JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

AMANDA E. BEAL
COMMISSIONER

BOARD OF PESTICIDES CONTROL

November 13, 2026

9:00 AM Board Meeting

Join the meeting in person in Room 101, Deering Building, 90 Blossom Lane, Augusta
Or

Microsoft Teams meeting
Join: https://teams.microsoft.com/meet/2678591331907630?p=oDhorMgRZ0u2b7tmQE
Meeting ID: 267 859 133 190 763 0
Passcode: bm7LM6oZ

Dial in by phone
+1 207-209-4724,,75386079# United States, Portland
Find a local number
Phone conference ID: 753 860 79#

AGENDA

1. Introductions of Board and Staff

   Welcome to the new public member, Brian Perkins, Ph.D., and reappointments of Dave Adams, Philip Fanning, Ph.D., and Dr. Mark Neavyn, M.D.

2. Minutes of the October 2, 2026 Board Meeting

   Presentation By: Alexander Peacock, Director
   Action Needed: Amend and/or Adopt

3. Request for Special Local Need 24(c) Registration for GoalTender® Herbicide, EPA Reg. No. 92894-3, Nutrichem USA, Inc.

   The University of Maine has requested the re-registration of the Special Local Need (SLN) for GoalTender® Herbicide (SLN ME-220001) that was first approved in 2022 and is due to

ALEXANDER PEACOCK, DIRECTOR
90 BLOSSOM LANE, DEERING BUILDING

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expire on December 31, 2026. This SLN is for post-emergent weed control in broccoli to primarily control nightshade and pigweed.

Presentation By: Julia Vacchiano, Pesticide Registrar & Water Quality Specialist
Action Needed: Discussion; Approve/Disapprove SLN

4. Overview and Risk Assessments of New Active Ingredients

Presentation to provide an overview and risk assessments of 3 newly approved active ingredients by USEPA. They include two herbicide active ingredients, Diflufenican and Trifludimoxazin, and one fungicide active ingredient, Fluoxapiprolin.

Presentation By: Julia Vacchiano, Pesticide Registrar & Water Quality Specialist, and Doug Van Hoewyk, Ph.D., Pesticide Toxicologist
Action Needed: None, Informational/Discussion

5. Pesticide Registration & Refusal to Register Requirements and Overview of the Environmental Risk Advisory Committee (ERAC) and Medical Advisory Committee (MAC)

Presentation to review registration requirements and tools available to the Board should they have a concern about the environmental impact and/or human health risk of a particular pesticide. This includes written comment to the Board from the Maine Water Accountability Project.

Presentation By: Julia Vacchiano, Pesticide Registrar & Water Quality Specialist, and Alexander Peacock, Director
Action Needed: None, Informational/Discussion

6. Consideration of Proposed Administrative Consent Agreement with Orkin Exterminating Co. Inc. of Portland, ME

The proposed administrative consent agreement outlines repeat violations of unauthorized pesticide applications and failure to have a positive property identification protocol in place.

Presentation By: Jose Gayoso, Manager of Compliance
Action Needed: Approve/Disapprove

7. Enforcement Case Pre-Review for Insight Pest Solutions Maine LLC of Falmouth, ME

In accordance with BPC Enforcement Protocol, Section 6 (b), identifying patterns of repeat offenses by the same entity, this information is being brought to the Board's attention. An administrative consent agreement with this company that included a suspended penalty was accepted by the Board in 2024. Violations identified include pesticide use inconsistent with the label, pesticide applications by an applicator with the proper commercial category, and calibration and record-keeping requirements.

Presentation By: Jose Gayoso, Manager of Compliance

Action Needed: Discussion, Enforcement Guidance

8. Enforcement Case Pre-Review for Butler Farms of Limestone, ME

In accordance with BPC Enforcement Protocol, Section 6 (b), identifying patterns of repeat offenses by the same entity, this information is being brought to the Board's attention. Repeat violations identified include improper storage and disposal of pesticide containers in accordance with the label and unlicensed applications of restricted-use pesticides.

Presentation By: Jose Gayoso, Manager of Compliance
Action Needed: Discussion, Enforcement Guidance

9. Other Old and New Business

a. Neonicotinoid Risk Assessment

b. Variance Permit for CMR01-026, Acadian Forestry & Plant Management, Sedgwick.

10. Schedule of Future Meetings

The next scheduled Board meeting date is December 18, 2026, at the Marquardt Building, Room 118, Augusta

Future Meetings: Wednesday, January 13, 2027 (ATS), March 5, 2027, April 16, 2027

Adjustments and/or Additional Dates?

11. Adjourn

NOTES

- The Board Meeting Agenda and most supporting documents are posted one week before the meeting on the Board website at www.thinkfirstspraylast.org.
- Any person wishing to receive notices and agendas for meetings of the Board, Medical Advisory Committee, or Environmental Risk Advisory Committee must submit a request in writing to the Board's office. Any person with technical expertise who would like to volunteer for service on either committee is invited to submit their resume for future consideration.
- On November 16, 2007, the Board adopted the following policy for submission and distribution of comments and information when conducting routine business (product registration, variances, enforcement actions, etc.):
  - *For regular, non-rulemaking business*, the Board will accept pesticide-related letters, reports, and articles. Reports and articles must be from peer-reviewed journals. E-mail, hard copy, or fax should be sent to the Board's office or pesticides@maine.gov. In order for the Board to receive this information in time for distribution and consideration at its next meeting, all communications must be received by 8:00 AM, three days prior to the

Board meeting date (e.g., if the meeting is on a Friday, the deadline would be Tuesday at 8:00 AM). Any information received after the deadline will be held over for the next meeting.

- During rulemaking, when proposing new or amending old regulations, the Board is subject to the requirements of the APA (Administrative Procedures Act), and comments must be taken according to the rules established by the Legislature.

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JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

BOARD OF PESTICIDES CONTROL

October 2, 2026

9:00 AM Board Meeting

Join the meeting in person in Room 101, Deering Building, 90 Blossom Lane, Augusta
Or

Microsoft Teams meeting
Join: https://teams.microsoft.com/meet/264542631124158?p=qYRonwYYYjXvTY8M13
Meeting ID: 264 542 631 124 158
Passcode: iK6K3Em6

Dial in by phone
+1 207-209-4724,,804791308# United States, Portland
Find a local number
Phone conference ID: 804 791 308#

MINUTES

1. Introductions of Board and Staff

   - Adams, Carlton, Fanning, Gray, Neavyn
   - Boyd, Gayoso, Gustanski, Johnston-Fennell, Leibowitz, Peacock, Poisson, Richard, Steinman, Vacchiano, Van Hoewyk

2. Minutes of the August 21, 2026 Board Meeting

   Presentation By: Alexander Peacock, Director
   Action Needed: Amend and/or Adopt

   Carlton/Fanning: Moved and seconded to adopt August 21, 2026, meeting minutes
   In Favor: Unanimous

3. Experimental Use Permits (EUP)

Board staff has received several inquiries about obtaining experimental use permits to trial pesticides on off-label sites. The BPC previously had a statute, Title 7 § 608, which established the Board's ability to issue EUPs. This section was repealed by the legislature in 2005. This is an overview of current EPA regulations regarding EUPs and a discussion of the possible need for a policy to inform EUP requests of federal standards established by EPA.

Presentation By: Alexander Peacock, Director
Action Needed: None, Discussion

- Peacock told the Board about Experimental Use Permits and that the BPC had received a couple of inquiries to use specific pesticides on off-label sites. The BPC previously had the authority to issue EUPs, but this statute was repealed by the legislature in 2005. The Board historically wished to repeal the statute due to lack of resources. Maine has one toxicologist, and it would most likely take at least a full year's study to investigate the use of an off-label site. Peacock mentioned that at a recent conference, Washington state asked what other states used as criteria for EUPs around beehives. Most states in the room said they didn't have the capacity to conduct EUP studies.
- Peacock also brought up that if an applicator is applying to an area under 10 acres, they are exempt from needing an EUP if they work with the manufacturer. Peacock suggested creating a policy that requires applicators to inform the BPC about the specifics of any EUP usage. He said if the EPA issues an EUP permit, the BPC may not be informed about it; the proposed policy would address this gap.
- Carlton asked if the EUP requests were for research.
- Peacock said yes, and that if a weed is showing resistance to an herbicide, they might trial a different herbicide to control it. He also mentioned it raised concern about how many off-site trials were occurring in Maine without the BPC knowing.
- Gustanski asked what off-site meant.
- Peacock explained that labels list sites and crops where the pesticide can be used. Off-site means it is an area not listed on the label.
- Adams asked how applicators with EUPs report chemical use in the annual summary report
- Peacock said they are required to report the chemistry and the site applied. Now that it is required that the annual summary reports are submitted digitally, it will be easier to take a closer look at the data to figure out if a product and the site don't match.
- Adams said that he would be a fan of requiring applicators to have a Category 10 license and that they report their testing.
- Peacock added that even if an applicator falls under the exemption, they are required to destroy all crops or animals, so they are not eaten. In that respect, we shouldn't have any issue of potentially contaminated products going to market.
- Gayoso warned that if the BPC doesn't know where the exceptions are, though, we can't enforce the EPA requirements.
- Van Hoewyk added that he evaluated the AI for one of the proposed uses and it did present risks of leaching, so he understood why Alex brought it to the Board.

4. PFAS Pesticides Update

BPC Pesticide Toxicologist updates the Board about recent research in PFAS pesticides and their potential to degrade into trifluoroacetate and possible defluorination in the environment.

Presentation By: Doug Van Hoewyk, Ph.D., Pesticide Toxicologist
Action Needed: None, Informational/Discussion

- Van Hoewyk informed the Board of changes in how the Maine Department of Environmental Protection interprets the PFAS definition. The current interpretation of PFAS now includes some mono-fluorinated active ingredients if they meet the specific criteria. With the new definition, the number of active ingredients with PFAS increased from approximately 50 to about 90. Van Hoewyk spoke on the degradation of PFAS and how many (but not all) eventually degrade into trifluoroacetate (TFA), which is a groundwater contaminant. Studies that do not demonstrate the formation of trifluoroacetate during environmental fate studies are likely due to study limitations, particularly the short duration of the study. Van Hoewyk also found 3 cases of PFAS pesticides defluorinating as they degrade. These cases are exciting because they are the only confirmed cases of a PFAS not becoming trifluoroacetate, but they are rare.

5. Preliminary Crop Yield Data Following Neonicotinoid Restrictions in Quebec

Presentation and discussion of preliminary crop yield data following neonicotinoid use restrictions adopted by the province of Quebec, Canada, in 2019.

Presentation By: Doug Van Hoewyk, Ph.D., Pesticide Toxicologist
Action Needed: None, Informational/Discussion

- Van Hoewyk updated the Board on some of the research into neonicotinoid seed yields. Quebec implemented restrictions on neonicotinoid-treated seeds in 2019, so yield data was much easier to get a hold of from them than from the US. Van Hoewyk prefaced his study by saying some of the data interpretations should not be met with a strict one-to-one correlation. There are many reasons why yield would change. Acres not harvested could be due to weather, market demand, or crop failure. Those variables were not considered in this study.
- Van Hoewyk took data from seven years before the restriction and the years after and found a trend of decreased harvested acreage. He had tried to find a control to use in his data, but it is hard to use a different crop. In general, corn silage yield decreased after the restrictions, but not by a drastic amount.
- Adams asked if Van Hoewyk could separate how many acres were treated previously from those that weren't.
- Gray said it's not that removing neonicotinoids is crippling farmers; it is that they are having a tool removed. Farmers will find a new tool that may not be as good. Gray theorized that instead of a yield change, there would be an economic change for the farmer and an environmental change for the worse. They won't give up and let yields plummet but will find a new tool that may not be as efficient or effective instead.

- Adams said they may have left the crops because they weren't worth harvesting.
- Gray said that he would like to say the drop was because of the restrictions, but that it could be mother nature.
- Peacock added that at a corn growers meeting he went to, they all said last year was a bad year. They were able to get out early to plant, but the heavy spring rains were problematic.

6. Enforcement Case Pre-Review for Mainely Grass of Westbrook

In accordance with BPC enforcement protocol, this information is being brought to the Board's attention, identifying repeat violations of failure to notify a member of the Pesticide Notification Registry and notification requirements under Chapter 28, Section 1.

Presentation By: Jose Gayoso, Manager of Compliance
Action Needed: Discussion, Enforcement Guidance

- Gayoso presented the Board with a consent agreement from the April 2024 Board meeting that addressed many complaints. In May of 2024 a member of the Maine Pesticide Notification Registry was not notified in advance of an application. They were notified as the application was occurring. In May of this year, there was a person who was not on the notification registry, but who requested notification from Mainely Grass of Westbrook directly. The person was not notified, even though the company had awareness of the person's request. Gayoso said it seemed like there had been a misunderstanding of the Chapter 28, Section 1 requirements by Mainely Grass. Section 1 is less clear than the notification registry as there is no established list that the BPC keeps. Mainely Grass wants to meet and learn more about Chapter 28, Section 1. Those were the two incidents that occurred after the last consent agreement with the company in April 2024. Mainely Grass did submit a letter to the board for consideration. The May 2024 complaint has not yet been addressed, so the two incidents would be wrapped into one agreement.
- Adams asked what Gayoso's thoughts were on the request being made through a Facebook message.
- Gayoso said that during the inspection the company seemed to show they were aware of the request, but further discussions made it seem as if they were not sure of the requirements.
- Fanning asked if a Facebook notification qualified.
- Peacock answered that the request can be any form of communication, as long as it is effective.
- Gayoso said he appreciated that Mainely Grass reached out to explain their misunderstanding of Section 1 and that they are willing to have a discussion about the requirements.

7. Enforcement Case Pre-Review for TruGreen Lawncare of Westbrook

In accordance with BPC enforcement protocol, this information is being brought to the Board's attention, identifying repeat violations of failure to notify a member of the Pesticide

Notification Registry, failure to post an application site, unauthorized application, and applications by an unlicensed applicator.

Presentation By: Jose Gayoso, Manager of Compliance
Action Needed: Discussion, Enforcement Guidance

- Gayoso introduced repeat violations by the company TruGreen Lawncare of Westbrook. The last consent agreement with them was June 5, 2026 for a misapplication at the wrong address. On the same day, the BPC received a complaint from a member of the notification registry who was not notified of an application. On June 16, 2026, the BPC received a complaint from a homeowner that their lawn was treated without permission. In this instance, the applicator applied at the wrong address and did not post the application. The applicator knocked on the door, received no answer, and applied anyway. In July, there was a complaint about drift, and while the inspector was not able to confirm drift occurred, they learned that one of the company's applicators, Abraham Lincoln, had been making applications even though his license had been terminated by BPC. TruGreen did not understand why Mr. Lincoln's license was terminated but didn't correct the issue before he continued to apply. 30 applications were made with the company's knowledge of the terminated license before he left. Those were the 3 incidents that occurred after the last approved consent agreement. Gayoso concluded with reminding the board of the letter TruGreen submitted for their consideration
- Adams asked if Mr. Lincoln's applications were done under the same Master applicator.
- Poisson answered that there are multiple Master applicators at TruGreen. One Master had been there the entire time, another was not there for each incident, and a third received their license in 2025
- Gray said that some of the explanations in the letter TruGreen wrote were weak.
- Leibowitz informed the Board that the audit note on the terminated license said "Per Notice from Abraham Lincoln and employer – JB"
- Peacock added that the license was terminated in 2024 and that it would have expired a few months later and should have been renewed anyway.

8. <u>Other Old and New Business</u>

a. Written Stakeholder Comments regarding LD 1323, Resolve, Directing the Board of Pesticides Control to Evaluate the Impact of Neonicotinoids on Pollinators, Humans, and the Environment.

b. EPA Clears Outdated Pesticides from Marketplace to Protect Human Health & the Environment

- Gayoso told the Board that the update was a little misleading, as they make it seem like products are being removed from the marketplace. What this update was actually about was closing the book on the reevaluation process on the active ingredient (AI). The AIs in question don't have any registered labels under the EPA, so they closed them out. There could still be products that have these active ingredients. Typically, the EPA allows

continued sale of the product until they are all sold. Products aren't actually being removed from the marketplace.

c. EPA Releases Glyphosate Human Health Open Literature Search Document for Public Feedback

d. Variance Permit for CMR01-026, American Forest Management, Inc., Bowmantown.

e. Variance Permit for CMR01-026, American Forest Management, Inc., Oxbow.

f. Variance Permit for CMR01-026, ACPS, Chebeague Island

g. Variance Permit for CMR01-026, Basswood Environmental, Scarborough

h. Variance Permit for CMR01-026, Damariscotta Mills Consulting, Inc., Alna

i. Variance Permit for CMR01-026, Legacy Woodlot Services, Starks

j. Variance Permit for CMR01-026, Legacy Woodlot Services, Maine Rivers, Starks

k. Variance Permit for CMR01-026, Legacy Woodlot Services, Monroe

9. Schedule of Future Meetings

The next scheduled Board meeting date is November 13, 2026, at the Deering Building, Room 101, Augusta

Future Meetings: December 18, 2026, Wednesday, January 13, 2026 (ATS)

Adjustments and/or Additional Dates?

10. Adjourn
Carlton/Fanning: Moved and seconded to adjourn at 10:27 am
In Favor: Unanimous

NOTES

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JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

To: Board of Pesticides Control
From: Julia Vacchiano, Pesticide Registrar & Water Quality Specialist
RE: SLN ME-220001, Goaltender, EPA Reg. # 92894-3 For Post-Emergent Use in Broccoli
Date: October 14, 2026

Mark Hutton, Ph.D., a specialist at the University of Maine Cooperative Extension, requests the extension of an existing SLN that allows for post-emergent application of Goaltender (EPA Registration #: 92894-3), first registered in 2009 and most recently extended in 2022. The UMaine letter of support states that GoalTender, active ingredient oxyfluorfen, is an important option for broccoli producers who need to apply herbicide to suppress certain broadleaf weeds after crop emergence, especially Hairy Nightshade and Pigweed. GoalTender is approved for both pre-transplant and pre-emergence applications, but post-emergence use fills a need in controlling difficult weed species that emerge later in the growing season. This extension would validate this Section 24(c) label until December 31, 2031.

Risks associated with GoalTender use on crops prevent the use from being added specifically to the EPA master label. The Section 24(c) label warns that use on broccoli may result in crop injury, crop yield reduction, and possible crop loss. Risks associated with use are outlined clearly on page 1 of the attached Special Local Need label. This product is also toxic to aquatic invertebrates and wildlife and can not be applied to water or areas where surface water is present.

As stated in Dr. Hutton's letter of support, Hairy Nightshade is of special significance because Maine growers plant broccoli in rotation with potatoes. Hairy Nightshade is an alternative host for late blight (*Phytophthora infestans).* Control of this weed may reduce the need for fungicide applications on potatoes during a later crop rotation.

In approving the original SLN application, the Board reviewed tolerance studies, product toxicity data, and environmental fate data, and determined that the extended use would not result in unreasonable adverse effects. The review Pamela J. Bryer, Ph.D., BPC Toxicologist, conducted supports this determination. Please refer to her memo included in this package as well as the report addendum by current BPC toxicologist Doug Van Hoewyk, Ph.D.

Please review the following included documents:

- Letter of request from Mark Hutton, Ph.D., University of Maine Cooperative Extension
- Letters of support from Pyxis Regulatory Consulting, Inc. representing Nutrichem USA, Inc.
- Toxicology Report – Pamela J. Bryer, Ph.D.

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- Risk Assessment Addendum – Doug Van Hoewyk, Ph.D.
- GoalTender Section 24(c) label for requested approval
- Goal Tender Section 3 label
- GoalTender Safety Data Sheet

ALEXANDER PEACOCK
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Putting Knowledge to Work with the People of Maine

09/30/2026

Dr. Dan Beran
Director of Technical Services
Crop Protection
Nufarm
10 Eastwood Drive
Eldora, IA 50624
daniel.beran@nufarm.com

Dear Dan,

I am writing this letter to request a Special Needs Registration for post-emergent application of the herbicide GoalTender. The Special Local Needs Registration for GoalTender herbicide with the active ingredient Oxfluorfen is an important option for broccoli producers who need to apply a post-emergent herbicide to suppress or control broadleaf weeds after crop emergence.

Several of the broccoli producers have used GoalTender (available under 24(c) Special Local Need Registration SLN ME-220001B) to great benefit and are reliant on this product when preplant herbicides have not worked effectively. This is important chemistry for post-emergence control of nightshade and pigweed. Control of hairy nightshade which serves as an important alternate host for the late blight *Phytophthora infestans* in potatoes. Broccoli may be grown in rotation with potatoes; therefore, control of hairy nightshade may reduce the need for fungicide use on potatoes.

I fully support the renewal of the Special Local Needs Registration for GoalTender herbicide for use in Maine.



Mark Hutton, Ph.D.
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PYXIS

ELECTRONIC SUBMISSION

October 7, 2026

Julia Vacchiano
Pesticide Registrar and Water Quality Specialist
Maine Board of Pesticides Control
28 State House Station
Augusta, ME 04333-0028

RE: Special Local Need, FIFRA Section 24(c) Application
GoalTender (EPA Reg. No. 92894-3)

Dear Ms. Vacchiano,

Nutrichem USA, Inc. respectfully requests to renew the Special Local Need (FIFRA Section 24(c)) for Postemergence Use in Broccoli for GoalTender (EPA Reg. No. 92894-3). We request the SLN registration be issued under Nutrichem USA, Inc. In addition, Nutrichem USA, Inc. asks that the label also be issued under the sub-registrant, Nufarm Inc. (EPA Reg. No. 92894-3-71368).

Please note: While Nutrichem USA, Inc., is interested in adding this use to its EPA-approved Section 3 label, we will not be submitting a label amendment request at this time. Because oxyfluorfen is currently under EPA Registration Review, EPA is not entertaining amendments to add new uses. As a result, this proposed use addition cannot be pursued until the Registration Review process has been completed and EPA resumes consideration of such amendments.

In support of this SLN application, please find the following:

1. Letter of Request (this letter)
2. One (1) copy of EPA Form 8570-25
3. One (1) copy of each draft 24(c) label
4. Letter supporting Nufarm Inc.
5. Letter of Authorization

Please contact me at 253-853-7369 or maryanne@pyxisrc.com, if you have any questions or need additional information.

Sincerely,



Maryanne Kellogg
Agent for Nutrichem USA, Inc.

Enclosures

PYXIS REGULATORY CONSULTING, INC.
Maryanne@PyxisRC.com
253.853.7369
535 Dock Street, Suite 211
Tacoma, WA 98402
www.PyxisRC.com

STATE OF MAINE
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JANET T. MILLS
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AMANDA E. BEAL
COMMISSIONER

Memorandum

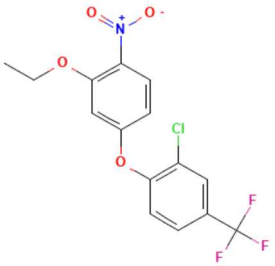
To: Board of Pesticides Control

From: Pamela J. Bryer, Ph.D. | Pesticides Toxicologist | Maine Board of Pesticides Control

Subject: Goal Tender FIFRA 24(c) Special Local Need registration

Date: February 18, 2022

Oxyfluorfen, the active ingredient in Goal Tender, is an herbicide that has been in use since the late 1970's. It works as a contact herbicide that inhibits a cellular enzyme leading to damage of the cell membrane. It is in Group 14 of the Herbicide Resistance Action Committee Mode of Action Classification (2021 Edition).[1] It is immobile in soil and, depending on circumstances, is considered to be moderately persistent to persistent. Laboratory studies indicate low toxicity to mammals, honeybees, some sediment-dwelling organisms, and some algae. Moderate toxicity is seen for birds, earthworms, fish, some sediment-dwelling organisms, some aquatic invertebrates, and some algae. High toxicity was seen for acute exposures to aquatic plants and aquatic invertebrates.



Exposed applicators have found the product is an irritant to eyes, skin, and occasionally respiratory tract tissues. Data from the California Pesticide Illness Surveillance Program provides an example of a human exposure incident; a group of agricultural workers entered a field 30 minutes following application (a violation of the 24-hour restricted entry interval (REI)) and nine out of 15 experienced symptoms of chemical conjunctivitis, eye irritation, tingling and itching of the skin, nausea, dizziness, headache, and vomiting.[2]

The WHO Recommended Classification of Pesticides by Hazard identifies oxyfluorfen as unlikely to present an acute hazard in normal use.[3]

Risks associated with oxyfluorfen:
Managing risk with pesticides is largely a function of controlling exposure. Current-use pesticides often degrade quickly and reach low or non-detectable concentrations by the time the treated commodity reaches the market. This document explores if there are currently ongoing exposures of oxyfluorfen and how use on broccoli might add to those exposures.

MEGAN PATTERSON, DIRECTOR
90 BLOSSOM LANE, MARQUARDT BUILDING

maine DEPARTMENT OF Agriculture Conservation & Forestry

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Current occurrences in the marketplace:
USDA testing routinely includes oxyfluorfen as part of the Pesticide Data Program (PDP). Out of 141,238 samples tested 106 samples have tested positive for oxyfluorfen which is 0.1% of all tests.[4] The highest detection found to date is 0.011 ppm. The only violative tests occurred when the active ingredient was found on crops lacking established tolerances. Detections have been made on cilantro, celery, spinach, rice, raisins, green onions, and mustard greens, none of the detections exceeded the established tolerances. The current tolerance for broccoli is 0.05 ppm.[5] The PDP testing has included over 7,400 samples of broccoli and cauliflower, none of the samples contained detectable concentrations of oxyfluorfen.

Potential exposure from broccoli consumption:
The highest concentration representing use on broccoli was found to be 0.0168 ppm following use at the 0.25 lbs a.i./A rate.[6] These data were submitted as part of IR-4 tolerance setting. Experiments found no residues in broccoli samples treated with 0.125 lbs a.i./A but did find detectable residues in one out of seven fields at the 0.25 lbs a.i./A rate. The maximum detected broccoli residue in that one field is the 0.0168 ppm mentioned above.

The average daily consumption of broccoli is 7.5 lbs/yr which corresponds to 9.3 grams/day.[7] If an adult consumes this amount of broccoli that was treated with oxyfluorfen (and that broccoli ended up with the maximum detected residue of 0.0168 ppm) they would be expected to be exposed to 0.00000195 mg oxyfluorfen/ kg body weight per day. This is lower than the established acceptable daily intake (ADI) of 0.003 mg oxyfluorfen/ kg body weight per day.[8] This value is conservatively based on 100% of the broccoli weight even though it is understood that oxyfluorfen is only going to be present in fatty-type tissues of the plant (based on its K_{ow} of 4.86 and that broccoli is 0.4% fat).[9,10] Additionally, this is based on 100% uptake into the body even though rat studies have shown that only 18% is expected to cross the GI tract and into the body.[11]

Oxyfluorfen is classified as likely to be carcinogenic to humans with an exposure level for cancer risk set at 0.0732 mg oxyfluorfen/kg body weight per day.[12] Based on the above calculation an individual would have to eat over 37,000 daily equivalents to reach this exposure level for cancer risk. This value overestimates the exposure potential by using the highest known concentration of oxyfluorfen in broccoli or any other commodity tested in USDA's PDP program, overestimating the partitioning into the broccoli, and overestimating the potential for crossing out of the GI tract.

Fate and transfer in the environment:
As previously discussed oxyfluorfen has a high K_{ow} indicating it is likely to partition into fatty tissues. That together with the low solubility in water indicates leaching into groundwater is not a likely concern for this compound. The vapor pressure and Henry's law constant (0.026 mPa and 0.0238 Pa/ m^3 mol^{-1} respectively) indicate low and non-volatility, together with the K_{ow} and solubility values, indicate that movement off-site is unlikely.[13,14]

In studies looking at the depth of penetration into the soil horizon oxyfluorfen has been found to travel short distances.[15] One study found the compound stayed within the top ten centimeters at 28 days after application. Another study found after three to twelve centimeters of rain the product traveled to five to nine centimeters deep.

Degradation:
Soil half-life data are variable. The range for laboratory-derived half-life data averages from 35 to 138 days, though the full range went up to 438 days. Soil field-derived half-life data were also variable and ranged from 31 to 172 days, averaging at 73 days.[16] Using the five half-lives rule of thumb, under the most extreme persistence (438 days) this chemical would take approximately six years until the product would be eliminated

from the environment, or more specifically 97.5% degraded. Under more normal or average conditions, the product would be expected to be eliminated from the soil environment in one year, again at the 97.5% eliminated threshold.

Sunlight appears to have significant degradation effects on the chemical which are reflected in shorter half-lives when the compound is in or on the plant or in sun-lit water. Water itself does not cause the compound to break down. On the surface of a plant, the breakdown half-life is 1.6 days. When the product is measured as on and in the plant tissues the half-life is 3.6 days.[16]

Long term soil dynamics:
Due to the combination of persistence in the soil and bioaccumulation potential the long-term patterns of oxyfluorfen are of concern. Soils of differing compositions will differ in their behavior, however, some studies indicate that oxyfluorfen does not accumulate in soils significantly. Figure 1 shows the soil concentration of oxyfluorfen on the same parcel over a four-year period.[17] Given the typical half-life 95.5% elimination from the soil is expected at the one-year point and you can see from the graph that the prediction is pretty accurate. The soil concentration at day 150 is approximately 0.8 mg/kg and the soil concentration at day 1350 (or 150 days after the fourth application) is approximately 1 mg/kg. While this is clearly an increase it does not follow the typical patterns of additive exposures which increase over time. Additionally, the soil maximum concentrations do not increase over time.

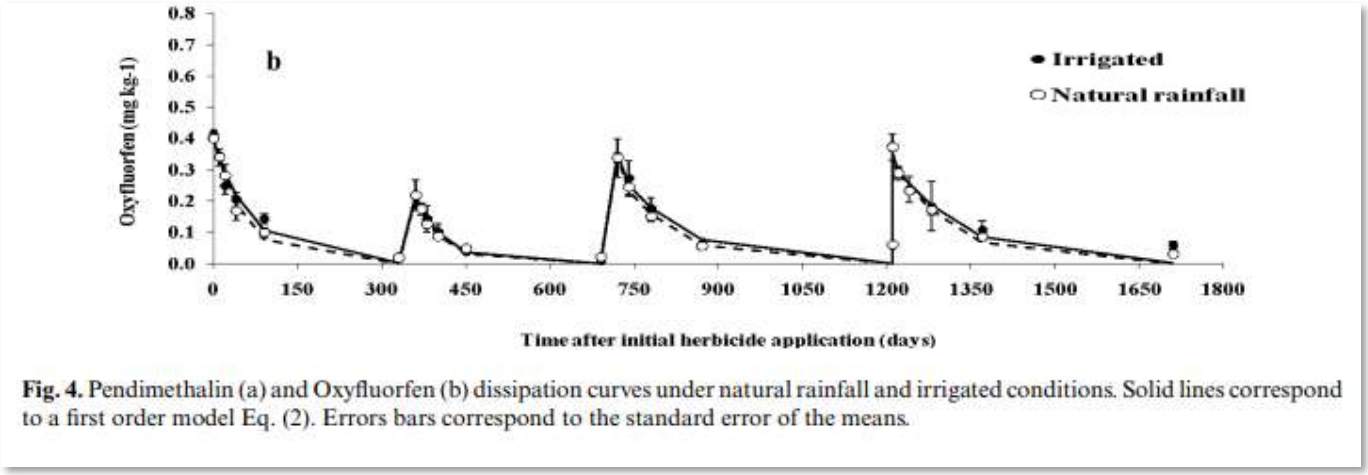


Fig. 4. Pendimethalin (a) and Oxyfluorfen (b) dissipation curves under natural rainfall and irrigated conditions. Solid lines correspond to a first order model Eq. (2). Errors bars correspond to the standard error of the means.

Figure 1. Excerpt from the paper by Claudio et al. 2009 showing soil concentrations of oxyfluorfen following repeated applications over a four-year period.

Another study has shown that oxyfluorfen residues that become entrapped by the soil stay bound to the soil particles.[18] Forty-two percent of the applied oxyfluorfen was found in the top two centimeters of soil 109 days following a wintertime application in a Mediterranean olive orchard under natural rainfall conditions. Of the oxyfluorfen found offsite it was found in the sediment, not the rainwater accumulated offsite. This reaffirms the data suggesting oxyfluorfen is unlikely to leach while reminding us that offsite transport can still occur. The residues are not considered to be active when they are bound.

Technical consideration:
It is of note that oxyfluorfen may be considered as a PFAS compound under the State of Maine's PFAS definition as per 38 MRS §1614(1)(f). Oyxfluorfen does not meet the Office of Pesticide Pollution's working definition of PFAS, nor does it fit into the Buck et al. 2011 classification scheme.[19,20]

Details of this SLN application:
The Goal Tender supplemental label states that the required amount of time following application that harvest activities are allowed is 35 days. There are 10 specific restrictions on the supplemental label. Use under this label does not allow rates that exceed those tested in the IR-4 testing program (0.25 lbs per acre), meaning the estimates of how much oxyfluorfen may enter the food supply would likely not exceed those estimated by the analysis performed. Similar SLN registrations have been issued in AZ, DE, MI, NY, PA, & TX.

The EPA Office of Pesticide Program's webpage indicates that the oxyfluorfen registration reevaluation interim decision is to be released in the first quarter of 2022.[21]

References

[1]Resistance classification group: https://hracglobal.com/tools/hrac-mode-of-action-classification-2021-map

[2]Applicator hazards: https://pubchem.ncbi.nlm.nih.gov/compound/39327#section=Skin-Eye-and-Respiratory-Irritations & https://pubchem.ncbi.nlm.nih.gov/compound/39327#section=Human-Toxicity-Excerpts

[3]Hazard classification: WHO (2005) The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification 2004, International Programme on Chemical Safety, p.34

[4]USDA PDP: https://www.ams.usda.gov/datasets/pdp

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[6]Broccoli test residues: Submitted test results in 2009 SLN review, data generated by IR-4 National Pesticide Clearance Protocol oxyfluorfen/broccoli. PR No 08806. Analytical results Report Date 08/02/05.

[7]Broccoli consumption: https://www.statista.com/statistics/257338/per-capita-consumption-of-fresh-broccoli-in-the-us/

[8]ADI for oxyfluorfen: https://comptox.epa.gov/dashboard/chemical/executive-summary/DTXSID7024241

[9]Oxyfluorfen K_{ow} value: https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/502.htm

[10]Broccoli fat content: https://www.healthline.com/nutrition/foods/broccoli#nutrients

[11]Uptake rate: EPA 2014. Oxyfluorfen: Human Health Assessment Scoping Document in Support of Registration Review. PC Code 111601. Decision No. 489866. Nieves et al.

[12]Cancer risk: EPA 2014. Oxyfluorfen: Human Health Assessment Scoping Document in Support of Registration Review. PC Code 111601. Decision No. 489866. Nieves et al.

[13]Water solubility: https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/502.htm

[14]Vapor pressure: https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/502.htm

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[16]Half-live values: https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/502.htm

[17]Figure of oxyfluorfen applications over four years: Claudio A. Alister , Patricio A. Gomez , Sandra Rojas & Marcelo Kogan (2009) Pendimethalin and oxyfluorfen degradation under two irrigation conditions over four years application, Journal of Environmental Science and Health Part B, 44:4, 337-343, DOI: 10.1080/03601230902800986

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[19] EPA PFAS definition: https://www.epa.gov/pesticides/pfas-packaging

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STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

November 5th, 2026

Re: Addendum to the 2022 Risk Assessment for GoalTender® Herbicide, EPA Reg. No. 92894-3

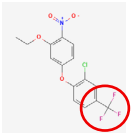
To: Maine Board of Pesticide Control

Dear Members of the Maine Board of Pesticide Control:

I have reviewed the toxicological profile of the product GoalTender® Herbicide. This product contains the active ingredient oxyfluorfen. The use of oxyfluorfen was evaluated in a 2022 risk assessment by BPC toxicologist Dr. Bryer. This was motivated by a Special Local Need (SLN) to request approval for Goaltender® on broccoli. My assessment on the risks of oxyfluorfen align with the 2022 document. In 2023, the EPA reviewed the registration of oxyfluorfen; this review altered uses of oxyfluorfen, but did not change its toxicological profile as new data were not submitted. This addendum provides new updates on the environmental fate of oxyfluorfen.

Summary Statement: The product GoalTender ® contains the active ingredient oxyfluorfen, which presents very low health risk to the general population- including children- and the environment if used according to the label. This conclusion aligns with the 2022 BPC risk assessment on oxyfluorfen. Oxyfluorfen is a PFAS that degrades into at least ten smaller PFAS metabolites, including trifluoroacetate (TFA). This degradant can contaminate water, but typically at concentrations that do not present a health or environmental risk to most organisms. However, degradation studies also reveal that oxyfluorfen can defluorinate, which prevents the formation of TFA.

The active ingredient oxyfluorfen is a PFAS as defined by the State of Maine and the OECD. EPA environmental fate studies reveal that it degrades into nine metabolites that retain the CF_3 moiety (circled in red to the right). These degradants are known to be precursors of the contaminant trifluoroacetate (TFA). Although TFA was not detected by the EPA, other studies noted that the degradation of oxyfluorfen in aerobic soil yields 5% TFA (Johnsen et al., 2026); it was also detected as a food residue (ESFA, 2014). Thus, the use of oxyfluorfen will increase the risk of TFA accumulation in the environment, but there is great uncertainty if current exposure to TFA in Maine presents a high risk.



Intriguingly, oxyfluorfen is also one of several PFAS active ingredients that can defluorinate under natural conditions. In an EPA study assessing the risk of oxyfluorfen in drinking water, an aqueous photolysis experiment degraded oxyfluorfen into three deflourinated metabolites (EPA, 2019). These data challenge the assumptions that oxyfluorfen is a "forever chemical" and a 100% conversation into TFA. It is not known if oxyfluorfen can also defluorinate in soil.

Please let me know if you have any questions on the environmental fate or risk of oxyfluorfen.

Respectfully,
Doug Van Hoewyk, PhD

Toxicologist; Maine Board of Pesticide Control

ALEXANDER PEACOCK, DIRECTOR
90 BLOSSOM LANE, DEERING BUILDING

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-2731
WWW.THINKFIRSTSPRAYLAST.ORG

References

EPA. (2019a). Oxyfluorfen: Tier II Drinking Water Exposure Assessment to Support Registration Review. EPA-HQ-OPP-2014-0778-0024

EPA. 2023. Oxyfluorfen. Amended Proposed Interim Registration Review Decision Case Number 2490 EPA-HQ-OPP-2014-0078

EFSA. (2014). Reasoned opinion on the setting of MRLs for saflufenacil in various crops, considering the risk related to the metabolite trifluoroacetic acid (TFA). *EFSA Journal*, *12*(2), 3585.

Johnsen, A. R., Henriksen, T., & Albers, C. N. (2026). *Formation of trifluoroacetic acid from common trifluoromethyl pesticides in agricultural soils* (Vol. 55, No. 2, p. e70160).

FIFRA 24(c) Special Local Need Label

GoalTender®

EPA Reg. No. 92894-3

24(c) Special Local Need Registration SLN ME-220001

For Postemergence Use in Broccoli

(For Distribution and Use Only in the State of Maine)

Expiration date: This label expires and must not be distributed or used in accordance with this SLN registration after December 31, 2031.

Conditions and Risks of Use for Special Local Need

USE OF GoalTender® (THE "PRODUCT") ON BROCCOLI (THE "CROP") FOR THIS SPECIAL LOCAL NEED MAY RESULT IN CROP INJURY, CROP YIELD REDUCTION AND/OR CROP LOSS AS FURTHER DISCUSSED BELOW. READ AND UNDERSTAND THESE CONDITIONS AND RISKS OF USE FOR SPECIAL LOCAL NEED BEFORE USING THE PRODUCT ON THE CROP.

This Product is available for use in the manner described in this Supplemental Labeling on the basis that, in the sole opinion of the user, the benefits and utility derived from the use of the Product on the Crop outweigh the potential risk of Crop injury, Crop yield reduction or Crop loss. The decision to use this Product in the manner described in this Supplemental Labeling must be made by each individual user on the basis of anticipated benefits versus (i) the potential risk of Crop injury, Crop yield reduction and Crop loss, (ii) the severity of the target pest infestation, (iii) the cost and availability of alternative pest controls and (iv) any other relevant factors.

By purchasing the Product for use, or using the Product, in the manner described in this Supplemental Labeling, you acknowledge and accept that, to the extent permitted by law:

(1) you assume all risk of Crop injury, Crop yield reduction and Crop loss;
(2) Nutrichem USA, Inc. does not make, and do not authorize any agent or representative to make, any representations or recommendations regarding the use of this Product on the Crop other than the statements on this Supplemental labeling;
(3) Nutrichem USA, Inc. does not make, and does not authorize any agent or representative to make, any warranties, express or implied, with respect to the use of the Product on the Crop and disclaim all warranties, expressed or implied, including any implied warranty of merchantability;
(4) Nutrichem USA, Inc. disclaims all liability for any damages, losses, expenses, claims or causes of actions arising out of or relating to Crop injury, Crop yield reduction and/or Crop loss;
(5) these Conditions and Risks of Use for Special Local Need supersede any contrary representations or recommendations by Nutrichem USA, Inc. or its respective agents or representatives, and any provisions in or on any Product literature or labeling including any provisions on the label affixed to the Product container.

If these Conditions and Risks of Use for Special Local Need are not acceptable, the unopened Product may be returned to the seller for a refund or used for a different labeled use in accordance with the label affixed to the Product container.

These Conditions and Risks of Use for Special Local Need are required by Nutrichem USA, Inc. and not specified by the US EPA or the State of Maine.

ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This label must be in the possession of the user at the time of pesticide application.
- Read this SLN labeling and the label affixed to the container for GoalTender™ before applying. All applicable use directions, precautions and restrictions on this SLN labeling and the label affixed to the product container must be followed.

Directions for Use

GoalTender® may be applied as a broadcast or directed spray for the postemergence suppression/control of susceptible broadleaf weed species in direct-seeded or transplanted broccoli.

Crop Tolerance Information: Broccoli are tolerant to postemergence applications of GoalTender; however, under certain conditions, GoalTender can cause severe crop injury. Application to crops grown under very mild (cool, cloudy) conditions can produce leaf cupping, crinkling, stunting, or necrotic lesions. When injury occurs, it is usually limited to the treated leaves with new leaves emerging undamaged. Delay in crop development and/or maturity, and yield reduction can result under these conditions.

Do not use GoalTender on plants that are weakened or are under stress due to temperature, disease, fertilizer, soil, salts, nematodes, insects, pesticides, drought, excessive moisture, flooding, or soil crusting.

Application Rate, Timing and Method of Application: Apply GoalTender as a broadcast postemergence application at the rate of 4 to 6 fl oz per acre (0.125 to 0.188 lb active). GoalTender may also be applied as a directed application at a rate of 4 to 8 fl oz per acre (0.125 to 0.25 lb active). Directed applications are those where spray mixtures are applied in such a way as to minimize contact to crop leaves, directing the spray toward the soil at the base of the crop.

For direct-seeded crops apply when the crop reaches a minimum of four true leaves. For transplanted crops apply after a minimum of two weeks after planting.

For postemergence use in broccoli do not mix GoalTender with adjuvants (oils, surfactants), liquid fertilizer or pesticides.

Apply only with ground equipment in a spray volume of 20 gallons or more of water per acre. Increase the spray volume to ensure complete and uniform coverage as weed height and density increases. Use a low-pressure sprayer equipped with flat fan nozzles operated at the manufacturer's recommended pressure.

Weeds Controlled or Suppressed Postemergence: GoalTender provides postemergence control/suppression of the following weeds when used at recommended dosages:

Common Name	Scientific Name
burning nettle	*Urtica urens*
cheeseweed (Malva)	*Malva parviflora*
nightshade, black	*Solanum nigrum*
pigweed, redroot	*Amaranthus retroflexus*
purslane, common	*Portulaca oleracea*
shepherdspurse	*Capsella bursa-pastoris*
sowthistle, annual	*Sonchus oleraceus*

Cultural Considerations: Best weed control results when GoalTender is applied to young (1-4 leaf), actively growing weeds.

Use Restrictions

In addition to the General Use Restrictions in the product label for GoalTender, the following use restrictions must be observed:

- For direct-seeded crops, do not apply more than 8 fl oz per acre (0.25 lb active) per crop as a post emergence treatment.

- For transplanted crops, do not apply more than 8 fl oz per acre (0.25 lb active) per crop as a post-transplant treatment. If a pre-transplant (preplant) treatment has previously been made, the combination of pre- plus post-transplant treatments must not exceed 16 fl oz per acre per season (0.5 lbs active).
- Do not add any adjuvant or liquid fertilizer to the spray mixture.
- For postemergence use in broccoli do not mix GoalTender with adjuvants (oils, surfactants), liquid fertilizer or pesticides.
- Do not apply within 35 days of harvest.
- Do not apply when weather conditions favor drift. Avoid drift to all non-target areas. GoalTender is phytotoxic to susceptible plant foliage.
- **Chemigation**: Under this SLN label, do not apply this product through any type of irrigation system.
- Avoid application if heavy rainfall is predicted to occur within 24 hours after planned application.
- The use directions under this SLN label supersede the Section 3 label prohibitions for broccoli.
- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

Section 24 (c) Registrant :
Nutrichem USA, Inc.
No. 27 Life Science Park Road
Changping District
Beijing 102206, China

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(20261007)

GoalTender®
HERBICIDE

Use Directions For: artichokes (globe), broccoli/cabbage/cauliflower, cacao, citrus (nonbearing), coffee, conifer (seedbeds, transplants, container stock) and selected deciduous trees, corn, cotton, cottonwood, eucalyptus, fallow bed, (cotton/soybeans) fallow land, garbanzo beans, garlic, guava (Hawaii only), horseradish, jojoba, mint, onions, onions grown for seed, papaya (Hawaii only), soybeans, taro, treefruit/nut/vine

Active Ingredient	
oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)4-(trifluoromethyl)benzene	41%
Other Ingredients	59%
Total	100%

Contains 4 pounds active ingredient per gallon

Shake Well Before Using

Keep Out of Reach of Children

CAUTION

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to inside of label booklet for Precautionary Statements and Directions for Use.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 92894-3 EPA Est. 81092-CHN-1

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Produced for
Adaura, LLC
4780 Ashford Dunwoody Road, Ste 540-267
Atlanta, GA 30338

NET CONTENTS
1 Gal.
(3.78 L)

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Avoid contact with skin or clothing.

Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

Mixers, loaders and applicators using engineering controls (see Engineering Controls requirements below) must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate) when mixing and loading
- Chemical-resistant apron when mixing and loading

All other mixers, loaders, applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate)
- Protective eyewear (goggles of face shield)
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when exposed to the product concentrate

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/ maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls: Mixers and loaders supporting aerial applications to fallow land or ground applications to corn, cotton, or soybeans must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], and must:

- Wear the personal protective equipment required above for mixers/loaders using engineering controls
- Wear protective eyewear if the system operates under pressure, and
- Be provided and have immediately available for use in case of emergency, such as a broken package, spill, or equipment breakdown, coveralls and chemical-resistant footwear.

Handlers performing applications to corn must use an enclosed cab that meets the definition in the Worker Protection Standard for agricultural pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:

- Wear the personal protective equipment required above for applicators using engineering controls
- Be provided and must have immediately available for use in an emergency when they must exit the cab in the treated area: coveralls, chemical-resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure.
- Take off any PPE that was worn in the treated area before reentering the cab, and
- Store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6);

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove contaminated clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. See Directions for Use for additional restrictions. Do not contaminate water when disposing of equipment wash water or rinseate.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements:

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE)and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours, except for the following:

- Onions, garlic and horseradish: The REI is 48 hours

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Non-Agricultural Use Requirements:

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.
Do not enter or allow others to enter until sprays have dried.

Storage and Disposal:

Do not contaminated water, food or feed by storage or disposal
Pesticide Storage: Keep from Freezing. Store above 32°F
Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Nonrefillable containers 5 gallons or less:
Container Handling: Nonrefillable container. Do not reuse or refill this container. After rinsing, offer for recycling if available available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.
Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

PRODUCT INFORMATION

GoalTender® herbicide is a selective herbicide for postemergence and preemergence residual weed control in labeled crops. Directions provided in the General Use Information section of this label apply to all uses of this product. Use directions for listed crops are provided in the Crop-Specific Use Directions section of this label.

Use Restrictions

The following use restrictions apply to all labeled uses of GoalTender (Refer to directions for use for individual crops for additional crop-specific use restrictions.):

- Do not graze or harvest plants from areas treated with GoalTender for feed or forage.
- Apply GoalTender only with ground equipment unless otherwise specified in crop-specific use directions.
- GoalTender is phytotoxic to plant foliage. Avoid accidental spray contact or drift with established crops. Do not apply when weather conditions favor drift to non-target areas.
- Some labeled crops are tolerant to over-the-top applications of GoalTender if applied during dormancy. Do not make over-the-top applications unless specifically allowed in crop-specific use directions.
- Do not treat ditch banks or waterways with GoalTender or contaminate water used for irrigation or domestic purposes.
- Do not apply GoalTender in enclosed greenhouses as foliage injury will result.

Spray Drift Buffer Restrictions

- A 25 foot vegetative buffer strip must be maintained between all areas treated with this product and lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- Do not allow spray to drift from the application site and contact people, structures people may occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.
- For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy when wind speed is 10 mph or less at the application site as measured by an anemometer.
- Use coarse spray according to ASAE 572 definition for standard nozzles or VMD of 475 microns for spinning atomizer nozzles.
- The applicator also must use all other measures necessary to control drift.

Rotation Crop Restrictions

- Do not rotate to small-grain crops (includes barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, wild rice) within 10 months following an application of GoalTender.
- Do not direct seed any crop, other than a crop labeled for use with GoalTender, within 60 days following application.
- Do not transplant seedlings of crops, other than crops labeled for use with GoalTender, within 30 days following application.
- **IMPORTANT: Unless otherwise specified elsewhere in this label or Adaura, LLC supplemental label or product bulletin, treated soil must be thoroughly mixed to a depth of 4 inches after harvest (or abandoning) of the treated crop but prior to planting of the rotational crop. Failure to achieve thorough and complete mixing or to follow the required minimum plant-back interval may result in crop injury, stand reduction and/or vigor reduction of the plant-back crop.** See specific fallow bed labeling instructions for required treatment-to-planting intervals following application of GoalTender to fallow beds or fallow fields.

Weeds Controlled

Common Name	***Scientific Name***
ageratum	*Ageratum conyzoides*
amaranth, spiny	*Amaranthus spinosus*
balsamapple	*Momordica charantia*
barnyardgrass (watergrass) †	*Echinochloa crus-galli*
bedstraw, catchweed	*Galium aparine*
bittercress, lesser	*Cardamine oligosperma*
bluegrass, annual †	*Poa annua*
buckwheat, wild	*Polygonum convolvulus*
burclover	*Medicago hispida*
buttercup, smallflower	*Ranunculus abortivus*
buttonweed	*Borreria laevis*
camphorweed	*Heterotheca subaxillaris*
canarygrass (annual)	*Phalaris canariensis*
carpetweed	*Mollugo verticillata*
cheeseweed (malva)	*Malva parviflora*
clover, red †	*Trifolium pratense*
clover, white †	*Trifolium repens*
cocklebur, common	*Xanthium pensylvanicum*
crabgrass, large (hairy) †	*Digitaria sanguinalis*
crotalaria	*Crotalaria species*
croton, tropic	*Croton glandulosus*
cudweed, narrowleaf	*Gnaphalium falcatum*

eveningprimrose, cutleaf	*Oenothera laciniata*
fiddleneck, coast †	*Amsinckia intermedia*
filaree, broadleaf	*Erodium botrys*
filaree, redstem	*Erodium cicutarium*
filaree, whitestem	*Erodium moschatum*
fireweed (from seed)	*Epilobium angustifolium*
flixweed	*Descurainia sophia*
foxtail, giant †	*Setaria faberi*
foxtail, green	*Setaria viridis*
foxtail, yellow	*Setaria lutescens*
geranium, Carolina	*Geranium carolinianum*
goosegrass †	*Eleusine indica*
groundcherry, cutleaf	*Physalis angulata*
groundcherry, Wright	*Physalis wrightii*
groundsel, common	*Senecio vulgaris*
henbit	*Lamium amplexicaule*
horseweed (marestail)	*Conyza canadensis*
jimsonweed	*Datura stramonium*
johnsongrass, seedling	*Sorghum halepense*
knotweed, prostrate	*Polygonum aviculare*
ladysthumb (smartweed)	*Polygonum persicaria*
lambsquarters, common	*Chenopodium album*
lettuce, prickly (china lettuce)	*Lactuca serriola*
mallow, little (malva)	*Malva parviflora*
mayweed (dog fennel)	*Anthemis cotula*
minerslettuce	*Montia perfoliata*
morningglory species, annual	*Ipomoea species*
morningglory, ivyleaf †	*Ipomoea hederacea*
morningglory, tall †	*Ipomoea purpurea*
mustard, black	*Brassica nigra*
mustard, blue (purple mustard)	*Chorispora tenella*
mustard, common yellow	*Brassica campestris*
mustard, hedge	*Sisymbrium officinale*
mustard, tumble (Jim hill mustard)	*Sisymbrium altissimum*
mustard, wild	*Brassica kaber*
nettle, burning	*Urtica urens*
nightshade, American black	*Solanum americanum*
nightshade, black	*Solanum nigrum*
nightshade, hairy	*Solanum sarrachoides*
oats, wild	*Avena fatua*
orach, red	*Atriplex rosea*
oxalis (bermuda buttercup)	*Oxalis pes-caprae*
panicum, fall	*Panicum dichotomiflorum*
pepperweed, Virginia	*Lepidium virginicum*
pepperweed, yellowflower	*Lepidium perfoliatum*
pigweed, prostrate	*Amaranthus blitoides*
pigweed, redroot	*Amaranthus retroflexus*
pimpernel, scarlet	*Anagallis arvensis*
poinsettia, wild	*Euphorbia heterophylla*
puncturevine	*Tribulus terrestris*
purslane, common	*Portulaca oleracea*
pusley, florida	*Richardia scabra*
ragweed, common	*Ambrosia artemisiifolia*
redmaids	*Calandrinia caulescens*
rocket, London	*Sisymbrium irio*

ryegrass, Italian	*Lolium multiflorum*
sage, lanceleaf	*Salvia reflexa*
sandbur, field	*Cenchrus incertus*
sandspurry, red	*Spergularia rubra*
sesbania, hemp	*Sesbania exaltata*
shepherdspurse †	*Capsella bursa-pastoris*
sicklepod	*Cassia obtusifolia*
sida, prickly (teaweed)	*Sida spinosa*
signalgrass, broadleaf	*Brachiaria platyphylla*
smartweed, pennsylvania	*Polygonum pensylvanicum*
sorrel, red (from seed)	*Rumex acetosella*
sowthistle, annual	*Sonchus oleraceus*
speedwell, birdseye	*Veronica persica*
spurge, garden	*Euphorbia hirta*
spurge, prostrate ††	*Euphorbia supina*
spurge, spotted ††	*Euphorbia maculata*
spurry, corn	*Spergula arvensis*
tansymustard	*Descurainia pinnata*
thistle, bull ††	*Cirsium vulgare*
thistle, Russian	*Salsola kali*
velvetleaf	*Abutilon theophrasti*
witchgrass	*Panicum capillare*
witchweed	*Striga asiatica*
woodsorrel, common yellow ††	*Oxalis stricta*

† Highest rate and/or multiple applications may be required for acceptable control.
†† Preemergence control only

Application Methods and Cultural Practices

Preemergence Weed Control

Apply the specified rate in a broadcast spray volume of 15 or more gallons of water per acre using calibrated spray equipment capable of uniform application to the soil surface. Seedling weeds are controlled as they come in contact with the soil-applied herbicide during emergence. Preemergence weed control is most effective when GoalTender is applied to soil surfaces that are clean (free of crop or weed residues or clippings) and weed-free. Prior to application, weed or crop residues should be removed by thorough incorporation into the soil using tillage equipment or by blowing the area to be treated. At least 0.25 inch of irrigation or rainfall is required to activate GoalTender and should occur within 3 or 4 weeks after application. For optimum results, GoalTender should be applied to prepared beds or soil surfaces that will be left undisturbed during the time period for which weed control is desired. Cultural practices that disturb or redistribute surface soil following treatment with GoalTender such as cutting water furrows will reduce weed control effectiveness.

Application Rates and Rate Ranges: Where rate ranges are given, use the lower rate in the rate range on coarse texture soils with less than 1% organic matter and lighter weed infestations. Use higher rates in the rate range on medium to fine texture soils, soils containing greater than 1% organic matter, heavy weed infestations, or for extended residual preemergence weed control.

Postemergence Weed Control

Apply the specified rate in a broadcast spray volume of 20 or more gallons of water per acre (a minimum 10 gallons if applying GoalTender in tank mix with glyphosate). Because GoalTender is a contact herbicide, complete and uniform coverage of weed foliage is essential for optimum postemergence control. Increase the spray volume to ensure complete and uniform coverage as weed height and density increases or in the presence of heavy trash (weed or crop residue). Postemergence applications of GoalTender are most effective when made to weeds at the seedling stage. Applications made later than

the 4-inch or 4 leaf stage may result in partial control or suppression. Postemergence applications should be made to seedling grasses not exceeding the 2-leaf stage. The addition of 0.25% v/v (2 pints per 100 gallons of spray) of an 80% active nonionic surfactant, labeled for application to growing crops, will enhance herbicidal effectiveness in controlling emerged weeds.

Postemergence Application Rates: Where a rate range is given, use a higher rate in the rate range for heavy weed infestations, weeds in advanced stages of growth or for extended residual preemergence weed control following control of existing emerged weeds.

Ground Application

Ground Broadcast: Apply GoalTender using conventional low-pressure ground spray equipment with flat fan spray nozzles. Follow manufacturer's recommendation for spraying pressure and boom height. An off-center (OC) nozzle positioned at the end of the boom may be desired. Check calibration of spray equipment before each use.

Directed Sprays: Apply GoalTender as a coarse low-pressure spray in a spray volume of 20 or more gallons of spray per acre (broadcast basis). Follow manufacturer's recommendations for nozzle spacing and operating pressure. Spray should be directed toward the soil at the base of the crop. In row crops, use a minimum of 2 flat fan nozzles per row (one on each side) and for optimum spray coverage use 4 flat fan nozzles per row (two on each side). The 2 forward nozzles should point forward and downward while the rear nozzles should point to the rear and downward. With either sprayer system, nozzles should be adjusted to cover the weed foliage but minimize contact with the crop. Do not apply with hollow cone nozzles.

IMPORTANT: GoalTender is a contact herbicide. Contact of sprays or drift with foliage or green stems can cause severe crop injury. Use directed sprays and spray shields and/or leaf lifters as necessary to minimize contact of spray or drift with crop foliage or stems. Young green stems of woody plants are also susceptible to injury from spray contact. Potential for injury to woody stems diminishes with loss of green color and the development of relatively impervious non-living corky tissue (bark) on the surface of the stem.

Band Application: Application rates listed in this label are for broadcast application. For band application, the rate per broadcast acre should be reduced according to the following formula:

Band Width (in inches) Row Width (in inches)	X	Rate per Broadcast Acre	=	Amount Needed per Acre for Banded Application

Spot Application

For spot application, apply sprays uniformly to soil for preemergence weed control or on a spray-to-wet basis for postemergence weed control. Mix the required amount of GoalTender with the recommended specified amount of water. For preemergence weed control, use one-half to one gallon of spray per 1000 sq ft. For postemergence weed control use a minimum of 1 gallon of spray per 1000 sq ft and add an 80% nonionic surfactant at the rate of 0.5 fl oz (1 Tbs) per gallon of spray. If making spot applications within an established crop, use coarse low-pressure sprays and direct the spray to the soil beneath the plants. To avoid crop injury, do not allow spray to contact leaves and stems of herbaceous plants or leaves or green stems of woody plants.

Amount of GoalTender Required to Treat 1000 sq ft at Specified Application Rate					
0.25 pt/acre	**0.5 pt/acre**	**1.0 pt/acre**	**1.5 pt/acre**	**2.0 pt/acre**	**4.0 pt/acre**
0.1 fl oz (2.75 ml)	0.2 fl oz (5.5 ml)	0.4 fl oz (11 ml)	0.55 fl oz (16.5 ml)	0.75 fl oz (22 ml)	1.5 fl oz (44 ml)

1 pint = 16 fl oz; 1 fl oz = 29.6 (30) ml

Aerial Application

Use aerial boom equipment designed for use with herbicides and a minimum spray volume of 10 gallons per acre (5 gallons per acre if tank mixed with glyphosate). **Do not aerially apply GoalTender unless crop-specific use directions specifically allow and provide directions for aerial application.**

AVOID DRIFT: Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result. Extreme care must be exercised to prevent spray drift that could result in damage to other crops or desirable vegetation. Adhere to the following guidelines when aerial applications are to be made.

Spray Drift Management (Aerial Application): Avoiding spray drift at the application site is the responsibility of the applicator. The potential for spray drift is controlled by the interaction of many equipment-and-weather-related factors. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator must adhere to the following requirements when GoalTender is aerially applied:

1. Do not apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least 1/2 mile from all crops and desirable vegetation, except the following:
   Maintain a minimum downwind buffer zone of:
   - 150 feet from dormant treefruit/nut/vine crops and overwintering sugar beets.
   - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets, and non-targeted vegetable fallow beds.
3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any non-targeted vegetable fallow bed, crop, or desirable vegetation.

The use of a drift control agent may be required by local regulations. However, the drift control agent may decrease the weed control effectiveness.

Important: Aerial applicators must be familiar with the label for GoalTender and follow all applicable use precautions. Applying GoalTender in a manner other than specified in this label is done at the user's risk. Users are responsible for all loss or damage resulting from aerial spraying. In addition, aerial applicators should follow all applicable state and local regulations and ordinances. In interpreting the label and local regulations, the most restrictive limitations apply.

Chemigation Instructions

Do not apply this product through any irrigation system unless the instructions for chemigation are followed. **Do not apply GoalTender through chemigation equipment unless chemigation is allowed by Crop-Specific Use Directions.**

Apply this product only through sprinkler (center pivot, solid set, portable lateral, or low-volume (micro-sprinkler)), drip (trickle), or flood (basin) irrigation systems. Refer to use directions for specific crops for

instructions as to which type of irrigation system may be used. Do not apply this product through any other type of irrigation system.

- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Sprinkler Chemigation (Foliar Spray Uses)

For sprinkler irrigation, sufficient water should be applied at the beginning of the irrigation period to insure uniform wetting of the plant and/or soil surfaces. Meter GoalTender into the sprinkler irrigation system at a continuous uniform rate during the middle 1/3 of the irrigation period to allow for uniform distribution to target weeds and/or soil surface. Continue irrigation during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. During sprinkler irrigation, sufficient water should be applied to insure water penetration to a depth of two inches.

AVOID DRIFT: Extreme care must be exercised to prevent spray drift that could result in damage to other crops or desirable vegetation. Use the following guidelines when applications of GoalTender are made through sprinkler irrigation equipment:

1. Do not apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least 1/2 mile from all crops and desirable vegetation, except for the following:
   Maintain a minimum downwind buffer zone of:
   - 150 feet from dormant treefruit, dormant vines and overwintering sugar beets.
   - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets and vegetable fallow beds.
3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any vegetable fallow bed, crop, or desirable vegetation.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

Flood (Basin) Chemigation (Soil Drench Uses)

GoalTender should be continuously metered into the water during the entire irrigation period. Agitation in the pesticide supply tank is suggested. Best weed control results from GoalTender applied through flood (basin) irrigation systems are obtained when a uniform distribution and flow of irrigation water is maintained over level land.

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- The system must contain a functional check calve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain functional automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Drip (Trickle) Chemigation (Soil Drench Uses)

To achieve optimum distribution of GoalTender in the soil surface, meter GoalTender at a continuous uniform rate during the middle 1/3 of the irrigation period. For best results, GoalTender should be uniformly distributed across the wetted area to help reduce the "ring effect" of weed escapes. Continue irrigation during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system.

To apply a pesticide using drip (trickle) chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pipe and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Chemigation Calibration: For Low-Volume Sprinklers (Micro-sprinklers) and Drip (Trickle) Irrigation Systems

Calculation of use rate is based on wetted area around emitters - NOT on grove acres. To determine correct amount of GoalTender, use the following formula:

1. Treated area per each emitter = A
   A = 3.14 x (radius x radius)

   Example: If the average distance from emitter to perimeter of wetted area measured at the soil surface is 13 inches, then
   A = 3.14 X (13" x 13")
   A = 3.14 X (169")
   A = 530.7 square inches

2. The area in square feet wet in each acre = B

$$B = \frac{A \times \text{emitters/acre}}{144}$$

   Example: If there are 300 emitters per acre, then

$$B = \frac{530.7 \times 300}{144} = B = 1105.6 \text{ square feet wetted per acre}$$

3. The total area (in square feet) wet by your system = C
   C = B X acres covered by system

   Example: If the system covers 20 acres, then
   C = 1105.6 square feet per acre x 20 acres
   C = 22,112 square feet wetted by system

4. Amount of GoalTender to inject = S

   Rate per treated acre of GoalTender = R

$$S = \frac{C \times R}{43{,}560} = \text{pints of GoalTender}$$

   Example: If the desired application rate per treated acre is 1 quart of GoalTender, then

$$S = \frac{22{,}112 \times 1.0}{43{,}560} = S = 0.507 \text{ pints of GoalTender should be injected into system.}$$

Note: Select the proper rate based on weed spectrum and desired length of control (See **Rate Ranges** section below).

Chemigation Systems Connected to Public Water Systems

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from a point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Mixing Directions

Shake well before use. Fill the spray tank at least one-third full of clean water. With the pump and agitator running, add the specified amount of herbicides to the spray tank. The order of addition to the spray tank should be (1) wettable powders, (2) flowables and (3) soluble liquids. Complete filling of the spray tank with water.

Use of Surfactants: For all applications of GoalTender where postemergence weed control is desired **(except garlic and onions)**, add a minimum of 2 pints of 80% active nonionic surfactant (cleared for application to growing crops) per each 100 gallons of spray. The addition of 4 pints of nonionic surfactant is specified to enhance postemergence activity when hard water (greater than 600 ppm) is used. Maintain agitation until spraying is completed.

Tank Mixing Precautions:

- Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.
- Do not exceed specified application rates. Do not tank mix this product with another pesticide that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.

Tank Mix Compatibility Testing: A jar test is specified prior to tank mixing to ensure compatibility of this product and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Sprayer Clean-up: Thoroughly flush spray equipment (tank, pump, hoses and boom) with clean water before and after each use. Residues of GoalTender remaining in spray equipment may damage other crops. The addition of a non-ionic surfactant to equipment flushing waters at the rate of 1 quart per 100 gallons is specified to aid in removal of residues of GoalTender.

Crop-Specific Use Directions

Artichoke (Globe)

Post-Directed Spray Application

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	**Application Method:** Apply as a directed spray to the soil surface between the rows and at the base of artichoke plants in a minimum spray volume of 40 gallons per acre. **Timing to Crop:** Apply after completion of ditching operations. Separate applications of up to 2 pt/acre may be made 8 to 10 weeks apart or a single application of up to 3 pt/acre may be made. **Timing to Weeds:** Preemergence up to 8 leaf stage.

Precautions:

- Do not apply over-the-top. Contact with direct spray or drift will cause injury to artichoke fronds or severe injury to buds or flowers.
- Application of GoalTender to artichoke plantings should be delayed a minimum of 60 days after cutting back or transplanting.

Restrictions:

- Do not apply more than 3 pints of GoalTender per acre per season as a result of a single application or multiple applications.
- **Preharvest Interval:** Do not apply within 5 days of harvest.

Key Weeds Controlled

Preemergence	Postemergence
cheeseweed (malva)	cheeseweed (malva)
groundsel, common	groundsel, common
lambsquarters, common	mustard, common yellow
mustard, common yellow	nettle, burning
oxalis (bermuda buttercup) †	oxalis (bermuda buttercup)
shepherdspurse	shepherdspurse
sowthistle, annual	sowthistle, annual

† Suppression

Broccoli / Cabbage / Cauliflower

Pre-Transplant (Preplant) Application for Preemergence Broadleaf Weed Control

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	0.5 - 1	**Pre-Transplant Application Only:** Apply broadcast to final seedbed prior to transplanting. Use lower rate in the rate range on coarse textured soils with less than 1% organic matter. Use the highest rate in the rate range on medium to fine textured soils or soils containing greater than 1% organic matter. Transplanting should be accomplished with minimal soil disturbance and soil left undisturbed during the time weed control is desired.

Precautions:

- Pre-transplant applications may result in initial, but temporary, crop injury (leaf cupping or crinkling) and is enhanced if crop leaves come in direct contact with treated soil. Crop will rapidly outgrow this condition and develop normally. Severe crop injury may result if transplants are under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides or storage conditions. The use of transplants less than 5 weeks old or use of extremely succulent transplants grown in containers less than 1 inch square, may increase the severity of crop injury. Hardening off, increasing the age of transplants or increasing the size of the rooting containers will lessen the possibility and/or severity of potential crop injury.
- GoalTender will assist in early season annual grass control, however, a herbicide program for preemergence or postemergence control of annual grasses is specified.
  Note: Do not apply GoalTender if an acetanilide herbicide such as Dual Magnum herbicide, Lasso herbicide, or Ramrod herbicide has been applied to the field during the current growing season as severe crop injury may occur.
- Do not apply GoalTender as a preemergence treatment to direct-seeded broccoli, cabbage or cauliflower.
- Do not apply GoalTender post-transplant or over-the-top of broccoli, cabbage or cauliflower.
- Applications to muck soils may result in partial weed control or suppression.

• Furrow and drip irrigation immediately after transplanting and under high temperatures can result in increased crop injury. Sprinkler irrigation is specified during early establishment of transplants. If these conditions cannot be met, GoalTender herbicide should not be used.
Crop-Specific Restrictions: • Do not apply more than 1 pint of GoalTender per treated acre per season.

Key Weeds Controlled:

Preemergence
carpetweed pigweed, redroot purslane, common smartweed, Pennsylvania

Cacao (Bearing And Nonbearing)

(For Use Only in Hawaii)

GoalTender may be applied as a pre-transplant treatment or to established or recently transplanted cacao.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	1 - 4	**Pre-transplant Application:** Up to 2 pints per broadcast acre may be applied as a pre-transplant application. **Application to Established Plantings:** In established plantings, including recently transplanted cacao plants, apply as a directed spray to the orchard floor. Use higher rates in rate range and increase spray volume to control dense growth of existing weeds or for extended residual preemergence weed control.
Precautions: • Do not apply preplant or preemergence to direct-seeded cacao. • GoalTender should be applied to only healthy growing trees/transplants of suitable size to allow directed sprays. Avoid spray contact with foliage.		
Crop-Specific Restrictions: • Do not apply more than 4 pints of GoalTender per acre as a single application or more than 12 pints per acre per year. • **Preharvest Interval:** Do not apply GoalTender within 1 day of harvest.		

Key Weeds Controlled

Preemergence	Postemergence
ageratum buttonweed crotalaria purslane, common spurge, garden	purslane, common spurge, garden

Citrus (Nonbearing)

Citrus, such as Calamondin, Chironja, Citrus Citron, Grapefruit, Kumquat, Lemon, Lime, Mandarin, Pummelo, Satsuma Mandarin, Sour Orange, Sweet Orange, Tangelo, Tangerine, Tangor

GoalTender may be applied only in non-bearing citrus orchards. Apply only as a directed spray to the orchard floor avoiding contact with citrus foliage.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	3	**Preemergence Weed Control:** Up to 3 pt/acre may be applied for residual preemergence weed control. **Postemergence Weed Control:** The 3 pint/acre rate will control weeds up to 4 inches tall. Weeds greater than 4-leaf or 4 inches tall may be partially controlled. Use sufficient spray volume for complete and uniform coverage of weeds. Increase the spray volume with increased weed height and density to ensure complete coverage.
Postemergence	1 - 3	

Tank Mixing: Refer to Mixing Directions section for Tank Mixing Precautions.

- **Preemergence Use:** For residual control of grass weeds, GoalTender may be tank mixed with grass herbicides labeled for use in citrus.
- **Postemergence Use:** For broader spectrum postemergence control of emerged grass and broadleaf weeds, GoalTender may be tank mixed with paraquat (Gramoxone herbicide) or glyphosate.

Precautions:

- Do not apply during periods of new citrus foliage growth. Applications should be made after foliage has fully expanded and hardened off. Avoid direct spray contact with citrus foliage.

Crop-Specific Restrictions:

- Apply GoalTender only to nonbearing citrus (trees that will not bear fruit for one year).
- Do not apply more than 3 pints (1.5 lbs ai) of GoalTender per acre per year as a result of a single or multiple applications.

Key Weeds Controlled

(Arizona and California)		(Florida, Louisiana and Texas)	
Preemergence	**Postemergence**	**Preemergence**	**Postemergence**
burclover cheeseweed (malva) fiddleneck, coast filaree, broadleaf filaree, redstem filaree, whitestem groundsel, common henbit knotweed, prostrate lambsquarters, common lettuce, prickly pigweed, redroot purslane, common redmaids rocket, London shepherdspurse sowthistle, annual spurge, prostrate spurge, spotted	cheeseweed (malva) fiddleneck, coast filaree, broadleaf † filaree, redstem † filaree, whitestem † groundsel, common henbit minerslettuce nettle, burning pigweed, redroot redmaids shepherdspurse sowthistle, annual	cudweed, narrowleaf eveningprimrose, cutleaf †† groundcherry, cutleaf lambsquarters, common nightshade, American black nightshade, black pepperweed, Virginia pigweed, redroot poinsettia, wild pusley, florida sida, prickly (teaweed) smartweed, pennsylvania sowthistle, annual spurge, prostrate spurge, spotted	balsamapple cudweed, narrowleaf ††† eveningprimrose, cutleaf †† groundcherry, cutleaf groundcherry, Wright lambsquarters, common morningglory, annual nightshade, American black nightshade, black pepperweed, Virginia pigweed, redroot poinsettia, wild purslane, common pusley, florida sida, prickly (teaweed) smartweed, pennsylvania sowthistle, annual

† GoalTender at the 3 pt/acre will provide control of filaree and other weeds up to 4-inch stage. Applications to weeds beyond the 4-inch stage may result in partial control.

†† Highest rate and/or multiple applications may be required for acceptable control.

††† Maximum 0.5-inch diameter

Clary Sage

Clary Sage *(Salvia sclarea)* Grown and Utilized in the Essence Industry
(For Use Only in North Carolina)

Weed Control	Rate (pt/acre)	Specific Use Directions
Postemergence	0.25 – 0.5	GoalTender may be applied to established clary sage for control of henbit *(Lamium amplexicaule*) and other winter annual broadleaf weeds during the winter and spring season. Apply shortly after the first flush of henbit is in the 2- to 4-leaf stage of growth. Additional applications may be required to control subsequent weed flushes through the spring season. After treatment, henbit will stop growing and slowly die. Increase the spray volume if weed growth is dense.
Precautions: • Clary sage may respond to the topical application of this product with some marginal leaf burn, but recovery is rapid.		
Crop-Specific Restrictions: • Do not apply more than 3 pints per acre per year.		

Coffee (Bearing And Nonbearing)

(For Use Only in Hawaii)

GoalTender may be applied to established coffee, recently transplanted coffee, or as a pre-transplant treatment. In established non-dormant coffee, apply as a directed spray avoiding contact with crop foliage. Newly established transplants should be healthy and well established and of sufficient size to allow use of directed sprays without contacting crop foliage.

GoalTender may be applied over-the-top of dormant coffee transplants. Transplants are considered to be dormant when active terminal growth has ceased and terminal buds have formed. Application over-the-top of coffee plants after buds start to swell (a sign that new growth has resumed) may result in crop injury.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	1 - 4	**Preemergence Weed Control:** ● Apply as a directed spray to the orchard floor beneath established coffee plants. ● Up to 2 pints per acre may be applied as a pre-transplant application prior to transplanting coffee plants. **Postemergence Weed Control:** Increase the spray volume when weed growth is dense or trash is present; or use a higher rate within the rate range for extended residual preemergence weed control.
Tank Mixing: Refer to Mixing Directions section for Tank Mixing Precautions. Apply tank mixes only as a directed spray.		
Precaution: To prevent foliar injury, do not apply during periods of rapid new growth or allow spray or drift to contact actively growing foliage.		

Crop-Specific Restrictions:

- Do not apply preplant or preemergence to direct-seeded coffee.
- Do not apply more than 4 pints per broadcast acre of GoalTender in a single application or 12 pints per broadcast acre per year.
- **Preharvest Interval:** Do not apply GoalTender within one (1) day of harvest.

Key Weeds Controlled:

Preemergence	Postemergence
ageratum buttonweed crotalaria purslane, common spurge, garden	purslane, common spurge, garden

Conifer Seedbeds, Transplants, Container Stock And Selected Field Grown Deciduous Trees

General Use Precautions and Restrictions:

- Do not apply GoalTender in an enclosed greenhouse structure as injury to plant foliage may result.
- Do not store or transport treated container stock in an enclosed structure until completion of 4 irrigations (minimum 21 days) as injury to non-labeled plants may occur.
- Apply GoalTender only to healthy conifer stock. Do not apply GoalTender to conifers that are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.
- Do not graze or harvest livestock forage from treated areas.

Key Weeds Controlled: When GoalTender is applied preemergence or postemergence at specified dosages and weed stages.

barnyardgrass †
bedstraw, catchweed
bittercress, lesser
bluegrass, annual †
buckwheat, wild
burclover
carpetweed
clover, red †
clover, white †
cocklebur, common
crabgrass, large †
fiddleneck, coast †
filaree, broadleaf
filaree, redstem
fireweed (from seed)
flixweed
foxtail, giant †
goosegrass †
groundcherry, cutleaf
groundcherry, wright
groundsel, common
henbit
jimsonweed
knotweed, prostrate
mustard, blue
mustard, tumble
mustard, wild
nettle, burning
nightshade, black
nightshade, hairy
oats, wild
orach, red
pepperweed, yellowflower
pigweed, prostrate
pigweed, redroot
pimpernel, scarlet
purslane, common
redmaids
rocket, London
sandspurry, red
shepherdspurse †
sida, prickly
smartweed, Pennsylvania
sorrel, red (from seed)
sowthistle, annual
speedwell, birdseye
spurge, prostrate ††
spurge, spotted ††

ladysthumb	spurry, corn
lambsquarters, common	tansymustard
lettuce, prickly	thistle, bull ††
mallow, little	thistle, Russian
mayweed	velvetleaf
minerslettuce	witchgrass
morningglory, ivyleaf †	woodsorrel, yellow ††
morningglory, tall †	

† Highest rate and/or multiple applications may be required for acceptable control.
†† Preemergence control only.

Conifer Seedbeds

Agricultural Use Requirements: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

GoalTender provides both postemergence and residual preemergence control of many broadleaf weeds and annual grass species.

Seeded conifers are tolerant to preemergence and postemergence applications of GoalTender. For weed control during the establishment of conifer seedlings, GoalTender can be applied after seeding of conifers, but prior to emergence. For weed control in emerged conifers, GoalTender may be applied over-the-top, but application should be delayed a minimum of 5 weeks after seedling emergence. If application is made during cool, cloudy weather, make certain that seedlings have hardened-off prior to spraying.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	0.5 - 2	**Application after planting, but prior to emergence of conifer seedlings:** Where grass weeds are present, apply 1 to 2 pints of GoalTender per acre. In known areas of high weed competition, apply 2 pints of GoalTender per acre. Broadcast to beds and irrigate with ½ to ¾ inch of sprinkler irrigation before weed emergence. GoalTender is most effective on annual grasses when applied preemergence.
Postemergence	0.5 - 1	**Application after emergence of conifer seedlings:** Application should be made to seedling weeds less than 4 inches in height (seedling grasses not exceeding the 2-leaf stage). Depending on subsequent weed flushes, multiple applications may be necessary to achieve season-long weed control.
Chemigation: GoalTender may be applied at labeled rates through sprinkler irrigation systems. For center pivot irrigation systems, apply the specified dosage of GoalTender per acre metered at a continuous uniform rate during the entire irrigation period, otherwise meter GoalTender at a continuous uniform rate during the middle 1/3 of the irrigation period. When applying by sprinkler irrigation, follow directions given in the Chemigation Instructions section of this label.		

Precautions:

- Occasionally spotting, crinkling, or flecking may appear on leaves of conifers. Leaves that receive direct spray or drift may be injured, but typically outgrow this condition rapidly and develop normally.

Crop-Specific Restrictions:

- Do not apply more than 4 pints of GoalTender per acre per year.

GoalTender may be applied to conifer seedbeds of the following species:
Important: When applied as directed, the conifer species listed on this label have shown tolerance to GoalTender. It is impossible, however, to evaluate this product on all varieties, biotypes and cultivars of listed species under all possible growing conditions. Until familiar with results under local growing conditions, the user should exercise reasonable judgment and caution with this product. Limit application of this product to a few plants in a small area to determine plant tolerance and extent of injury if such occurs, prior to initiating large-scale applications.

Douglas fir	*Pseudotsuga menziesii*
Fir	Fraser (*Abies fraseri)* Grand (*Abies grandis)* Noble (*Abies procera*)
Hemlock	Eastern hemlock (*Tsuga canadensis)*
Pine	Austrian (*Pinus nigra)* Eastern White (*Pinus strobus)* Himalayan (*Pinus wallichiana)* Jack (*Pinus banksiana)* Loblolly (*Pinus taeda)* Lodgepole (*Pinus contorta)* Longleaf (*Pinus palustris)* Monterey (*Pinus radiata)* Mugo (*Pinus mugo)* Ponderosa (*Pinus ponderosa)* Scotch (*Pinus sylvestris)* Shortleaf (*Pinus echinata)* Slash *(Pinus elliottii)* Virginia *(Pinus virginiana)*
Spruce	Blue (*Picea pungens)* Dwarf Alberta (*Picea glauca Conica)* Norway (*Picea abies)* Sitka (*Picea sitchensis)*

Conifer Transplants And Container Stock (Includes 2-0 Seedling And Christmas Tree Plantings)

Agricultural Use Requirements: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Many container-grown conifers and conifer transplants are tolerant to preemergence and postemergence applications of GoalTender. Applied postemergence, GoalTender provides postemergence control of emerged weeds and preemergence residual control of many broadleaf weeds and grasses (see Key Weeds Controlled) at the beginning of this section.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 4	**Transplanted and Container Grown Conifers:** For best results, preemergence applications should be made immediately after transplanting seedlings or to weed-free container stock. Postemergence applications should be made to weeds less than 4 inches in height. Two applications may be necessary, in fall-transplanted conifer fields, for season-long weed control. The addition of a non-ionic surfactant (0.25% v/v) labeled for application to growing crops, enhances the activity of GoalTender on emerged weeds.
Precautions: • Do not make over-the-top applications during periods of active conifer growth. Apply only before bud break or after new terminal growth has hardened off.		
Crop-Specific Restrictions: • Do not apply more than 4 pints of GoalTender per acre in a single application or more than 8 pints per acre per year.		

In addition to those conifer species listed under the Conifer Seedbed section, the following conifer species have been shown to be tolerant to GoalTender:

Arborvitae	*Thuja occidentalis* *Thuja orientalis*
Juniper	*Juniperus chinensis* *Juniperus horizontalis* *Juniperus procumbens* *Juniperus sabina* *Juniperus scopulorum*
Red cedar	*Juniperus virginiana*
Western Hemlock	*Tsuga heterophylla*
Yew	*Taxus species*

Selected Field-Grown Deciduous Trees

Listed field-grown deciduous trees are tolerant only to directed spray applications of GoalTender. GoalTender provides both preemergence and postemergence control of listed broadleaf weeds and grasses.

Timing to Crop: Apply GoalTender to established deciduous trees or after transplanting. For optimum weed control, applications should be made prior to weed germination. Apply only as a directed spray to soil beneath the trees.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Early postemergence	1 - 3	GoalTender may be applied to established deciduous trees or after transplanting as a single or split application. Apply as a directed spray to the soil surface. Use of spray shields to reduce exposure of foliage and bark is specified. The addition of a non-ionic surfactant (0.25% v/v) labeled for application to growing crops, will enhance herbicidal activity on emerged weeds. **Spot Application:** Spot treatments at specified rates may be used to control localized weed infestations. See use directions for Spot Application in the Application Methods and Cultural Practices section.

Tank Mixing: For broader spectrum control, GoalTender may be tank mixed with other preemergence or postemergence herbicides registered for this use in deciduous trees. Refer to Mixing Directions section for Tank Mixing Precautions.

Precautions:

- For maximum crop safety, directed applications should be prior to budbreak in the spring or after trees have initiated dormancy in the fall. Avoid contact of spray or drift with foliage or stems with green bark. Application after bud swell may result in crop injury. If a non-dormant application is required due to weed competition, apply only after foliage has fully expanded and hardened off. Use only directed sprays and spray shields to prevent spray contact with stems with green bark or foliage.
- Do not apply GoalTender to trees that have been weakened or are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, wind injury, drought, flooding, previously applied pesticides, insects, or winter injury as severe injury may result.

Crop-Specific Restrictions:

- Do not apply more than 3 pints of GoalTender per acre per year.
- Do not apply to bearing treefruit, nut and vine crops. For selected bearing treefruit, nut and vine crops, refer to Treefruit/Nut/Vine section of this label for use directions.
- Do not graze or feed livestock forage cut from areas treated with GoalTender.

GoalTender may be applied to the following deciduous tree species:

Almond ††	*Prunus spp.*
Apple ††	*Malus X domestica*
Apricot ††	*Prunus spp.*
Ash, Green Ash, White	*Fraxinus pennsylvanica* *Fraxinus americana*
Birch, River	*Betula nigra*
Cherry ††	*Prunus spp.*
Chestnut ††	*Castanea spp.*
Crabapple ††	*Malus spp.*
Cottonwood	*Populus spp.*
Dogwood	*Cornus florida*
Eucalyptus	*Eucalyptus viminalis* *Eucalyptus pulverulenta* *Eucalyptus camaldulensis*
Filbert ††	*Corylus spp.*
Lilac	*Syringa vulgaris*
Locust, Black	*Robinia pseudoacacia*
Maple, Black † Maple, Red † Maple, Sugar †	*Acer nigrum* *Acer rubrum* *Acer saccharum*
Myrtle, Crepe	*Lagerstroemia indica*
Nectarine ††	*Prunus spp.*
Nut, Hickory ††	*Carya sp.*
Nut, Macadamia	*Macadamia ternifolia*
Oak, Chestnut Oak, Cherrybark Oak, Nutt All Oak, Pin Oak, Red Oak , Water Oak, Willow	*Quercus prinus.* *Quercus pagoda* *Quercus nuttallii* *Quercus palustris* *Quercus. rubra* *Quercus nigra* *Quercus phellos*
Olive, Russian	*Elaeagnus angustifolia*
Poplar Poplar, Tulip	*Populus* spp. *Liriodendron tulipifera*

Peach ††	*Prunus persica*
Pear ††	*Pyrus spp.*
Pecan ††	*Carya spp.*
Pistachio ††	*Pistacia vera*
Plum ††	*Prunus spp.*
Prune ††	*Prunus spp.*
Redbud	*Cercis canadensis*
Sweetgum	*Liquidambar styraciflua*
Sycamore	*Platanus occidentalis*
Walnut, Black ††	*Juglans nigra*

† Do not apply to maple trees used for production of maple sap or maple syrup.
†† Apply only to nonbearing trees. For bearing treefruit, nut and vine crops, refer to specific use directions in the Treefruit/Nut/Vine section of this label.

Corn

FOR USE ONLY ON FIELD CORN IN CONJUNCTION WITH THE USDA WITCHWEED ERADICATION PROGRAM IN NORTH CAROLINA AND SOUTH CAROLINA

Apply GoalTender only as a directed spray from May through August for preemergence and postemergence control of witchweed *(Striga asiatica)*. Corn must be a minimum of 24 inches tall. Examine witchweed infested fields during the early part of the growing season to determine uniformity of corn stand and grass weed pressure. If necessary, cultivate weed-infested fields prior to initial application of GoalTender to allow for optimum soil coverage during the initial application. Fields treated with GoalTender should be inspected regularly for any breakthrough of witchweed. If breakthrough occurs, a second application should be made as soon as possible after appearance of witchweed. Repeat treatments should occur prior to bloom stage to prevent seed set.

Weed Control	**Rate (pt/acre)**	**Specific Use Directions**
Preemergence	1 – 1.5	**Initial Application:** Apply as a directed spray over the entire row surface at the rate of 1 pint per acre. Use up to 3 pints per acre in areas of heavy witchweed infestation. Use a minimum spray volume of 20 gallons per acre and a non-ionic surfactant at the rate of 2 pints per 100 gallons of spray.
Postemergence	0.5 - 1	**Repeat Applications:** In case of witchweed breakthrough a repeat application may be made at 0.5 to 1 pints per acre.
Precautions: • Do not spray over the top of the corn, as this may result in severe corn injury. Spray should contact only the lower 3 to 8 inches of the corn stalk and any leaves in this zone. Spray droplets contacting the lower leaves will cause necrotic spotting or streaking of sprayed tissue.		
Crop-Specific Restrictions: • Do not apply more than 2.5 pints (1.25 lb active) of GoalTender per acre during the growing season. • Do not apply any apply within 60 days of harvest. • Do not use corn plants from a treated field for green chop, ensilage, forage, or fodder.		

Cotton

Application Methods and Equipment: GoalTender may be applied as a post-direct spray to cotton a minimum of 6 to 8 inches tall. Care must be exercised to avoid spray contact with the cotton leaves. Use rigid precision ground spray equipment and spray shields to prevent spray contact with cotton foliage. Use branch lifters or shields, as necessary, to avoid contact of directed sprays with cotton plant.

Accurate, placement of spray nozzles is essential for uniform coverage of weeds and to minimize injury to cotton plants. Use a minimum broadcast spray volume of 20 gallons per acre and operate the sprayer at the minimum spray pressure specified by the spray nozzle manufacturer. GoalTender may be applied as a post-direct spray with only 2 flat fan nozzles per row (1 nozzle on each side of the row). For optimum coverage, use 4 flat fan nozzles per row (2 nozzles on each side of the row). The 2 forward nozzles should point forward and downward while the rear nozzles should point to the rear and downward. With either sprayer setup, nozzles should be carefully adjusted to cover the weed foliage with minimum contact to cotton plants. GoalTender may also be applied as a band application. **Do not use hollow cone nozzles.**

Tank Mixing: For control of additional broadleaf and grass weeds, GoalTender may be applied as a postemergence directed spray in tank mix combination with other herbicides registered for postemergence use in cotton (see Tank Mixing Precautions under Mixing Directions).

Weed Control	Rate (pt/acre)	Specific Use Directions
Postemergence	0.5 - 1	Apply as a post-directed spray. For optimum control, use the 1 pint per acre rate on actively growing weed seedlings with no more than 4 true leaves (not counting cotyledon leaves). Effective control of succulent weeds at the 2- to 3-leaf stage can usually be obtained at the 0.5 pint per acre rate. See Mixing Directions for surfactant recommendations. Where available, irrigation may be applied prior to application of GoalTender to encourage maximum weed emergence. Irrigation following application will improve preemergence activity of GoalTender against nightshade and groundcherry species.

Precautions:

- Do not apply to cotton less than 6 inches tall or severe crop injury will result.
- Exercise care to avoid spray contact with cotton leaves. Leaves accidentally sprayed will exhibit necrotic (dead) spots and may be dropped from the plant. Crop injury may be enhanced if application is made when excessive soil moisture is present or rainfall occurs immediately after application, however, cotton will outgrow this condition and develop normally.

Crop-Specific Restrictions:

- **Western Cotton (AZ and CA):** Do not apply more than 1 pint (0.5 lb active) of GoalTender per acre in a single application, or more than a total of 2 pints (1.0 lb active) of GoalTender per broadcast acre per season as a result of multiple applications. Do not apply within 75 days of harvest.
- **Southern Cotton (All other states):** Do not apply more than 1 pint (0.5 lb active) of GoalTender per acre of per season as a result of a single application or multiple applications. Do not apply within 90 days of harvest.

Key Weeds Controlled:

Postemergence	
cocklebur, common	nightshade, black
croton, tropic	nightshade, hairy
groundcherry, cutleaf	pigweed, redroot
groundcherry, Wright	poinsettia, wild †
jimsonweed	purslane, common
lambsquarters, common	sesbania, hemp
morningglory, annual (up to 6 leaf)	sicklepod ††
nightshade, American black	sida, prickly (teaweed) †
	smartweed, pennsylvania
	velvetleaf

† Multiple applications may be required for acceptable control.
†† Post-direct applications of GoalTender will control or suppress seedlings not exceeding the one true leaf stage.

Cottonwood

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	GoalTender may be applied as a single or split application. Apply as a directed spray to soil at the base of cottonwood trees. Use the higher rate in the rate range for extended preemergence weed control or for postemergence control of weeds up to the 6 leaf stage. The addition of a non-ionic surfactant at 2 pints per 100 gallons of spray will enhance the postemergence activity of GoalTender on emerged weeds.
Precautions: • Apply GoalTender immediately after transplant only to dormant healthy cottonwood stock. • In established stands, do not allow sprays of GoalTender to contact cottonwood foliage. In newly established cottonwood plantings, use spray shields, if necessary, to prevent exposure of green bark and foliage.		
Crop-Specific Restrictions: • Do not apply more than 3 pints per acre of GoalTender in a single application or more than 9 pints per acre per year.		

Key Weeds Controlled:

groundsel, common	mustard, hedge
knotweed, prostrate	shepherdspurse
lambsquarters, common	smartweed, Pennsylvania

Eucalyptus

Apply GoalTender for preemergence and postemergence control of listed broadleaf weeds in established eucalyptus plantings.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	**Directed Spray:** GoalTender may be applied as a single or split application. Apply as a directed spray to soil at the base of eucalyptus trees. Use the higher rate in the rate range for extended preemergence weed control or for postemergence control of weeds up to the 6 leaf stage. The addition of a non-ionic surfactant at the rate of 2 pints per 100 gallons of spray, will enhance the postemergence activity of GoalTender on emerged weeds. **Over-the-Top Application:** In new plantings, apply GoalTender just before or immediately after transplanting eucalyptus seedlings that are in a dormant condition (i.e., leaves may be present, but terminal growth has hardened off and terminal buds have formed). In established plantings, GoalTender may be applied as an over-the-top spray when plants are in a dormant condition.

Precautions:

- At transplant, apply GoalTender only to healthy "dormant" healthy eucalyptus stock. In established plantings, use spray shields, if needed, to prevent exposure of foliage and bark of small and/or actively growing plants.
- To avoid phytotoxicity, make over-the-top applications only to eucalyptus trees in a dormant condition. Do not make over-the-top applications after bud break and resumption of active growth.

Crop-Specific Restrictions:

- Do not apply more than 3 pints of GoalTender per acre in a single application or more than 9 pints per acre per year.

Key Weeds Controlled:

Preemergence	Postemergence
burclover	cheeseweed (malva)
cheeseweed (malva)	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf †
filaree, broadleaf	filaree, redstem †
filaree, redstem	filaree, whitestem †
filaree, whitestem	groundsel, common
groundsel, common	henbit
henbit	minerslettuce
knotweed, prostrate	nettle, burning
lambsquarters, common	pigweed, redroot
lettuce, prickly	redmaids
pigweed, redroot	shepherdspurse
redmaids	sowthistle, annual
rocket, London	
shepherdspurse	
sowthistle, annual	
spurge, prostrate	
spurge, spotted	

† At the 3-pint rate, GoalTender will provide control of filaree up to the 6-leaf stage.

Use on Fallow Beds

(Not for use prior to planting soybeans in California)

Used alone or in tank mix combination with glyphosate, GoalTender provides preemergence and/or postemergence control of winter annual broadleaf weeds on land to be planted to crops.

Prior to planting, treated fallow beds should be thoroughly tilled (incorporated) to a depth of at least 2.5 inches. GoalTender is no longer herbicidally effective once the active layer in the soil surface is disrupted by soil incorporation.

Aerial Application: GoalTender may be aerially applied for weed control in fallow beds. Follow requirements for Aerial Application in the Product Information section of this label.

Minimum Treatment to Planting Intervals for listed crops:

	Minimum Treatment-to-Planting Interval	
Direct Seeded Crops	**GoalTender (up to 0.5 pint/acre)**	**GoalTender (>0.5 to 1 pint/acre)**
carrot	90 days	90 days
cotton	7 days	7 days
potato	60 days	60 days
sugar beet	60 days	90 days
other root/tuber crops	90 days	90 days
onions	180 days	180 days
other bulb vegetables	180 days	180 days
cabbage	90 days	90 days
cauliflower	90 days	90 days
other brassica crops	120 day	120 days
lettuce	90 days	120 days
other leafy vegetables (except brassica crops)	120 days	120 days
pepper	90 days	120 days
tomato	60 days	120 days
other fruiting vegetables	120 days	120 days
cantaloupe	60 days	90 days
squash	90 days	120 days
watermelon	60 days	60 days
other cucurbits	90 days	120 days
dry beans	60 days	60 days
peanut	60 days	60 days
other legume vegetables	60 days	60 days
safflower	60 days	60 days
Soybeans (Except California)	7 days	7 days
cereal grains: Including barley, buckwheat, corn, proso millet, pearl millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, and wild rice	10 months	10 months
cotton and soybean	(see specific labeling for fallow beds to be planted to cotton or soybeans)	

Transplanted Crops	Minimum Treatment-to-Planting Interval	
	GoalTender (up to 0.5 pint/acre)	GoalTender (>0.5 to 1 pint/acre)
celery	30 days	30 days
conifer	0 days	0 days
garlic	0 days	30 days
grape/kiwi	0 days	0 days
onion	0 days	30 days
pepper	30 days	30 days
strawberries	30 days	30 days
tomato	30 days	30 days
treefruit/nut/citrus	0 days	0 days

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	0.5 - 1	Use 20 or more gallons of spray volume per acre and increase spray volume for dense weed growth. Use the 0.5 pint per acre rate for up to 4 weeks of preemergence control and postemergence control of susceptible weeds up to 4-leaf stage. Use the 1 pint per acre rate for up to 8 weeks of preemergence control and postemergence control of susceptible weeds up to 6-leaf stage. Best preemergence control is achieved when irrigation or rainfall occurs within 3 or 4 weeks after application. A tank mix with glyphosate is specified if the treatment area contains dense weed populations, oversized weed seedlings, volunteer grains, annual grasses or under unfavorable environmental conditions. **Outside of California:** For enhanced contact activity (burndown/suppression) tank mix 3.25 fl oz of GoalTender with the labeled rate of either glyphosate or paraquat (Gramoxone). Apply at the application rate and weed growth stages specified in the respective tank mix product label.

Precautions:

- **Failure to achieve thorough and complete incorporation, or to follow the** specified **treatment-planting interval, may result in stand reduction and/or vigor reduction of the planted crop.**
- Crop injury may be enhanced if newly seeded crops or transplants are under stress due to drought, flooding, excessive fertilizer or soil salts, low soil temperatures, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.
- **Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result.**

Crop-Specific Restrictions:

- Do not apply more than 1 pint of GoalTender per acre per fallow season.

Key Weeds Controlled: GoalTender provides preemergence and postemergence control of the following weeds on fallow beds: †

buttercup, smallflower	mustard species
cheeseweed (malva)	nettle, burning
eveningprimrose, cutleaf ††	oxalis
fiddleneck, coast	pigweed, redroot
filaree, broadleaf	purslane, common
filaree, redstem	redmaids
geranium, Carolina	rocket, London
groundcherry, cutleaf	shepherdspurse
groundsel, common	sida, prickly
henbit	sowthistle, annual
ladysthumb	velvetleaf (wild cotton)
minerslettuce	

† Thorough spray coverage is essential to maximize the postemergence activity of GoalTender. For postemergence control when applied by air, a tank mixture of GoalTender with either glyphosate or paraquat (Gramoxone) is specified.

†† Requires maximum rate and/or multiple applications for effective control.

Fallow bed use prior to transplanting peppers or strawberries grown in plastic culture

GoalTender herbicide may be applied broadcast or banded as a fallow bed application to pre-formed beds prior to transplanting peppers or strawberries grown in plastic culture. The GoalTender use rate is up to 1 pint per broadcast acre. It is recommended that soil moisture be used to activate GoalTender soon after application. This can be done by sprinkler irrigation with approximately 1/2 inch of sprinkler irrigation and then applying the plastic any time during the 30-day treatment to planting interval. Or, if there is adequate existing soil moisture, apply plastic to the beds as soon as possible after application and allow the moisture which condenses and accumulates beneath the plastic to thoroughly wet the treated soil.

Mechanical incorporation of the fallow-bed treatment prior to laying plastic is not required. Not disturbing the soil may allow for extended weed control. Not incorporating increases the potential for crop injury, especially under wet conditions. Therefore, the treatment should be incorporated if the risk of crop injury is not acceptable. The minimum treatment to planting interval is 30 days.

Fallow Land

(For Use Only In Idaho, Oregon and Washington)

Used alone or in a tank mix combination with glyphosate, GoalTender provides preemergence and/or postemergence control of listed annual broadleaf weeds in a fallow land system. GoalTender may be used to reduce weed growth prior to the establishment of a dry soil mulch. Use is restricted to summer fallow on land that will be planted the following year to winter wheat, barley or oats.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	0.25 - 1	**GoalTender Alone:** Preemergence weed control occurs as seedling weeds come in contact with the soil-applied herbicide during emergence. Postemergence weed control is most effective when GoalTender is applied to seedling weeds less than 4 inches in height. Apply GoalTender in 15 or more gallons of water per acre and increase spray volume if weed growth is dense. Use of an 80% active nonionic surfactant cleared for use on growing crops is specified for optimum postemergence weed control.
Tank Mixing: For postemergence control of annual grass weeds, 0.25 - 1 pt/acre of GoalTender may be tank mixed with labeled rates of glyphosate. Follow label instructions for Fallow and Reduced Tillage Systems for the glyphosate product. Refer to Mixing Directions section for Tank Mixing Precautions.		
Use Restrictions for Fallow Land: • Do not apply more than 1 pint per acre per application or more than 1 pint per use season.		

Key Weeds Controlled: GoalTender provides preemergence and postemergence control of the following weeds on fallow land:

fiddleneck, coast henbit lettuce, prickly (china lettuce) mustard, blue (purple mustard) mustard, tumble (Jim hill mustard)	pigweed, redroot purslane, common shepherdspurse sowthistle, annual

Garbanzo Beans

(For Use Only in Arizona and California)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	0.5	Apply after planting but prior to weed or crop emergence as a single broadcast application using a spray volume of 20 or more gallons of water per acre.
Precautions: • Garbanzo beans are tolerant to preemergence application of GoalTender, however, under certain conditions, severe but temporary crop injury may occur. A heavy splashing rain shortly after crop emergence or wet soil conditions during early growth stages can cause leaf cupping, crinkling, stunting or defoliation of the garbanzo seedlings. Injury, when it occurs, it is usually limited to the first few leaves that develop after plants emerge from the soil. Delays in crop development and/or maturity may result, but Garbanzo beans do recover with little to no impact on yield.		

Crop-Specific Restrictions:

- Do not apply more than 0.5 pint per acre of GoalTender in a single application.
- Do not use bean vines for livestock feed or hay.
- Maximum total application rate per year is 1.5 lbs ai/A

Key Weeds Controlled:

Preemergence
groundsel, common
mallow, little
rocket, London
shepherdspurse

Garlic

Agricultural Use Requirements: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

For optimum preemergence weed control, the soil surface should be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices which result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control.

Direct Seeded Garlic (Postemergence Application):		
Weed Control	**Rate (per acre)**	**Specific Use Directions**
Postemergence	1 - 2 fl oz	**Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:** Apply GoalTender at 1 to 2 fl oz per acre to direct seeded garlic that has at least 3 fully developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 1 to 2 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control.
Postemergence	0.25 – 0.5 pt	**Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah and Washington:** Apply GoalTender at 0.25 to 0.5 pt per acre to seeded garlic that has at least 2 fully developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 0.25 to 0.5 pt per acre may be applied up to a maximum of 1.25 pints per

		acre per use season. For optimum postemergence weed control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control.
Postemergence	0.25 pt	**All Other States:** Apply GoalTender at 0.25 pt per acre to direct seeded garlic that has at least 2 fully developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 0.25 pt per acre may be applied up to a maximum of 1 pint per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control.

Direct Seeded Garlic (California Only)		
Weed Control	**Rate (per/acre)**	**Specific Use Directions**
Preemergence Postemergence	0.5 pt	**Application after planting but prior to garlic emergence:** Apply GoalTender after planting, but prior to crop emergence, for preemergence control of listed broadleaf and grass weeds using ground, air or sprinkler irrigation (chemigation). **Aerial application:** Apply in a minimum spray volume of 10 gallons per acre. Follow Aerial Application instructions and precautions in the Product Information section of this label. **Postemergence directed application:** Apply GoalTender as a directed spray to garlic that is at least 12 inches tall. Accurate, uniform placement of directed postemergence sprays is essential for effective weed control and to minimize injury to garlic plants. Use low-pressure sprays and a minimum spray volume of 20 gallons per acre. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control. **Sprinkler irrigation (portable lateral or solid set) preemergence or postemergence:** Apply GoalTender at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Apply after planting but prior to garlic emergence or postemergence when garlic is at least 12 inches tall. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.

Precautions:

- **Garlic Response to Preemergence Applications of GoalTender:** Following a preemergence application of GoalTender, a chlorotic band around some of the leaves may be observed after the first irrigation (or rainfall) following garlic emergence.
- **Garlic Response to Post-direct Applications of GoalTender:** Post-direct applications may cause chlorotic leaf banding, necrotic lesions, or stunting of the garlic plants. Symptoms will be more severe if applications are made during cool, wet, overcast, or foggy weather. Garlic will typically outgrow these conditions. A delay in crop development, maturity, reduced yields, or quality may result

Transplanted Garlic: Postemergence Application Immediately after Planting		
Weed Control	**Rate (per/acre)**	**Specific Use Directions**
Preemergence Postemergence	up to 1 pt	**All States Except Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:** Transplanted garlic is most tolerant of a postemergence application immediately after transplanting. An application of up to 1 pint per acre may be made within two days after transplanting. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. If less than 1 pint per acre is applied, a second application can be made two weeks or more after transplanting. Do not exceed the maximum use rate of 1 pint per acre of GoalTender per season as a result of multiple applications.
Preemergence Postemergence	1 - 2 fl oz	**Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:** Multiple treatments at 1 to 2 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre per use season. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area.

Key Weeds Controlled:

canarygrass (annual)	puncturevine
eveningprimrose, cutleaf	purslane, common †
groundsel, common	rocket, London
mallow, little (malva)	sage, lanceleaf
nightshade, black	shepherdspurse †
pigweed, prostrate †	sowthistle, annual
pigweed, redroot †	

† Key weeds controlled at specified rates in Northeastern States.

Garlic - Crop-Specific Precaution (Postemergence Application):

- Postemergence applications of GoalTender may cause chlorotic leaf banding, necrotic lesions, or stunting of the garlic plants. Symptoms may be more severe if garlic emerged under cool, wet, overcast, or foggy weather. These conditions are temporary and should not affect the vigor or development of garlic plants.

Crop-Specific Restrictions (Applicable to All Methods of Application):

- In all states **except** Northeastern states, do not apply until **direct seeded** garlic plants have two fully developed true leaves. In the Northeastern states, do not apply until direct seeded garlic plants

Crop-Specific Restrictions (Applicable to All Methods of Application):
have three fully developed true leaves. Application made prior to the specified growth stage may result in serious crop injury. • Do not apply more than a total of 1 pint per acre of GoalTender per use season as a result of multiple applications. • Do not apply within 60 days of harvest. • In direct seeded garlic (except in California), do not apply GoalTender as a preemergence treatment. • Use only on dry bulb garlic. • Do not apply to garlic grown for seed. • For weed control in garlic, do not mix GoalTender with oils, surfactants, liquid fertilizers or pesticides except as specified on approved Adaura, LLC Supplemental Labeling. • Do not apply to garlic plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases.

Guava (Bearing and Non-Bearing

(For Use Only in Hawaii)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	2.5 - 4	**Preemergence or Postemergence:** In established guava plantings, apply preemergence or postemergence to weeds. Increase the spray volume to ensure adequate coverage in high densities of emerged weeds or heavy trash. Minimize contact with guava plants by directing the spray to the soil surface. Spray shields are suggested to minimize spray contact in young plantings. For broader spectrum postemergence control of grass and broadleaf weeds, GoalTender may be applied in tank mix combination with paraquat (Gramoxone) or glyphosate. Follow applicable use directions, precautions and limitations on the labels of the respective tank mix products.
Postemergence	1 - 4	
Precautions: • Prevent direct spray or drift from contacting green stems, fruit or foliage, as injury may result. • Alone or in tank mix combination, GoalTender should be applied to only healthy growing trees. • Application of GoalTender should be made only after new foliage growth has hardened off.		
Crop-Specific Restrictions: • Do not apply more than 4 pints per acre of GoalTender in a single application or more than 8 pints per season. • Do not apply GoalTender within 1 day of harvest.		

Key Weeds Controlled:

Preemergence	Postemergence
ageratum buttonweed crotalaria purslane, common spurge, garden	purslane, common spurge, garden

Horseradish

Agricultural Use Requirements: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1	Apply GoalTender after the horseradish roots have been planted but prior to emergence of new horseradish leaves. Emerged leaves that receive direct or indirect spray (drift) contact will be injured. If necessary, cultivate before application to destroy germinated weeds.
Precautions: • Do not apply GoalTender to horseradish plantings that have been weakened or stressed due to unfavorable temperature conditions, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.		
Crop-Specific Restrictions: • Do not apply more than 1 pint of GoalTender per acre per crop.		

Key Weeds Controlled:

lambsquarters, common pigweed, redroot purslane, common	shepherdspurse smartweed, pennsylvania

Jojoba

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	Initial application may be made when jojoba plants have reached a height of 6 inches or more. Use sufficient spray volume to ensure thorough coverage of dense weed growth. Sprays should be directed to the base of jojoba plants to avoid possible phytotoxicity to foliage. Spray shields are suggested for use in young plantings. Use higher rate in rate range for extended residual preemergence weed control. Make follow-up applications as necessary to maintain weed control. For early postemergence control of susceptible seedling weeds (less than 8 inches tall) apply GoalTender at the rate of 2 pints per acre. GoalTender may be applied at the rate of 3 pints per acre for postemergence control of weeds up to 12 inches tall. For optimum residual control, apply during the fall or winter months. Control may be unsatisfactory for weeds greater than 12 inches tall.
Precautions: • Avoid direct spray or drift contact with jojoba flowers or buds as severe injury may result. • Over-the-top applications may cause burning, crinkling or bronzing of jojoba foliage, particularly to the youngest leaves, flowers, or buds present at the time of application.		
Crop-Specific Restrictions: • Do not apply more than 3 pints per acre per year.		

Key Weeds Controlled:

Preemergence	Postemergence
burclover	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf ††
filaree, broadleaf	filaree, redstem ††
filaree, redstem	filaree, whitestem ††
filaree, whitestem	groundsel, common †
groundsel, common	henbit
henbit	mallow, little (malva,
knotweed, prostrate	cheeseweed)
lambsquarters, common	minerslettuce
lettuce, prickly	nettle, burning
mallow, little (malva,	pigweed, redroot †
cheeseweed)	redmaids
pigweed, redroot	shepherdspurse
purslane, common	sowthistle, annual
redmaids	
rocket, London	
shepherdspurse	
sowthistle, annual	

† Highest rate may be required for acceptable postemergence control.

†† GoalTender at the 3-pint rate will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

Mint (Spearmint and Peppermint)

Mint (Spearmint and Peppermint) Grown on Mineral Soils		
Weed Control	**Rate (pt/acre)**	**Specific Use Directions**
Preemergence Postemergence	2 - 3	**Oregon and Washington (East of Cascades), California, Montana, Idaho, Nevada, South Dakota and Utah:** Apply from December through March when mint is dormant. When used postemergence (to weeds), add an 80% active ingredient nonionic surfactant at the rate of one quart per 100 gallons of spray volume and apply before weeds exceed a height of 4 inches. Late winter applications will provide maximum activity on summer weeds, but summer grass control may be inconsistent. For best results, fall-plowed fields should be harrowed to provide a smooth surface for application. In furrow-irrigated fields, corrugating must be done prior to application. Corrugating or harrowing will result in disturbance of treated soil or movement of untreated soil into treated areas, resulting in poor weed control.
Preemergence	1 – 1.5	**Peppermint (Western Oregon Willamette Valley):** Apply GoalTender from November through February to dormant peppermint only. Treatments in January or February generally provide better residual preemergence control of annual broadleaf weeds. Full season weed control should not be expected from this treatment.
Precautions: • Application must be made prior to emergence of new spring growth or severe crop injury may result. • **In the Willamette valley, do not apply GoalTender to mint that has been plowed.** • Apply GoalTender only to healthy stands of spearmint and peppermint. Do not apply to spearmint or peppermint weakened by disease, drought, flooding, excessive fertilizer, soil salts, previously applied pesticides, nematodes, insects, or winter injury, as severe injury may result.		
Crop-Specific Restrictions: • Do not make more than one application of GoalTender per season.		

Key Weeds Controlled:

bedstraw, catchweed	† oats, wild
† bluegrass, annual	orach, red
flixweed	pepperweed, yellowflower
groundsel, common	pigweed, redroot
lambsquarters, common	† ryegrass, Italian
lettuce, prickly (china lettuce)	shepherdspurse
mustard, blue (purple mustard)	sowthistle, annual
mustard, tumble (Jim hill mustard)	tansymustard
nightshade, hairy	thistle, Russian

† Control of annual grasses is best obtained when GoalTender is applied prior to emergence. Postemergence control of winter annual grasses is generally unsatisfactory if applications are made after the 1 to 2-leaf stage.

Mint (Spearmint and Peppermint) Grown on Muck Soils): For Use Only on Mint Grown in Indiana, Michigan, Montana, North Dakota, South Dakota, and Wisconsin		
Weed Control	**Rate (pt/acre)**	**Specific Use Directions**
Preemergence Postemergence	2 - 3	**Note:** Use directions in this section apply only to spearmint and peppermint grown on muck soils (organic matter content of 20% or greater). When used postemergence (to weeds), add an 80% active ingredient nonionic surfactant at the rate of one quart per 100 gallons of spray volume and apply before weeds exceed a height of 4 inches.
Precautions: • Application must be made prior to emergence of new spring growth or severe crop injury may result. • To avoid excessive crop injury, do not apply within 4 days of planting (sprigging) spearmint or peppermint. • Apply GoalTender only to healthy spearmint or peppermint. Do not apply to spearmint or peppermint that has been weakened by disease, nematodes, soil insects, or winter injury, as severe injury may result.		
Crop-Specific Restrictions: • Do not make more than one application of GoalTender per season.		

Key Weeds Controlled

Knotweed, prostrate
pigweed, redroot
purslane, common

Non-Crop Use

(Non-Food-Producing, Non-Cultivated Agricultural or Non-Agricultural Areas, such as Highway and Utility Rights-of-Way, Industrial Sites, Tank Farms, Storage Areas, Airports, Fencerows, and Farmsteads)

Weed Control	**Rate (pt/acre)**	**Specific Use Directions**
Preemergence	2.5 - 4	**Preemergence:** Use higher rate in rate range for longer residual control. **Postemergence:** Use the lower rate in the rate range for control of susceptible weeds in the early postemergence stage, less than 4 inches tall. Use the higher rate for weeds up to 12 inches tall. Application to weeds beyond the 4-inch stage may result in partial control.
Postemergence	1 - 4	
Tank Mixing: Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply. • **Preemergence:** For broader-spectrum residual preemergence weed control, GoalTender may be applied in tank mix combination diuron (Karmex) or simazine. • **Postemergence:** For additional postemergence control of susceptible grass and broadleaf weeds, GoalTender may be applied in tank mix combination with paraquat (Gramoxone) or glyphosate.		
Site-Specific Restrictions: • Do not feed or allow animals to graze on any areas treated with GoalTender. • Do not apply more than 4 pints per acre in a single application.		

Key Weeds Controlled:

Preemergence	Postemergence
burclover	cheeseweed (malva)
cheeseweed (malva)	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf
filaree, broadleaf	filaree, redstem
filaree, redstem	groundsel, common
groundsel, common	henbit
henbit	minerslettuce
knotweed, prostrate	nettle, burning
lambsquarters, common	pigweed, redroot
lettuce, prickly	purslane, common
pigweed, redroot	redmaids
purslane, common	shepherdspurse
redmaids	sowthistle, annual
rocket, London	
shepherdspurse	
sowthistle, annual	

Onions

Agricultural Use Requirements: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

For optimum preemergence weed control, the soil surface should be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices which result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control.

Direct Seeded Onions: Postemergence Application		
Weed Control	**Rate (per acre)**	**Specific Use Directions**
Postemergence	1 - 2 fl oz	**Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:** Apply GoalTender at 1 to 2 fl oz per acre to direct seeded onions that have at least 3 fully developed true leaves using ground equipment. Multiple treatments at 1 to 2 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.
Postemergence	0.25 – 0.5 pt	**Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah and Washington:** Apply GoalTender at 0.25 to 0.5 pt per acre to direct seeded onions that have at least 2 fully developed true leaves using ground equipment. Multiple treatments at 0.25 to 0.5 pt per acre may be applied up to a maximum of 1.25 pints per acre per use season. For

		optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.
Postemergence	0.25 pt	**All other states:** Apply GoalTender at 0.25 pt per acre to direct seeded onions that have at least 2 fully developed true leaves, using ground equipment. Multiple treatments at 0.25 pt per acre may be applied up to a maximum of 1 pint per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4 leaf stage and actively growing.
Postemergence	(see above)	**Sprinkler Irrigation - all except northeastern states (center pivot, portable lateral or solid set):** Apply GoalTender at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.

Transplanted Onions: Application Immediately before Planting		
Weed Control	**Rate (per/acre)**	**Specific Use Directions**
Preemergence Postemergence	0.5 - 1 pt	**pre-transplant application (not for use in northeastern states or western states:** GoalTender may be applied as a broadcast or band application after completion of tillage operations, but before transplanting of onion plants. Transplanting should be accomplished with a minimum of soil disturbance. For optimum weed control, soil surfaces should be left undisturbed after transplanting for the period for which weed control is desired. However, timely cultivation after weed emergence will assist in weed control. If less than 1 pt per acre was applied as a pre-transplant application, postemergence applications may be made as instructed for seeded onions. Do not exceed the maximum use rate of 1 pt per acre per use season as a result of multiple applications.

Transplanted Onions: Application Immediately after Planting		
Application Timing for Target Weeds	**Rate (per/acre)**	**Specific Use Directions**
Preemergence	up to 1 pt	**All states except northeastern states:** transplanted onions are most tolerant of a postemergence application immediately after transplanting. An application of up to 1 pint per acre may be made within two days after transplanting. If less than 1 pint per acre is applied, a second application can be made two weeks or more after transplanting. Do not exceed the maximum use rate of 1 pint per acre of GoalTender per season as a result of multiple applications.
Preemergence	1 - 2 fl oz	**Northeastern states including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:** Multiple treatments at 1 to 3 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre per use season.

Onions - Use Precautions (applicable to all areas and methods of application):

- GoalTender can cause necrotic lesions, twisting, pigtailing or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the specified onion growth stage of the onion plants as specified in Specific Use Directions.
- Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases.

Onions - Crop-Specific Restrictions (applicable to all areas and methods of application):

- In all states **except** Northeastern states, do not apply until **direct seeded** onion plants have at least two fully developed true leaves. In the Northeastern states, do not apply until direct seeded onion plants have at least three fully developed true leaves. Application made prior to the specified growth stage may result in serious crop injury.
- Do not apply more than a total of 1 pint per acre of GoalTender per use season as a result of multiple applications.
- Do not apply within 45 days of harvest.
- Do not apply GoalTender as a preemergence treatment to direct seeded onions.
- Use only on dry bulb onions.
- Do not apply to onions grown for seed, except as instructed in separate use directions.
- Tank mixtures of GoalTender herbicide with oils, surfactants, liquid fertilizers or other pesticides may be made but could result in enhanced crop response/injury and are the responsibility of the user.

Key Weeds Controlled:

Postemergence
canarygrass (annual)
eveningprimrose, cutleaf [(a)]
groundsel, common
mallow, little (malva)
nightshade, black
pigweed, prostrate [(b)]
pigweed, redroot [(a, b)]
puncturevine
purslane, common [(a, b)]
rocket, London
sage, lanceleaf
shepherdspurse [(b)]
sowthistle, annual

[a] Weeds controlled when applied as a pre-transplant application. In addition, GoalTender at the rate of 0.5 to 1 pint per acre will provide control/suppression of carpetweed, Pennsylvania smartweed, galinsoga, common lambsquarters, and wild mustard. Applications of GoalTender to muck soils may result in partial control or suppression of the weeds listed.

[b] Specific weeds controlled at rates specified for use in northeastern states (see DOSAGE section).

Onions Grown for Seed

Agricultural Use Requirements: Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Weed Control	Rate (per/acre)	Specific Use Directions
Preemergence	1 fl oz	**Northeastern States including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:** Multiple treatments at 1 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre per use season. Prior to initial treatment, seeded onions must have *at least four (4) true leaves*. Multiple treatments at the aforementioned rate may be applied.
Preemergence	up to 0.25 pt	**All other States:** Apply GoalTender at up to 0.25 pt per acre to seeded onions that have *at least three (3) true leaves.* Multiple treatments at 0.25 pt per acre may be applied up to a maximum of 1 pint per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. **Sprinkler Irrigation - Portable Lateral or Solid Set:** Apply GoalTender at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.

Use Precautions:

- **Notice:** Some varieties or inbred lines of onions may be more susceptible to GoalTender. Care should be taken to insure that the particular onion variety or line being grown is tolerant to GoalTender. It is suggested that all onion varieties or lines be tested in limited areas to ensure an adequate level of crop tolerance prior to an application for postemergence weed control.
- GoalTender can cause necrotic lesions, twisting, pigtailing or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the specified onion growth stage of the onion plants as specified in Specific Use Directions.
- Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.

Crop-Specific Restrictions:

- In all states, do not apply GoalTender until the onions have reached the minimum leaf stage specified. Application prior to the specified stage of development may result in serious injury
- Do not apply more than a total of 1 pint per acre of GoalTender during one use season.
- Do not apply within 60 days of harvest.
- For seeded onions, do not apply GoalTender with oils, surfactants, liquid fertilizers or other pesticides except as specified in approved Adaura, LLC Supplemental Labeling.

Key Weeds Controlled:

Postemergence
canarygrass (annual)
eveningprimrose, cutleaf
groundsel, common
mallow, little (malva)
nightshade, black
pigweed, prostrate †
pigweed, redroot †
puncturevine
purslane, common †
rocket, London
sage, lanceleaf
shepherdspurse
sowthistle, annual

† Specific weeds controlled at rates specified for use in northeastern states (see DOSAGE section).

Papaya

(For Use Only in Hawaii)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2	The initial application should occur no sooner than 4 months after transplanting or 6 months after direct seeding, and after the papaya has reached a minimum height of 4 feet. Applications may be repeated at approximate 4-month intervals. Apply preemergence or postemergence to weeds. Increase the spray volume to assure adequate coverage of dense growth of emerged weeds. GoalTender must be applied as a directed spray to the orchard floor beneath the papaya plants. Accurate, uniform placement of GoalTender is essential for effective weed control and to minimize crop injury. GoalTender must be applied using rigid precision ground sprayer equipment. Postemergence applications may be made up to the 4 leaf stage of weed growth.
Precautions: • Do not allow the herbicide solution, spray, drift or mist to contact green bark, stems, fruit or foliage as injury may result. • Do not use GoalTender on papaya plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.		
Crop-Specific Restrictions: • Do not apply more than 2 pints of GoalTender per broadcast acre in a single directed spray or more than 6 pints per broadcast acre per year as a result of multiple applications. • Do not apply GoalTender within 1 day of harvest.		

Key Weeds Controlled:

amaranth, spiny
purslane, common
spurge, garden

Soybeans

(Not for Use in California)

Soybeans - Early Preplant Application in Conservation Tillage Systems		
Weed Control	**Rate (pt/acre)**	**Specific Use Directions**
Preemergence	0.75 – 1.5	**Early Preplant Application:** Surface apply GoalTender to the stale seedbed approximately 14 days before planting conservation tillage soybeans for postemergence and preemergence residual broadleaf control. Use a spray volume of 20 or more gallons per acre and increase the spray volume if growth of existing weeds is dense. GoalTender at 1 to 1.5 pints provides early season suppression of annual grasses, but should not be relied upon as a basic grass herbicide. A planned program utilizing herbicides registered for early preplant, preemergence or postemergence grass control in soybeans is specified. Use of ridge or slot planter or a similar planting implement that causes minimal soil disturbance is specified. Movement or redistribution of surface soil will reduce herbicidal effectiveness.

Soybeans: No-Till (Double-Crop)		
Application Timing for Target Weeds	**Rate (pt/acre)**	**Specific Use Directions**
Preemergence Postemergence	0.25 - 1	**Preemergence Application to Soybeans:** Applied preemergence, GoalTender provides postemergence and residual preemergence control of susceptible broadleaf weeds. **Apply GoalTender within one day after planting. Later applications may result in severe crop injury.** Apply in a minimum spray volume of 20 gallons per acre and increase spray volume if growth of existing weeds is dense.
Tank Mixing: For enhanced postemergence control of existing grass and broadleaf weeds, GoalTender may be tank mixed with paraquat (Gramoxone) or glyphosate. For extended residual control of annual grasses no-till soybeans, GoalTender may also be tank mixed with a residual grass herbicide such as Bronco Herbicide, Dual Magnum Herbicide, or Lasso Herbicide.		
Postemergence	0.5	**Postemergence Directed Application:** GoalTender may be applied as a post-directed application. Optimum control is achieved when GoalTender is applied to seedling weeds not exceeding 4 true leaves (not counting cotyledon leaves) and actively growing. Use of an 80% nonionic surfactant cleared for application to growing crops at the rate of 2 pints per 100 gallons of spray is specified whenever postemergence weed control is desired. **For postemergence application, Soybeans must be a minimum 8 inches tall.** Use a minimum of 2 flat fan nozzles per row. Use branch lifters or shields to prevent excessive spray contact to the soybean plants. Do not use hollow cone nozzles.

Soybeans: Grown Under Conventional Tillage Systems

Application Timing for Target Weeds	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	0.5 – 0.75	**Preemergence Application to Soybeans:** GoalTender provides preemergence control of susceptible broadleaf weeds. **Apply GoalTender within one day after planting. Later applications may result in severe crop injury.** Apply in a minimum spray volume of 20 gallons per acre and increase spray volume if growth of existing weeds is dense. The 0.75 pint per acre rate will assist in early season annual grass control but should not be relied upon as a basic grass herbicide. GoalTender may also be applied as a preemergence application following a preplant incorporated grass herbicide treatment

Preemergence Tank Mixes (To Control Additional Grass and Broadleaf Weeds): Apply preemergence tank mixes of GoalTender within one day after planting. Later applications may result in severe crop injury.

- GoalTender at 0.3 to 0.75 pints per acre may be applied preemergence to soybeans in tank mix with Dual Magnum Herbicide or Lasso Herbicide. GoalTender may be applied alone as a preemergence application following a preplant incorporated grass herbicide application or as a tank mix in a preemergence application with Dual Magnum, or Lasso herbicides. Refer to the label of tank mix product for additional weeds controlled.
- GoalTender at 0.3 to 0.4 pints per acre may be applied preemergence to soybeans in tank mix with 1 to 1.67 pints of Command 6EC herbicide. Refer to the label for Command 6EC for additional weeds controlled.

Postemergence	0.5	**Postemergence Directed Sprays:** GoalTender may be applied as a post-directed application at 0.5 pint per acre. Optimum control is achieved when weeds not exceed 4 true leaves and are actively growing (do not count cotyledon leaves). Use of an 80% nonionic surfactant cleared for application to growing crops at the rate of 2 pints per 100 gallons of spray is specified whenever postemergence weed control is desired. **For postemergence application, Soybeans must be a minimum 8 inches tall.** Use a minimum of 2 flat fan nozzles per row. Use branch lifters or shields to prevent excessive spray contact to the soybean plants. Do not use hollow cone nozzles.

Postemergence Tank Mixes: For broader spectrum control of broadleaf weeds, GoalTender may be applied in tank mix with Butoxone Herbicide or Butyrac 200 Herbicide. Use 0.5 pint of GoalTender with 1 pint of Butoxone or 0.7 to 0.9 pint of Butyrac 200 per acre. Refer to label of tank mix product for additional weeds controlled.

Precautions (All Methods and Timings to Soybeans):

- Soybeans are tolerant to preemergence and post-directed applications of GoalTender at specified rates, however, under certain conditions injury may occur. Heavy splashing rain shortly after crop emergence or cold, wet soil conditions during early growth stages can cause leaf cupping and crinkling. When injury occurs, it is generally limited to the first few leaves that develop after crop emergence. Soybeans recover from this injury and yields are not adversely affected. Soybeans accidentally sprayed during a post-directed application will exhibit necrotic spotting and injury to the soybean plant. Exercise care to avoid spray contact with the soybean leaves.

Crop-Specific Restrictions:

- **Tank Mixing:** Read and observe all label directions before using. Follow applicable use directions, precautions and limitations on the labels of the respective tank mix products. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive limitations must apply.
- Do not make more than two applications of GoalTender per growing season.
- Do not apply more than 1 pint (0.5 lbs active) of GoalTender per acre during one growing season as a result of preemergence application in no-till (double-crop) or conventional till soybeans, or post-directed in conventional till soybeans. If early preplant application is made, do not apply more than 1.5 pints (0.75 lb active) of GoalTender per acre during one growing season.
- Do not apply a post-directed application of GoalTender to soybeans after the initial appearance of blooms.
- Maximum total application rate per year is 1.5 lbs ai/A

Key Weeds Controlled (GoalTender Alone):

Preemergence	Postemergence
groundcherry, cutleaf †	cocklebur, common
jimsonweed	croton, tropic
lambsquarters, common	groundcherry, cutleaf
nightshade, American black †	groundcherry, Wright
nightshade, black †	jimsonweed
pigweed, redroot	lambsquarters, common
poinsettia, wild	morningglory, annual (up to 6 leaf)
shepherdspurse	mustard, wild
sida, prickly (teaweed)	nightshade, American black
smartweed, Pennsylvania	nightshade, black
sowthistle, common †	nightshade, hairy
velvetleaf	pigweed, redroot
	† poinsettia, wild
	purslane, common
	sesbania, hemp
	shepherdspurse
	sicklepod ††
	sida, prickly (teaweed) †
	smartweed, Pennsylvania
	velvetleaf

† Multiple applications may be required for acceptable control.

†† Post-direct applications of GoalTender will kill or suppress seedlings not exceeding the one true leaf stage.

Taro

(For Use Only in Hawaii)

For use only to dryland taro grown in Hawaii. Dryland taro is defined as taro grown without irrigation, or by using irrigation practices that do not result in run-off, irrigation return flow, or other loss of irrigation water from the production area. If irrigation is used, the water applied shall not exceed the field capacity of the soil.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1	**Preemergence to Taro and Weeds:** A single application of GoalTender at the rate of 2 pints per acre may be applied within 1 week after transplanting but prior to emergence of taro plants.
Postemergence	0.5	**Postemergence to Taro and Weeds:** GoalTender may be applied as a post-directed or band application at the rate of 1 pint per acre. Effective control of succulent weed seedlings in the 2-to 3-leaf stage can usually be obtained. Applications to weeds beyond the 3-leaf stage may result in partial control.

Precautions:

- Accurate, uniform placement of GoalTender is essential for effective weed control and to minimize crop injury. Taro foliage receiving accidental spray or drift will be injured. GoalTender must be applied using rigid precision ground sprayer equipment.
- Occasionally, after the use of GoalTender, spotting, crinkling or flecking may appear on the leaves of the taro. Leaves that receive direct or indirect (drift) spray contact will be injured.
- Do not use GoalTender on taro plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.

Crop-Specific Restrictions:

- Do not apply more than 1 pint of GoalTender per broadcast acre as a single preemergence application.
- Do not apply more than 0.5 pint of GoalTender per acre in a single post-direct spray or more than 1 pint per acre per season as a result of multiple post-directed applications.
- Do not apply more than 2 pints of GoalTender per acre per season as a result of preemergence and post-direct applications.
- Do not apply GoalTender within 6 months of harvest of taro (corms, leaves).

Key Weeds Controlled:

amaranth, spiny
purslane, common
spurge, garden

Treefruit / Nut / Vine Crops (Dormant Application)

Almond, Apple, Apricot, Avocado, Beechnut, Brazil Nut, Butternut, Cashew, Cherry, Chestnut, Chinquapin, Crab Apple, Date, Feijoa, Fig, Filbert, Grapes, Hickory Nut, Kiwi, Loquat, Macadamia Nut, Mayhaws, Nectarine, Olives, Peach, Pear, Pecan, Persimmon, Pistachio, Plum, Pomegranates, Prune, Quince, and Walnut

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence (broadcast application) (banded application)	2.5 – 3 2.5 - 4	Apply GoalTender a minimum of 20 gallons of water per acre. Use higher spray volumes to ensure thorough coverage in high densities of emerged weeds or heavy trash. Sprays should be directed to the soil and the base of dormant trees or vines. **In California,** GoalTender may be applied as an over-the-top or directed spray to dormant nonbearing grape plantings. The use of a low-pressure sprayer is suggested. Do not apply over-the-top to grape plantings that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, injury from previously applied pesticides, or injury due to insects, nematodes, or diseases, as severe crop injury may result.
Postemergence (broadcast application) (banded application)	1 – 3 1 - 4	Apply in a spray volume of 40 or more gallons per acre. For optimum control, apply when weeds are at seedling stage of growth. The lower rate in the rate range (1 pint per acre) is specified for the control of susceptible seedling weeds in the early postemergence stage up to the 4-leaf stage. Higher rates (up to 3 pints per acre) may be used for weeds up to the 6-leaf stage. Applications to weeds beyond the 6-leaf stage may result in partial control.

Tank Mixing: Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply. See labels of tank mix partners to determine suitability and use rates for various crops.

- **Postemergence:** For broader spectrum postemergence control of listed grass and broadleaf weeds, GoalTender may be applied in tank mix with paraquat (Gramoxone) or glyphosate. These herbicides may also be added to preemergence tank mixes for enhanced control of existing weeds.
- **Preemergence:** For broad-spectrum preemergence control of susceptible grass and broadleaf weeds in listed treefruit, nut or vine plantings, GoalTender may be applied in tank mix with napropamide (Devrinol herbicide), diuron (Karmex herbicide), pronamide (Kerb® herbicide), simazine, norflurazon (Solicam herbicide) or oryzalin (Surflan herbicide).

Chemigation (All States): For dormant season application using sprinkler (low-volume (micro-sprinkler), drip (trickle), and flood (basin) irrigation systems, apply GoalTender at the specified rate per acre. Follow applicable directions in the Chemigation section of this label when making applications using irrigation systems.

Precautions:

- GoalTender or any of the combinations specified on this label should be applied to only healthy growing trees or vines.
- Avoid direct plant contact. Direct spray toward the base of tree or vines unless specific use recommendations allow over-the-top application.

Crop-Specific Restrictions:

- In all states, unless otherwise specified, do not apply GoalTender during the period between bud swell and completion of final harvest or when fruit/nuts are present. GoalTender may be applied upon completion of final harvest.

- **In Arizona and California, GoalTender may be applied during the period following completion of final harvest up to February 15 (February 1st in the Coachella Valley, California). Applications made after these calendar dates, but prior to bud swell, may result in significant crop injury and are the responsibility of the user.**
- For banded applications, up to 4 pints per acre of GoalTender per use season may be applied within the treated band. Do not apply more than a maximum of 3 pints per acre per use season on a broadcast basis.
- Do not apply to grapes or kiwi established less than 3 years unless vines are on a trellis wire a minimum of 3 feet above the soil surface.
- Do not apply to grapes or kiwi that are not staked or trellised unless vines are free standing.
- Maximum total application rate per year is 1.5 lbs ai/A

Key Weeds Controlled (Arizona and California):

Preemergence	Postemergence
burclover	cheeseweed (malva)
cheeseweed (malva)	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf †
filaree, broadleaf	filaree, redstem †
filaree, redstem	filaree, whitestem †
filaree, whitestem	groundsel, common
groundsel, common	henbit
henbit	minerslettuce
knotweed, prostrate	nettle, burning
lambsquarters, common	pigweed, redroot
lettuce, prickly	redmaids
pigweed, redroot	shepherdspurse
purslane, common	sowthistle, annual
redmaids	
rocket, London	
shepherdspurse	
sowthistle, annual	

† GoalTender at the 3-pint rate will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

Key Weeds Controlled (All Other States Except Arizona and California):

Preemergence	Postemergence
camphorweed	balsamapple
cudweed, narrowleaf	cocklebur, common
eveningprimrose, cutleaf †	cudweed, narrowleaf ††
groundcherry, cutleaf	eveningprimrose, cutleaf †††
jimsonweed	groundcherry, cutleaf
lambsquarters, common	groundcherry, Wright
nightshade, American black	jimsonweed
nightshade, black	lambsquarters, common
pepperweed, Virginia	morningglory, annual
pigweed, redroot	nightshade, American black
poinsettia, wild	nightshade, black
sida, prickly	pepperweed, Virginia
smartweed, Pennsylvania	pigweed, redroot
sowthistle, annual	poinsettia, wild
spurge, prostrate	purslane, common
spurge, spotted	

Preemergence	Postemergence
velvetleaf	sesbania, hemp shepherdspurse sida, prickly (teaweed) smartweed, pennsylvania sowthistle, annual velvetleaf

† Highest rate and/or multiple applications may be required for acceptable control.
†† Maximum 0.5-inch diameter
††† Highest rate and/or multiple applications may be required for acceptable control.

Grapes (Non-Dormant Application)

(California Only)

GoalTender may be applied as a directed spray or, for supplemental preemergence weed control, through low-volume sprinkler (micro-sprinkler) or drip irrigation systems for control or suppression of listed broadleaf weeds in non-dormant grapes (raisin and wine grapes only). GoalTender may also be applied to all grapes (raisin, table, and wine) as a dormant season application. Refer to Treefruit/Nut/Vine Crops (Dormant Application) section above for use directions for dormant season application to grapes.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1	GoalTender may be applied preemergence or postemergence to weeds either as a directed spray in a minimum spray volume of 20 gallons per acre or through low-volume sprinkler (micro-sprinkler) or drip irrigation systems. Repeat applications may be required. Applications may be made from completion of bloom up to 14 days before to harvest. When applied as a postemergence directed spray, add 1 quart 80% active nonionic surfactant cleared for application to growing crops per 100 gallons of spray. Sprays should be directed to the soil and the base of vines.
Postemergence	0.5 - 1	

Tank Mixing:

- When applied as a directed postemergence spray using ground equipment, GoalTender may be applied in tank mix with paraquat (Gramoxone) or glyphosate in a minimum spray volume of 10 gallons per acre. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

Chemigation: Follow chemigation instructions in Product Information section.

- **Low Volume Sprinkler (Micro sprinkler) and Drip (Trickle) Irrigation:** Apply only through low-volume sprinkler or drip systems designed to uniformly distribute irrigation water beneath the canopy. Meter GoalTender at a continuous rate during the middle 1/3 of the irrigation period and discontinue application during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. Use of GoalTender through low-volume sprinklers or drip emitters helps to reduce the "ring effect" of weed escapes in areas around sprinklers or emitters where previously applied broadcast or directed treatments begin to break down.

Precautions:

- **Crop Tolerance:** The use of GoalTender may result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift, soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Grape leaves that are immature or expanding at the time of contact with GoalTender are the most susceptible to foliage injury. Grapes may exhibit some small blemishes (spots or flicks) on the fruit.
- GoalTender is phytotoxic to plant foliage. Avoid drift to all other crops and nontarget areas. Do not apply when weather conditions favor drift.

Crop-Specific Use Restrictions:

- The total amount of GoalTender applied during one season (from completion of final harvest through dormancy to non-dormant use covered by this section) cannot exceed 3 pints per acre as a result of multiple applications in any given area (broadcast, banded, or within the wetted area of the low-volume sprinkler or drip irrigation system).
- Do not apply within 14 days of harvest.
- Do not initiate application of GoalTender in non-dormant grapes until the completion of the bloom period.
- Do not apply to grapes established less than 3 years unless vines are either on a trellis wire a minimum of 3 feet above the soil surface, or protected by grow tubes.
- GoalTender should be applied only by ground application equipment of through low-volume sprinkler (micro-sprinkler) or drip (trickle) irrigation systems.
- Apply GoalTender as a non-dormant application to wine grapes or raisin grapes only.

Key Weeds Controlled or Suppressed:

Preemergence	Postemergence
burclover	cheeseweed (malva)
cheeseweed, malva	fiddleneck, coast
fiddleneck, coast	groundsel, common
groundsel, common	henbit
henbit	minerslettuce
knotweed, prostrate	morningglory species, annual
lambsquarters, common	mustard, black
minerslettuce	nettle, burning
mustard, black	nightshade, black
nettle, burning	pigweed, redroot
nightshade, black	purslane, common
pigweed, redroot	redmaids
purslane, common	rocket, London
redmaids	sowthistle, annual
rocket, London	
sowthistle, annual	

Sucker Control in Non-Dormant Grapes

(Washington and Oregon Only)
(Grapes for Wine and Processing Only)

Application Timing for Sucker Control	Rate (pt/acre)	Specific Use Directions
Grape suckers less than 12 inches in length.	0.5 - 1	Apply GoalTender in a three-foot band directed towards to newly emerging suckers at the base of the grapevine. The highest rate and/or a second application may be required to achieve an acceptable level of control/suppression of grape suckers. Avoid spray contact on flowers, grape clusters, or fruit. Use mounted nozzles to deliver the spray solution. Thorough spray coverage of sucker growth is essential for optimal activity. Use a spray volume of 50 or more gallons per acre (broadcast basis).
Tank Mixing: For enhanced postemergence sucker activity, a tank mixture of GoalTender with either glufosinate (Rely Herbicide) or paraquat (Gramoxone) can be used. Apply at the specified rates and growth stages in a manner describe on the respective labels. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.		
Precautions: • The use of GoalTender may result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift or soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Leaves that are immature or expanding at the time of contact with GoalTender are the most susceptible to injury. Grape fruit may exhibit some small blemishes (spots or flecks) on the fruit.		
Crop-Specific Restrictions: • The total amount of GoalTender applied during one crop year (dormant and non-dormant) cannot exceed 3 pints per acre as a result of multiple applications in any give area (broadcast or banded). • GoalTender should be applied only by ground application equipment. • Apply GoalTender as a non-dormant application for sucker control only to wine or processed grapes. • Do not apply GoalTender within 60 days of harvest.		

Pistachios, Walnuts, Almonds (California and Arizona Only)

(Non-Dormant Application)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	2.5 - 3	**Preemergence:** For residual weed control of listed weeds.
Postemergence	0.5 - 1	**Postemergence (Suppression):** Apply to seedling weeds less than 4 inches in height. Repeat applications may be required.
	1 - 3	**Postemergence (Cleanup):** Contact (postemergence) control for cleanup sprays and preharvest applications. Apply to seedling weeds less than 4 inches in height. Applications to weed seedlings beyond the 4-inch stage may result in partial control.
Tank Mixing: For broader spectrum grass and broadleaf weed control in tree row middles, GoalTender may be tank mixed with either paraquat (Gramoxone) or glyphosate. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.		

Chemigation: Follow chemigation instructions in Product Information section.

Flood (Basin) Irrigation: For flood (basin) irrigation systems, meter continuously into the water during the entire irrigation period. Best weed control results are obtained when a uniform distribution and flow of irrigation water is maintained over level land. Irrigation water treated with GoalTender must be contained on the treated area until the water is absorbed by the soil.

Low Volume Sprinkler (Micro sprinkler) and Drip (Trickle) Irrigation: Apply only through low-volume sprinkler or drip systems designed to uniformly distribute irrigation water beneath the tree canopy. Applications should be made prior to weed emergence; otherwise postemergence activity may be inconsistent due to uneven coverage. Meter GoalTender at a continuous rate during the middle 1/3 of the irrigation period and discontinue application during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. Use of GoalTender through low-volume sprinklers or drip emitters helps to reduce the "ring effect" of weed escapes in areas around sprinklers or emitters where previously applied broadcast or directed treatments begin to break down.

Precautions:

- Direct spray toward the base of trees. Avoid direct contact with foliage or nuts.
- GoalTender should be applied only to healthy growing trees

Crop-Specific Use Restrictions:

- When applied as a non-dormant treatment, GoalTender can only be applied to pistachio plantings between May and 7 days prior to harvest.
- When applied as a non-dormant treatment, GoalTender can only be applied to almond plantings between April 1 and September 30 and to walnut plantings between May 1 and September 30.
- Do not apply GoalTender within 7 days of harvest of pistachios.
- Do not apply GoalTender within 30 days of harvest of almonds.
- Do not apply GoalTender within 7 days of harvest of walnuts.
- Do not apply more than 3 pints of GoalTender per acre during the non-dormant season.
- Maximum total application rate per year is 1.5 lbs ai/A

Key Weeds Suppressed and/or Controlled

cheeseweed (malva)	morningglory species, annual
fiddleneck, coast	mustard, black
filaree, broadleaf	nettle, burning
filaree, redstem	pigweed, redroot
filaree, whitestem	purslane, common
groundsel, common	redmaids
henbit	rocket, London
minerslettuce	sowthistle, annual

Additional Weeds Controlled in Tank Mix with Glyphosate or Paraquat

barnyardgrass	horseweed (marestail)
bluegrass, annual	rocket, London
chickweed, common	ryegrass, Italian

Windbreaks and Shelterbelts

(For Use Only in Minnesota, North Dakota, South Dakota and Wyoming)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	Apply GoalTender may be applied as a broadcast, banded or post-directed spray. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Pre-transplant applications must be made after completion of soil preparation but prior to transplanting. Transplanting should

		be completed with minimal soil disturbance. For optimum weed control results, treated soil surfaces should be left undisturbed during the time period for which weed control is desired. **Postemergence Weed Control:** For best results, apply before 4-leaf stage for broadleaf weeds or 2-leaf stage for grass weeds. **Conifers:** GoalTender can be applied pre-transplant, post-directed or postemergence (over-the-top) to conifers. Postemergence or post-directed applications should be applied prior to budbreak or after new growth foliage has hardened off and new terminal buds have formed. **Deciduous Hardwoods:** GoalTender has exhibited selectivity to many deciduous species when applied pre-transplant or as a post-directed spray prior to budbreak.

Precautions:

- **Important:** Some varieties or cultivars of conifers or deciduous species listed may be susceptible to GoalTender. Care should be taken to ensure that the particular variety to be sprayed with GoalTender is tolerant. For unfamiliar species, it is suggested that GoalTender be tested on a limited number of plants prior to large-scale application.
- Occasionally after the use of GoalTender, a spotting, crinkling or flecking may appear on the leaves of the deciduous species. Leaves that receive direct or indirect (drift) spray contact will be injured. Deciduous species typically rapidly outgrow these symptoms and develop normally.
- Application after budbreak may result in injury to deciduous species. If non-dormant application is required, apply only after foliage has fully expanded and hardened off. Avoid direct or indirect spray contact with the foliage by applying to the soil surface as a directed spray.
- Apply GoalTender only to healthy deciduous and/or conifer trees. Do not apply GoalTender to conifers or deciduous trees that have been weakened or under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.

Specific Use Restrictions for Shelterbelts:

- Do not apply more than 3 pints of GoalTender per acre in a single application or more than 9 pints per acre per year.

Key Broadleaf Weeds Controlled:

buckwheat, wild	mustard, wild
burclover	nettle, burning
carpetweed	nightshade, black
dock, curly	nightshade, hairy
groundcherry, cutleaf	oats, wild
groundcherry, Wright	orach, red
groundsel, common	pepperweed, yellow flower
henbit	pigweed, prostrate
jimsonweed	pigweed, redroot
knotweed, prostrate	purslane, common
kochia	rocket, London
ladysthumb	shepherdspurse †
lambsquarters, common	smartweed, Pennsylvania
lettuce, prickly	sowthistle, annual
mallow, little	tansymustard
mayweed	thistle, Russian (seedling)
mustard, blue	velvetleaf
mustard, tumble	

† The highest rate or multiple applications may be required for acceptable control.

Key Grasses Controlled:

barnyardgrass	foxtail, giant
bluegrass, annual	goosegrass
crabgrass, large	witchgrass

GoalTender may be applied to numerous conifer and deciduous species, including the following:

Conifer Species

Common Name	Scientific Name
douglas-fir	*Pseudotsuga menziesii*
fir	
grand	*Abies grandis*
fraser	*Abies fraseri*
noble	*Abies procera*
hemlock	
eastern hemlock	*Tsuga canadensis*
western hemlock	*Tsuga heterophylla*
pine	
Austrian	*Pinus nigra*
eastern white	*Pinus strobus*
jack	*Pinus banksiana*
Himalayan	*Pinus graffithii*
loblolly	*Pinus taeda*
lodgepole	*Pinus contorta*
longleaf	*Pinus palustris*
monterey	*Pinus radiata*
mugo	*Pinus mugo*
ponderosa	*Pinus ponderosa*
scotch	*Pinus sylvestris*
shortleaf	*Pinus echinata*
slash	*Pinus elliottii*
Virginia	*Pinus virginiana*
spruce	
blue	*Picea pungens*
dwarf Alberta	*Picea glauca conica*
Norway	*Picea abies*
Sitka	*Picea sitchensis*
Arborvitae	*Thuja occidentalis* *Thuja orientalis*
juniper	*Juniperus chinensis* *Juniperus horizontalis* *Juniperus procumbens* *Juniperus sabina* *Juniperus scopulorum*
red cedar	*Juniperus virginiana*
yew	*Taxus* spp.

Deciduous Hardwood Species

Common Name	Scientific Name
ash	*Fraxinus* spp.
crabapple	*Malus spp.*
eucalyptus	*Eucalyptus* spp.
lilac	*Syringa vulgaris*

maple, black	*Acer nigrum*
oak, northern red	*Quercus rubra*
olive, Russian	*Elaeagnus angustifolia*
poplar (cottonwood)	*Populus* spp.
sweetgum	*Liquidambar styraciflua*
sycamore	*Platanus occidentalis*
walnut, black	*Juglans nigra*

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

Warranty Disclaimer

Adaura, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent permitted by law, Adaura, LLC MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Adaura, LLC or the seller. All such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Adaura, LLC's election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

Adaura, LLC shall not be liable for losses or damages resulting from handling or use of this product unless Adaura, LLC is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Adaura, LLC be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer and Inherent Risks of Use above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Adaura, LLC or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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SAFETY DATA SHEET

EMERGENCY CALL: 1-877-325-1840

1. IDENTIFICATION

PRODUCT NAME: Goaltender
DESCRIPTION: Liquid Herbicide
EPA Reg. No.: 92894-3

COMPANY IDENTIFICATION:
Nutrichem USA, LLC
3050 Metro Drive, Suite 113
Bloomington, MN 5542

2. HAZARD IDENTIFICATION

WARNING

Suspected of causing cancer (H351)
May cause damage to organs through prolonged or repeated exposure (H373)
Very toxic to aquatic life with long lasting effects (H400+H410)



HAZARD CLASSIFICATION

Health Hazards	Category
Carcinogenicity	2
Specific target organ toxicity -repeated exposure	2

Physical Hazards	Category
None	--

Environmental Hazards	Category
Hazardous to the aquatic environment – short-term (acute)	1
Hazardous to the aquatic environment – long-term (chronic)	1

HAZARDS NOT REQUIRING CLASSIFICATION

None

PRECAUTIONARY STATEMENTS

Obtain, read and follow all safety instructions before use. Do not breathe spray/mist. Wear protective gloves/protective clothing/eye protection/face protection (P203+P260+P280)

Get medical help if you feel unwell. (P319)

If exposed or concerned, get medical advice. (P318)

Avoid release to the environment not in accordance with the product label. Collect spillage. (P273+P391)

Store locked up. (P405)

Dispose of contents / container using instructions in the product label and in accordance with local / Federal regulations. (P501)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	Chemical Name	CAS #	Composition
Oxyfluorfen	Benzene, 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl)-	42874-03-3	41.0%
Propylene glycol		57-55-6	10.0%

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 day or night, for emergency treatment information.

5. FIREFIGHTING MEASURES

Flash Point: Not determined

Flammable Limits (LFL-UFL): Not determined

Fire and Explosion Hazards: Not determined

Extinguishing Medium: Water fog or fine spray, dry chemical fire extinguishers, carbon dioxide fire extinguishers, foam, alcohol resistant foams (ATC type) are preferred, general purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Equipment: Firefighters should be equipped with self-contained positive pressure breathing apparatus and full bunker gear.

Fire Fighting Instructions: Evacuate area of all unnecessary personnel and fight fire from a safe distance upwind. Contain contaminated water / firefighting water; do not allow to enter drains or waterways. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

NFPA Ratings: Health – 1 / Flammability – 1 / Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate area and keep unnecessary and unprotected personnel from entering. Wear suitable personal protective clothing and equipment as described in Section 8 of this document.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Spill Cleanup: Dike spill using suitable absorbent or impervious materials such as sand or clay. Collect and contain contaminated absorbent and place in an appropriate container for disposal. Pump any free liquid into an appropriate closed container and decontaminate tools and equipment following cleanup. Collect washings for disposal.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin or clothing.

Storage: Keep from freezing. Store above 32°F

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Component	Regulation	Type of listing	Value/Notation
Oxyfluorfen	Dow IHG	TWA	0.2 mg/m^3
Propylene glycol	US WEEL	TWA	10 mg/m^3

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Engineering Controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations. Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower.

Protective Clothing: When handling, wear long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate) when mixing and loading, chemical-resistant apron when mixing and loading.

General: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and was PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	yellow to orange liquid
Odor:	characteristic
Melting/freezing point range:	not available
Boiling point/Boiling range:	not available
Flammability:	not available
Flammability limits (upper/lower):	not available
Flash point:	not available
Auto-ignition temperature:	none below 400°C
Decomposition temperature:	not available
pH:	6.5-7.5
Kinematic viscosity:	not available
Solubility:	not available
Partition coefficient	not available
Vapor pressure:	not available
Bulk density:	9.85-9.95 lb./gal
Relative vapor density:	1.19
Dynamic viscosity:	81.4 mPa.s at 40°C (104°F)
Particle characteristics:	no data available

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Some components of this product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

CHEMICAL STABILITY: Thermally stable at typical use temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with acids, amines, bases, halogens.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: carbon monoxide, carbon dioxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides, toxic gases are released during decomposition.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY (rat LD_{50}): 5,000 mg/kg

DERMAL TOXICITY (rat LD_{50}): > 5,000 mg/kg

INHALATION TOXICITY (rat LC_{50}): >0.39 mg/L (dust/mist) (4-hour)

Maximum attainable concentration. No deaths occurred at this concentration.

EYE IRRITATION: Essentially non irritating to eyes. Corneal injury is unlikely.

SKIN IRRITATION: Brief contact is essentially nonirritating to skin.

SKIN SENSITIZATION: Did not cause allergic skin reactions when tested in guinea pigs.

CARCINOGENICITY:

EPA: Category C: Possible human carcinogen (oxyfluorfen)
ACGIH: Not listed **NTP:** Not Listed
IARC: Not listed **OSHA:** Not Listed

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE): Evaluation of available data suggests that this material is not an STOT-SE toxicant.

SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED TOXICITY EXPOSURE): For the active ingredient(s): In animals, effects have been reported on the following organs: liver, spleen.

MUTAGENICITY: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

TERATOGENICITY: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

REPRODUCTIVE TOXICITY: In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

12. ECOLOGICAL INFORMATION

This product is toxic to aquatic invertebrates and wildlife.

Information presented below is from testing done with the active ingredient, oxyfluorfen:
Bluegill sunfish (96-hour LC_{50}): 0.2 mg/L
Fathead minnow (30-days NOAEC): 0.38 mg/L
Sheepshead minnow (96-hour LC_{50}): >0.11 mg/L; (34-day NOAEC): 0.00409
Water Flea (48-hour LC_{50}): 1.5 mg/L; (21-days NOAEC): 0.013
Algae (96-hour EC_{50}): 0.0029

AVIAN TOXICITY
Bobwhite Quail (LD_{50}): >2,150 mg/kg (body weight)
Bobwhite Quail (5-days LC_{50}): >5,000 mg/kg (diet)

HONEYBEE TOXICITY
Honeybee Acute contact (LD_{50}): >100 µg/bee
Honeybee Acute oral (LD_{50}): >109 µg/bee

ENVIRONMENTAL FATE
Does not bioaccumulate. Not persistent in soil or water. Relatively immobile in soil (K_{oc} > 5,000).

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
CONTAINER DISPOSAL: Nonrefillable and refillable containers. Refer to the product label for specific container disposal instructions.

14. TRANSPORT INFORMATION

US-DOT:
Not regulated

IMDG:

Containers ≤ 1.3 gal. (5 L) in strong outer packaging:
Not regulated

Containers > 1.3 gal. (5 L) or containers not in strong outer packaging:
Shipped internationally by vessel: UN3082, Environmentally hazardous substance, liquid, N.O.S. (oxyfluorfen), 9, III, Marine Pollutant

IATA:
Shipped by air: UN3082, Environmentally hazardous substance, liquid, N.O.S. (oxyfluorfen), 9, III, Marine Pollutant

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

FIFRA –
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

> **PRECAUTIONARY STATEMENTS**
> **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**
> **CAUTION**
> Avoid contact with skin or clothing.
>
> **ENVIRONMENTAL HAZARDS**
> This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. See Directions for Use for additional restrictions. Do not contaminate water when disposing of equipment wash water or rinseate.

All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide. This product is excluded from listing requirements under EPA/TSCA.

SARA Title III – Section 302 Extremely Hazardous Substances
Not listed

SARA Title III – Section 311/312 Hazard Categories
Immediate (acute), Delayed (chronic)

SARA Title III – Section 312 Threshold Planning Quantity
Not listed

SARA Title III – Section 313 Reportable Ingredients
Oxyfluorfen (CAS No. 42874-03-3): 41.0%

CERCLA Reportable Quantity (RQ) –
Not listed

CALIFORNIA PROP 65 STATUS –
This product does not contain any chemical known to the State of California to cause cancer or other reproductive harm.

CANADA – This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

16. OTHER INFORMATION

NUTRICHEM USA, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

SDS Version: 2.0 Effective Date: 01/06/2023

Form Approved. OMB No. 2070-0182 Approval expires 5-31-15

United States Environmental Protection Agency
Office of Pesticide Programs, Registration Division (7505C)
Washington, DC 20460

Application for/Notification of State Registration of a Pesticide To Meet a Special Local Need

(Pursuant to section 24(c) of the Federal Insecticide, Fungicide, and Rodenticide Act, as Amended)

For State Use Only
Registration No. Assigned
Date Registration Issued

1. Name and Address of Applicant for Registration

Nutrichem USA, Inc.
No. 27 Life Science Park Road
Changping District
Bejing 102206, China

2. Product is (Check one)

- [X] EPA-Registered — EPA Registration Number: 92894-3
- [ ] New (not EPA-registered) — Attach EPA Form 8570-4, Confidential Statement of Formula for new products. — EPA Company Number: 92894

3. Active Ingredient(s) in Product

oxyfluorfen

4. Product Name

GoalTender

5. If this is a food/feed use, a tolerance or other residue clearance is required. Cite appropriate regulations in 40 CFR Part 180, 185, and/or 186. 40 CFR 180.381

6. Type of Registration (Give details in Item 13 or on a separate page, properly identified and attached to this form):

- [ ] a. To permit use of a new product.
- [X] b. To amend EPA registrations for one or more of the following purposes:
  - [ ] (1) To permit use on additional crops or animals.
  - [ ] (2) To permit use at additional sites.
  - [ ] (3) To permit use against additional pests.
  - [X] (4) To permit use of additional application techniques or equipment.
  - [ ] (5) To permit use at different application rates.
  - [ ] (6) Other (specify below)

7. Nature of Special Local Need (check one)

- [ ] There is no pesticide product registered by EPA for such use.
- [X] There is no EPA-registered pesticide product which, under the conditions of use within the State, would be as safe and/or as efficacious for such use within the terms and conditions of EPA registration.
- [ ] An appropriate EPA-registered pesticide product is not available.

8. If this registration is an amendment to an EPA-registered product, is it for a "new use" as defined in 40 CFR 152.3 ?

- [ ] Yes (discuss in Item 13 below)
- [X] No

9. Has an EPA Registration or Experimental Use Permit for this chemical ever been (check applicable box(es), if known):

- [ ] Sought
- [X] Issued
- [ ] Denied
- [ ] Cancelled
- [ ] Suspended
- [X] Registration
- [ ] Experimental Use Permit
- [ ] No Previous Permit Action

10. Has FIFRA section 24(c) registration for this use of the product ever, by another State, been (check appropriate box(es), if known):

- [X] Sought
- [X] Issued
- [ ] Denied
- [ ] Revoked

If any of the above are checked, list States in Item 13 below.

- [ ] No FIFRA section 24(c) Action

11. Endangered Species Act: (Give details in Item 13 or on a separate page, properly identified and attached to this form)

Identify the counties where this pesticide will be used. If Statewide, indicate "all." Provide a list of Federally protected endangered/threatened species which occur in the areas of proposed use. ALL

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

12. Indicate use status of Special Local Need, i.e., planned dates of use:

From: 01/01/2027 To: 12/31/2031.

Signature of Applicant or Authorized Representative

Maryann M Kellogg

Title

Agent

Telephone Number

253-853-7369

Date

October 7,2026

13. Comments (attach additional sheet, if needed)

10. AZ, CA, DE, MI, NJ, NY, PA, TX

11. Attached

Determination by State Agency

This registration is for a Special Local Need and is being issued in accordance with section 24(c) of FIFRA, as amended. To the best of our knowledge, the information above is correct, except as noted in "Comments" below or in attachments.

Name, Title, and Address of State Agency Official	Comments (by State Agency Only)	Received by EPA
Title		
Telephone Number / Date		

EPA Form 8570-25 (Rev. 5-12)

EPA COPY

Listed species believed to or known to occur in Maine

Source: US-FWS Environmental Conservation Online System (ECOS)
https://ecos.fws.gov/ecp/report/species-listings-by-state?stateAbbrev=ME&stateName=Maine&statusCategory=Listed
Date: 10/7/2026

Notes:
This report shows listed species or populations believed to or known to occur in ME
This list does not include experimental populations and similarity of appearance listings.
Click on the highlighted scientific names below to view a Species Profile.

11 Species Listings

Scientific Name	Common Name	Where Listed	Region	ESA Listing Status
Birds				
Charadrius melodus	Piping Plover	[Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as	5	Threatened
Sterna dougallii dougallii	Roseate tern	Northeast U.S. nesting population	5	Endangered
Calidris canutus rufa	rufa red knot	Wherever found	5	Threatened
Fishes				
Salmo salar	Atlantic salmon	Gulf of Maine DPS	5	Endangered
Flowering Plants				
Platanthera leucophaea	Eastern prairie fringed orchid		3	Threatened
Pedicularis furbishiae	Furbish lousewort		5	Threatened
Isotria medeoloides	Small whorled pogonia		5	Threatened
Insects				
Bombus affinis	Rusty patched bumble bee	Wherever found	3	Endangered
Mammals				
Lynx canadensis	Canada Lynx	Wherever Found in Contiguous U.S.	6	Threatened
Myotis septentrionalis	Northern Long-Eared Bat	Wherever found	3	Endangered
Reptiles				
Eretmochelys imbricata	Hawksbill sea turtle	Wherever found	4	Endangered

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

November 4th, 2026

Re: Risk Assessment overview for three new active ingredients

To: Maine Board of Pesticide Control

Dear Members of the Maine Board of Pesticides Control-

I have reviewed the toxicological profile of the three newly approved active ingredients: diflufenican, fluoxapiprolin, and trifludimoxazin. These active ingredients represent new options for Maine farmers and growers who seek to control pests and should be integrated into a sound IPM strategy. An overview of their environmental and human health risks is presented below.

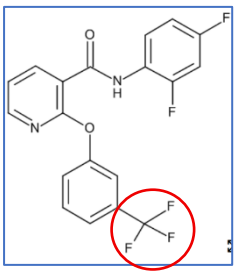
Diflufenican

Diflufenican is an herbicide that inhibits photosynthesis and is therefore highly toxic to plants and algae. Therefore, this active ingredient presents an off-target risk to terrestrial and aquatic plants. However, this risk is minimized if products containing diflufenican are used according to the label. This stems from the herbicide's chemical properties. This includes a low vapor pressure, which prevents it from transitioning into a gas and drifting into the atmosphere. Additionally, its low water solubility and a K_{ow} value >4 means that it is very hydrophobic and will partition to the soil. Thus, the risks of leaching into the groundwater are minimal if applied to soil that has a sand content less than 70%. Similar to all pesticidal active ingredients, the risk of runoff remains a threat if not used according to the label, *i.e.* applications on ledge, standing water, or adverse weather.

Diflufenican is classified as mildly toxic or practically non-toxic to most groups of animals (*e.g.* mammals, birds, bees, and insects). However, it is moderately toxic to fish and therefore presents an environmental concern to these non-target organisms if there is exposure in aquatic ecosystems. There is no evidence that diflufenican is carcinogenic or genotoxic.

This herbicide has a half-life of ~100 days in soils and is therefore categorized as moderately persistent to persistent in soils. Although diflufenican has the potential to bioaccumulate in fish, this is not anticipated if exposure in aquatic systems is prevented. This conclusion is reached because diflufenican has a high binding affinity for soil, which greatly reduces leaching and this risk to fish if used according to the label.

Diflufenican is a PFAS as defined by the State of Maine and the OECD. The molecule possesses a trifluoromethyl groups (CF_3), which is circled in red. This feature means that it can degrade into trifluoroacetate and contaminate aquatic systems. In fact, environmental fate studies in aerobic soil reveal that 5% of the active ingredient can transform into trifluoroacetate (Johnsen et al., 2026). Additionally, EPA documents identified nine degradants that retain the CF_3 group, indicating that the yield of trifluoroacetate could be greater than 5%; however, this has not been experimentally determined.



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EPA identified one metabolite that is more toxic than the original parent molecule, which was categorized as a residue of concern. However, this metabolite is not expected to accumulate to levels that present a health or environmental risk. This conclusion is based on its calculated hazard ratio, which indicates that potential exposure is orders of magnitude lower than a toxicological threshold to terrestrial and aquatic organisms.

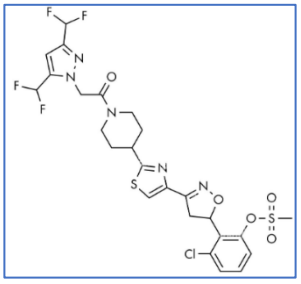
Resistance to diflufenican has been documented. Diflufenican shares a similar mode of action with six other herbicides, and therefore presents an elevated risk of cross-resistance, i.*e.* resistance to one pesticide also confers resistance to the new active ingredient.

Fluoxapiprolin

Fluoxapiprolin is a new tool in fungal management and shares a similar mode of action with oxathiapropalin. Therefore, the Fungicide Resistance Action Committee (FRAC) notes a moderate risk of cross-resistance, i.*e.* resistance to oxathiapropalin also confers resistance to the new active ingredient.

This new active ingredient is categorized as mildly-toxic or practically non-toxic to aquatic and terrestrial animals. Under the request of EPA's Human Effects Division, the Cancer Assessment Review Committee evaluated fluoxapiprolin and deemed it not likely to be carcinogenic to humans (EPA, 2022). According to the EPA, the level of risk associated with fluoxipropalin does not reach a level of concern for aquatic and terrestrial animals; this "no effects" conclusion also extends to species protected under the Endangered Species Act (EPA, 2026).

Fluoxapiprolin is a fluorinated molecule that does not meet PFAS criteria as defined by the State of Maine or OECD. Environmental fate studies reveal six degradants that retain the recalcitrant carbon-fluorine bond. Intriguingly, one metabolite identified as BCS-CS55621 is defluorinated in aerobic soil, anaerobic soil, and aerobic aquatic system; in this case, the difluoromethyl group is replaced by a carboxylic group. This points to the growing body of evidence that several fluorinated active ingredients - including those that are PFAS- are capable of defluorination under both natural conditions and laboratory conditions.



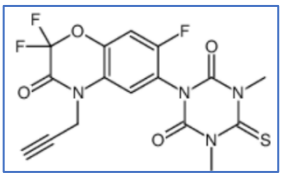
Fifteen dissipation studies document that the half-life of fluoxapiprolin ranges from 10-62 days; a manual analysis of these data reveals a geometric mean of 28 days, suggesting slight to moderate persistence.

Trifludimoxazin

Trifludimoxazin is an herbicide that inhibits photosynthesis and is therefore highly toxic to plants and algae. It is classified as mildly toxic or practically non-toxic to diverse groups of animals (*e.g.* mammals, birds, bees, fish, and insects); if used according to the label, risks to animals is anticipated to be low.

The greatest environmental risk of trifludimoxazin includes non-target effects in terrestrial and aquatic plants. However, this risk is minimized by trifludimoxazin's physiochemical properties. The herbicide's low vapor pressure means that its ability to volatilize- and drift into the atmosphere- under environmentally relevant conditions is practically non-existent. Additionally, its low water solubility and a K_{ow} value >3 means that it will partition to the soil and rather than leach into the groundwater; however, risk of runoff remains a threat to aquatic plants if the pesticidal active ingredient is not used according to the label.

Trifludimoxazin is a PFAS as defined by the State of Maine and the OECD. However, it lacks a trifluoromethyl group (CF_3), which means it will not degrade and contribute to trifluoroacetate accumulation and its potential to contaminate water sources. Environmental fate studies reveal that trifludimoxazin is not persistent in field soil experiments. Nonetheless, EPA dockets indicate that it can degrade into twelve degradants that retain the CF_2 moiety; these metabolites are persistent, but they are not nearly as recalcitrant as metabolites with CF_3 moieties. These degradants are more likely to leach; however, the metabolites are orders of magnitude less toxic than trifludimoxazin. This feature greatly decreases their toxicological profile to aquatic plants if they were to be detected in



Maine's waters. In contrast to heavily fluorinated PFAS molecules, the ability of trifludimoxazin to bioaccumulate in the food chain is negligible.

Please let me know if you have any questions related to my risk assessment.

Respectfully,
Doug Van Hoewyk, PhD



Toxicologist
Maine Board of Pesticide Control

References

EPA. 2020. Trifludimoxazin: Ecological Risk Assessment for the Proposed Section 3 New Chemical Registration. EPA-HQ-OPP-2018-0762-0013

EPA, 2022 Fluoxapiprolin: Report of the Cancer Assessment Review Committee. EPA-HQ-OPP-2022-0980-0016

EPA. 2022. Diflufenican. Report of the Residues of Concern Knowledgebase Subcommittee (ROCKS). EPA-HQ-OPP-2021-0435-0015

EPA. 2025. Diflufenican.Human Health Risk Assessment. EPA-HQ-OPP-2021-0435-0013

EPA. 2025. Diflufenican: Final Environmental Fate and Ecological Risk Assessment (ERA) for the FIFRA Section 3 Registration and Biological Evaluation (BE) with Associated Effects Determinations for Federally Listed Endangered and Threatened Species and Designated Critical Habitat. EPA-HQ-OPP-2021-0435-0048

EPA, 2026 Memorandum Supporting Final Decision to Approve Registration for the New Active Ingredient of Fluoxapiprolin. EPA-HQ-OPP-2022-0980-0027

New Active Ingredients – November 13, 2026

1. Fluoxapiprolin – Group 49 Fungicide
    a. Xivana Prime (264-1226)
        i. Fungicide for control or suppression of crop diseases on brassica head and stem vegetables, bulb vegetables, cucurbit vegetables, fruiting vegetables, leafy vegetables, leaf petiole vegetables, small fruit vine (climbing), and tuberous and corm vegetables
        ii. Bayer Cropscience, LP
        iii. Submitted to Maine August 12, 2026
        iv. Groundwater and Surface Water advisory statements in Environmental Hazards
2. Trifludimoxazin – Group 14 Herbicide
    a. Voraxor (7969-495)
        i. Herbicide for use in corn, legume vegetables, small grains, sorghum, soybean, and in postharvest and fallow
        ii. New active is in formula alongside existing active saflufenacil
        iii. BASF Agricultural Solutions US, LLC
        iv. Submitted to Maine July 24, 2026
        v. Groundwater, Surface Water, Non-target Organism, and pollinator advisory statements in Environmental Hazards
        vi. Endangered and and Threatened Species Protection Requirements section in Directions for Use
    b. Antorix (7969-493)
        i. Herbicide for use as a postemergence-directed broadleaf and grass herbicide in citrus fruit trees, nut trees, and pome fruit trees
        ii. New active is in formula alongside existing active saflufenacil
        iii. BASF Agricultural Solutions US, LLC
        iv. Submitted to Maine July 24, 2026
        v. Groundwater, Surface Water, Non-target Organism, and pollinator advisory statements in Environmental Hazards
        vi. Endangered and and Threatened Species Protection Requirements section in Directions for Use
3. Diflufenican
    a. Convintro (264-1213)
        i. Herbicides for preemergence control of broadleaf weeds on field corn and soybeans
        ii. Bayer Cropscience, LP
        iii. Submitted on July 13, 2026
        iv. Surface Water Advisory in Environmental Hazards
        v. Endangered and Threatened Species Protection Requirements section in Directions for Use

Convintro™

Herbicide

Net Contents:

2.5 Gallons

DIFLUFENICAN	GROUP 12	HERBICIDE

For preemergence control of certain broadleaf weeds on field corn and soybeans

ACTIVE INGREDIENT:	
Diflufenican [N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]pyridine-3-carboxamide]	**42.01%**
OTHER INGREDIENTS:	**57.99%**
TOTAL:	**100.00%**

Contains 4.17 pounds per U.S. gallon (500 grams per liter) of the active ingredient per U.S. gallon

EPA Reg. No. 264-1213

KEEP OUT OF REACH OF CHILDREN

CAUTION PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.

Please refer to booklet for additional precautionary statements and directions for use.

For **MEDICAL** and **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours a Day 1-800-334-7577
For **PRODUCT USE** Information Call 1-866-99BAYER (1-866-992-2937)

MIX WELL BEFORE USE

Produced for
Bayer CropScience LLC
800 N. Lindbergh Blvd.
St. Louis, MO 63167
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FIRST AID

If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment advice.

In case of emergency, call the toll-free Bayer CropScience Emergency Response telephone number: 1-800-334-7577.

Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

Note to Physician: No specific antidote is available. All treatments should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

- Harmful if swallowed or absorbed through the skin.
- Causes moderate eye irritation.
- Avoid contact with skin, eyes or clothing.
- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607 (d)(e) and (f)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY REQUIREMENTS

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

- Users must remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users must remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, oysters and shrimp. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. For terrestrial uses, **DO NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high

water mark. **DO NOT** apply when weather conditions favor drift from areas treated. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. **DO NOT** use the same spray equipment for other purposes unless thoroughly cleaned. **DO NOT** contaminate water used for irrigation or domestic purposes.

SURFACE WATER ADVISORY This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several months or more after application.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read the entire label before using this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

ENDANGERED AND THREATENED SPECIES PROTECTION REQUIREMENTS:

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

For Important crop safety information, refer to the Use Directions section under the specific crop.

REPORTING ECOLOGICAL INCIDENTS: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticideincidents.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval.

DO NOT enter or allow worker entry into treated areas during the restricted entry interval **(REI) of 12 hours.**

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water), is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

PRODUCT INFORMATION

Covintro Herbicide:

- is a selective herbicide for control of Amaranthus weed species infesting soybean, field corn, seed corn and corn grown for silage.
- is formulated as a suspension concentrate (SC) containing 4.17 pounds diflufenican active ingredient per gallon.
- contains the active ingredient diflufenican which is a PDS inhibitor mode of action that controls weeds by inhibiting enzymes that are essential to the protection of chlorophyll in plant leaves.
- is effective in controlling glyphosate-, triazine-, PPO-, ALS-, HPPD-, and auxin- herbicide resistant populations of Amaranthus weed species.

Requires the addition of tank mix partner(s) for control of weeds other than Amaranthus weed species.

USE RESTRICTIONS

DO NOT apply Aerially.

DO NOT use this product in the states of California, Alaska, or Hawaii.

DO NOT use this product in the state of Florida, except for the counties of: Escambia, Santa Rosa, Okaloos, Walton, Holmes, Washington, Jackson, Calhoun, Gadsden, Leon, Jefferson, Madison, Hamilton, Suwannee, Columbia, Baker, Lafayette, Union, Bradford, Clay, Gilchrist, Dixie, Levy, Alachua, Putnam, and Marion.

Refer to the specific use directions and restrictions in each specific crop section.

APPLICATION INSTRUCTIONS

Covintro Herbicide:

- may be used in either conventional, conservation tillage, or no-till crop management systems.
- may be applied either preplant or preemergence.
- will provide it's most effective weed control when applied and subsequently moved into the soil by rainfall, sprinkler irrigation or mechanical tillage prior to weed emergence.
- may be tankmixed or applied in sequential applications with other herbicides to control additional weeds.
- may be applied using either water carrier or sprayable grade fluid fertilizer as a liquid carrier.
- may be applied by ground application only. Aerial application is not permitted.
- may be applied as either a broadcast spray or as a band application.

Refer to the **SPECIFIC USE DIRECTIONS** section of this label for additional application information specific from each registered use of Covintro Herbicide.

Ground Application (Banding)

Banding herbicide application equipment must be carefully calibrated to prevent crop exposure to concentrations of Covintro Herbicide that exceed the labeled rate for the soil type. It is critical to ensure that the calibrated band width equates to actual band width realized in field applications. Bands actually delivered at a width narrower than targeted will concentrate the product and increase the risk for crop response.

Even flat spray tip nozzles and a band width of no less than 12" must be used.

Apply a broadcast equivalent rate and volume per acre. The following equations may be used to make the required calculations as follows:

$$\frac{\text{band width (inches)}}{\text{row width (inches)}} * \text{broadcast rate per acre} = \text{banding rate per acre}$$

$$\frac{\text{band width (inches)}}{\text{row width (inches)}} * \text{broadcast spray volume per acre} = \text{banding spray volume per acre}$$

Ground Application (Broadcast)

Apply Covintro Herbicide in tank mixtures in a minimum of 10 gallons of spray mixture per acre. Uniform, thorough spray coverage is important to achieve consistent weed control. Confirm that spray tank is equipped with a sparge tube agitator, mechanical agitation devices or jet agitator devices that are capable of providing vigorous agitation while mixing. Agitate thoroughly before and during application with either bypass or mechanical agitation. Maintain adequate in-tank agitation at all times, including during momentary stops to keep the spray mixture in suspension and provide a minimum of 20% bypass at all times. Keep the spray boom at the lowest possible spray height above the target surface. Refer to nozzle manufacturer's specifications for proper nozzle, pressure setting, and sprayer speed for optimum product performance and minimal spray drift. Uneven application or sprayers not properly calibrated may decrease the level of weed control and/or increase the level of adverse crop response. Maintain constant ground speed while applying product to ensure proper distribution. **DO NOT** overlap spray patterns beyond equipment manufacturers specifications as excessive rates may result in adverse crop responses and potential stand loss. The use of screens to protect the pump and nozzles is advised. Screens placed on the suction side of the pump must be 16-mesh or coarser. Equip sprayer with 50 mesh in line filter(s) located between the pump discharge and the spray boom. This filter may be located prior to each spray boom section. If nozzle filters are used, use 50 mesh or coarser nozzle filters as specified by nozzle manufacturer. **DO NOT** place a screen in the recirculation line. Application must be made at a sufficient spray pressure and volume to provide accurate and uniform application of spray particles to a given area without causing spray drift to non-target areas.

RESISTANCE MANAGEMENT

For resistance management, Covintro Herbicide is a Group 12 herbicide. Any weed population may contain or develop plants naturally resistant to Covintro Herbicide and other Group 12 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of Covintro Herbicide or other Group 12 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- **DO NOT** apply this product alone. An appropriate herbicide tank mix partner must be used to broaden the spectrum of weed control.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance contact Bayer CropScience at 1-866-99BAYER (1-866-992-2937). You can also contact your pesticide distributor or university extension specialist to report resistance.

MANDATORY SPRAY DRIFT MITIGATIONS

MANDATORY SPRAY DRIFT MANAGEMENT

- **DO NOT apply this product aerially.**

Ground Boom Applications

- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes), must register between 3 and 15 miles per hour.
- Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment).
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- **DO NOT** release spray at a height greater than 2 feet above the ground or crop canopy.
- Applicators must select nozzle and pressure that deliver coarse or coarser depending on team discussions] droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASAE S572).
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

- IMPORTANCE OF DROPLET SIZE
  An effective way to reduce spray drift is to apply large droplets. Consider the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.
- Controlling Droplet Size - Ground Boom
  - Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Consider using the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
  - Pressure – Using the lowest spray pressure recommended for the nozzle will produce the target spray volume and droplet size.
  - Spray Nozzle - Consider using a spray nozzle that is designed for the intended application as well as using nozzles designed to reduce drift.
- Release height – Ground Boom
  For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.
- HOODED (OR SHIELDED) SPRAYERS
  Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded sprayers. Applicators should verify that the shields are not interfering with the uniform deposition of the spray on the target area.
- TEMPERATURE AND HUMIDITY
  When making applications in hot and dry conditions, consider using larger droplets to reduce effects of evaporation.
- TEMPERATURE INVERSIONS
  Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.
- WIND
  Drift potential generally increases with wind speed.
  Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

MANDATORY RUNOFF/EROSION MITIGATION

Applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA) that has a Bulletin in BLT. If you are located inside a PULA, follow the instructions in the bulletin.

If the application site is located outside a PULA, follow the instructions in the section below.

2 mitigation points are required for all field crops listed on this label. Follow the steps below to achieve points.

- Step 1. To achieve the mitigation points specified above, visit EPA's mitigation menu website (www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.
- Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (*e.g.*, subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).
- Step 3. If the application site does not meet the field/application parameters specified on EPA's mitigation menu website, choose among the mitigation and/or mitigation relief options on EPA's mitigation menu website to meet or exceed the required points noted here before applying this product.
- Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:

- Employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's Mitigation Menu Website. EPA may periodically update the Mitigation Menu Website, for example, by adding new mitigation measures or updating a mitigation measure description.

- Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

COMPATIBILITY TESTING AND TANK MIX PARTNERS

Compatibility

If Covintro Herbicide is to be tank mixed with liquid fertilizers or other pesticides, compatibility must be tested prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1 qt) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop, **DO NOT** use this mixture for spraying. Indications of incompatibility usually will appear within 5-15 minutes after mixing. Read and follow all parts of the label of each tank-mix product.

Order of Mixing

Covintro Herbicide may be used with other recommended pesticides, fertilizers, and micronutrients. When using Covintro Herbicide, make sure the sprayer is completely clean, free of rust or corrosion which occurs from winter storage. Examine strainers and screens to be sure the sprayer is clean from previously used pesticides. Ensure that all in-line strainer and nozzle screens in the sprayer are 50 mesh or coarser. **DO NOT** use screens finer than 50 mesh.

Any tank mix containing Covintro Herbicide must be kept agitated and sprayed out immediately. **DO NOT** allow tank mixes to stand for prolonged periods of time.

The proper mixing procedure for Covintro Herbicide, in tank mix combinations with other pesticides is:

1. Fill the spray tank with 50% of the required volume of water and begin agitation. Agitation must continue throughout the entire mixing and spraying procedure.
2. If a compatibility agent is necessary to improve mixing or to prevent formation of undesirable and unsprayable gels or precipitates, while agitating, add it to the carrier already in the tank. Use only compatibility agents cleared by FDA for this use. Read and follow directions for use, cautionary statements, and all other information appearing on the selected compatibility agent label. Check for adequate agitation.
3. Add specified rate of Covintro Herbicide slowly to the spray tank or mixing system and ensure complete dispersion. Maintain and ensure thorough dispersion and sufficient agitation during both mixing and spraying.
4. Add the tank mix product.
5. Fill the spray tank with the balance of water needed.
6. Continue agitation during application and until sprayer tank is empty.

RE-SUSPENDING SC PRODUCTS IN SPRAY SOLUTION

Like other suspension concentrates (SCs), Covintro Herbicide will settle if left standing without agitation. If the spray solution is allowed to settle for one hour or more, reagitate the spray solution for a minimum of 10 minutes before application.

APPLICATION OF COVINTRO HERBICIDE IN FLUID FERTILIZERS

Covintro Herbicide may be applied in fluid fertilizer solutions by following the appropriate mixing procedures and compatibility check. When using tank mix combinations, be sure all components are compatible.

Compatibility checks of Covintro Herbicide and tank mix combinations which include Covintro Herbicide must be made for each batch of fluid fertilizer because of the variability of these fertilizers.

Compatibility Check:

1. Pre-mix 2 teaspoonfuls of Covintro Herbicide with 16 teaspoonfuls of water (1:8 ratio) in a quart jar by adding the water first and follow with Covintro Herbicide. Mix thoroughly. Add the second herbicide after mixing Covintro Herbicide first.
2. Then pour 1 pint of fluid fertilizer into the quart jar and shake well.
3. Allow to stand for 5 minutes.

THIS COMPATIBILITY CHECK MUST ONLY BE USED WHEN MIXING WITH FLUID FERTILIZERS.

Interpretation of Results: If the solution in the jar appears to be uniform, without signs of agglomeration, or without a separation of an oily film on top of the fertilizer, the mixture may be used. If not, repeat the compatibility check using twice the amount of water or add a compatibility agent to the water. If separation occurs, but the mixture can be resuspended by shaking, then application is possible with good agitation in the spray tank.

Tank mixing Guidelines:

1. Add the required amount of water and compatibility agent (if required) to the tank. Start the agitation system while adding Covintro Herbicide followed by a second herbicide and agitate.
2. Add fluid fertilizer and continue agitation.
3. Maintain continuous agitation to assure uniform spray mixture until the tank is emptied.

EQUIPMENT CLEANOUT PROCEDURES

To avoid injury or exposure to non-target crops, thoroughly clean all mixing and spray equipment, including pumps, nozzles, lines and screens with a good quality tank cleaner, on an approved rinse pad or on the field site where an approved crop is to be grown. Mix only as much cleaning solution as needed.

1. Flush tank, hoses, boom, and nozzles with clean water.
2. Use a pressure washer with a high quality commercial spray tank cleaner in water to clean the inside of the spray tank. Take care to wash all parts of the tank, including the inside top surface. If a pressure washer is not available, completely fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
3. Flush hoses, spray lines, and nozzles for at least 1 minute with the cleaning solution.
4. Dispose of rinsate from steps 1-3 in an appropriate manner.
5. Repeat steps 2-4.
6. Remove nozzles, screens, and strainers and clean separately in the cleaning solution after completing the above procedures.
7. Rinse the complete spraying system with clean water.

Cleanup must be conducted on an approved rinse pad or the field site where an approved crop is to be grown.

ROTATIONAL CROPS

Rotational crops vary in their crop response to low concentrations of Covintro Herbicide remaining in the soil. The amount of Covintro Herbicide that may be present in the soil depends on soil moisture, soil temp, application rate, elapsed time since application, and other environmental factors. When Covintro Herbicide is used in combination with other products, always follow the most restrictive rotational crop requirements. The following rotational crops may be planted after applying Covintro Herbicide: Labeled crops Corn (field and seed) and Soybeans may be replanted at any time; all other crops require a minimum plant back interval of 30 days, except legumes at a minimum of 365 days.

In the event of crop failure: If the crop treated with Covintro Herbicide is lost, only soybeans, field corn, and corn grown for silage may be replanted immediately. **DO NOT** make an additional application of Covintro Herbicide.

Crop	Geography	Rotational Interval (months)	Minimum Precipitation Requirement[1]
Corn (Field and seed) & Soybeans	All	0	None
Wheat, Triticale, Barley, and Rye	All	4	
Sweet corn, Popcorn, Potato, Grain Sorghum, and Sunflower	All	6	
Cotton and Rice	All	10	15 inches of cumulative precipitation from application to planting of rotational crop.[2]
Sugar beets	East of the Mississippi River		
Tobacco, Alfalfa, Canola, Chickpeas, Peas, Peanuts and Lentils	All	12	
Dry Beans	East of the Mississippi River	12	
Dry Beans, Sugar beets	West of the Mississippi River	18	
All other crops[3]	All		

[1] The amount of cumulative precipitation required before planting a rotational crop is in addition to the required rotational interval given in months.

[2] Furrow or flood irrigation not to be included in total. No more than 7 inches of overhead irrigation included in total.

[3] All other crops may be seeded only after the completion of a successful bioassay after a Covintro Herbicide application. Refer to the "Field/Small Scale Bioassay" section.

Cover Crops

Use of cover crops as a means of soil improvement, erosion control, weed and/or insect suppression, etc., following harvest of corn or soybeans in the Fall is increasing. Planting of cover crops in fields treated with Covintro Herbicide is allowed as long as these cover crops are not grazed by livestock nor harvested for food. Cover crops are to be tilled under or chemically controlled with burndown herbicides in the spring. Many cover crops can be planted within 90-120 days after application of Covintro Herbicide.

However, all potential cover crops have not been evaluated for tolerance to Covintro Herbicide and significant injury may occur. Prior to seeding a cover crop, complete a successful field/ home bioassay to provide an indication of the level of tolerance to the prior Covintro Herbicide application. Refer to the "Field/Small Scale Bioassay" section. If used in tank mixtures with other herbicides, always follow the most restrictive label.

Field/Small Scale Bioassay

A field/ small scale bioassay must be completed before rotating to a cover crop other than those specified in the "Rotational Crop Restrictions" section of this label. To conduct an effective **field bioassay**, grow strips of the crop(s) you intend to grow the following season in a field previously treated with Covintro Herbicide. The test strip must be placed in a controlled area and include low areas and knolls, and include variations in soil including type and pH. Crop response to the bioassay will determine if the crop(s) grown in the test strips can be grown safely in the areas previously treated with Covintro Herbicide.

For an effective **small scale bioassay**, collect uniform samples of all soil types from the Covintro Herbicide- treated field (see example above for types of soil in the sample) and place the soil into a sturdy container. Plant the desired cover crop into the soil, apply water and place the container in a warm, sunny area to allow germination and growth of the crop. Monitor growth of the cover crop over a three to four week period. If the cover crop emerges and grows normally, the risk to establish and grow the cover crop in the Covintro Herbicide-treated field must be tolerable.

WEEDS CONTROLLED

Covintro Herbicide applied as directed in this label will control or suppress the weeds listed below. Additional weeds may be controlled with tank mixtures or sequential applications (refer to the TANK MIX INSTRUCTIONS section of this label). Always refer to the tank mix partner labels for specific use rates and additional instructions.

BROADLEAF WEEDS CONTROLLED				
Broadleaf Weeds	Covintro Herbicide Alone		Broadleaf Weeds	Covintro Herbicide Alone
Amaranth, Palmer	C		Waterhemp, common	C
Pigweed, prostrate	C		Waterhemp, tall	C
Pigweed, redroot	C			
Pigweed, smooth	C			
C= Control				

SPECIFIC USE DIRECTIONS

CORN (Field Corn, Seed Corn and Corn Grown for Silage)

Covintro Herbicide may be used in either conventional, conservation tillage, or no-till crop management systems and may be applied either preplant or preemergence. Covintro Herbicide treatments are most effective in controlling weeds when adequate rainfall is received within 14 days after application. If cultivation is necessary because of soil crusting, soil compaction, or weed germination before rain occurs, use shallow tillage including rotary hoe to lightly incorporate Covintro Herbicide. Make certain corn seeds are below the tilled area. If treated soil is moved during tillage practices in such a way that the herbicide barrier is no longer intact, weeds may emerge from areas where treated soil has been removed. **DO NOT** incorporate with a drag harrow after planting. An appropriate herbicide tank mix partner must be used in order to broaden spectrum of weed control.

APPLICATION TIMING

Preplant Surface-Applied

Covintro Herbicide may be applied up to 30 days before planting corn when used in a planned sequential application program including Covintro Herbicide followed by postemergence applied herbicides appropriate for control of the target weeds. An appropriate herbicide tank mix partner must be used to broaden spectrum of weed control. Total Covintro Herbicide applied may not exceed the listed rate for a preplant treatment on the predominate soil type in the field.

Moving treated soil out of the row or moving untreated soil to the surface during planting may result in reduced weed control. For enhanced burndown of emerged broadleaf and grass weeds tank mix with glyphosate, dicamba, paraquat, or 2,4-D according to their labelled use rates. Follow all label directions, rotational crop guidelines, and use restrictions/precautions for Covintro Herbicide and any tank-mix partners and use the most restrictive guidelines.

Preemergence

Apply Covintro Herbicide during planting (behind the planter after furrow closure) or within 3 days after planting. Failure to thoroughly close and firm the seed furrow may allow herbicide to directly contact the seed which can cause injury. An appropriate tank mix partner herbicide must be used to broaden spectrum of control. For enhanced burndown of emerged broadleaf and grass weeds tank mix with glyphosate, dicamba, paraquat, or 2,4-D according to their labelled use rates. If applying Covintro Herbicide to emerged weeds, the inclusion of an appropriate adjuvant (Crop Oil Concentrate (COC), Methylated Seed Oil (MSO), or High Surfactant Oil Concentrate (HSOC)) will enhance burndown activity of controlled weeds. Follow all label directions, rotational crop guidelines, and use restrictions/precautions for Covintro Herbicide and any tank-mix partners and use the most restrictive guidelines.

Application in fall or early spring following harvest of previous crop

Covintro Herbicide may be applied after previous crop harvest and at least 30 days prior to planting corn using the rates in the preplant section. For enhanced burndown of emerged broadleaf and grass weeds tank mix with glyphosate, dicamba, paraquat, or 2,4-D according to their labelled use rates. If applying SC500 Herbicide to emerged weeds, the inclusion of an appropriate adjuvant (Crop Oil Concentrate (COC), Methylated Seed Oil (MSO), or High Surfactant Oil Concentrate (HSOC)) will enhance burndown activity of controlled weeds. Follow all label directions, rotational crop guidelines, and use restrictions/precautions for Covintro Herbicide and any tank-mix partners and use the most restrictive guidelines.

APPLICATION RATES

Application Timing	Maximum Rate in Fluid Ounces of Covintro Herbicide per Acre					
	Coarse Soils		Medium Soils		Fine Soils	
	Sand, Loamy Sand, Sandy loam		Loam, Silt Loam, Silt, Sandy Clay Loam		Silty Clay Loam, Clay Loam, Sandy Clay, Silty Clay, Clay	
	< 1.5% O.M.*	>=1.5% O.M.	< 1.5% O.M.	>=1.5% O.M.	< 1.5% O.M.	>=1.5% O.M.
Preplant 8 to 30 days prior to planting	2.4 (0.0784 lbs ai/A)	3.3 (0.1076 lbs ai/A)			4.1 (0.1334 lbs ai/A)	
Preemerge (0 to 7 days prior to planting or within 3 days of planting)	2.4 (0.0784 lbs ai/A)		3.3 (0.1076 lbs ai/A)		4.1 (0.1334 lbs ai/A)	

*Organic Matter

Application of Covintro Herbicide at less than listed rates for the appropriate soil will only provide suppression of sensitive weeds.

RESTRICTIONS FOR USE

- **DO NOT** apply more than 4.1 fluid ounces per acre (0.1334 lbs) of Covintro Herbicide per 365-day period or exceed the maximum labeled rate for any given soil type.
- **DO NOT** apply more than 4.1 fluid ounces (0.1334 lbs) per acre of Covintro Herbicide in a single application or exceed the maximum labeled rate for any given soil type or crop response may occur.
- **DO NOT** make more than one application per year.
- **DO NOT** apply under conditions that favor runoff
- **DO NOT** apply if soil is saturated with water or above field capacity.

PRECAUTIONS FOR USE

- Spray overlaps produce areas of over application which increase the potential for crop injury.
- **Planting depth:** Seed must be planted a minimum of 1 ½ inches deep and must be completely covered with soil and furrow firmed or reduced crop stand or injury may occur.
- **Application Timing:** Applying Covintro Herbicide less than 8 days before corn planting may increase the risk of crop injury, especially if irrigation or rainfall is received following the application. Injury symptoms include leaf tissue bleaching (whitening), leaf chlorosis (yellowing), necrosis (browning), and/or temporary stunting. Applying Covintro Herbicide more than 8 days (but not more than 30 days) prior to planting may reduce the risk of crop injury.
- **Effect of adverse weather:** Following an application of Covintro Herbicide, periods of cool/cold, wet conditions (cool/cold daytime/nighttime temperatures, saturated soil conditions, recurring rainfall events, etc.) during corn seed germination and/or early crop development period may result in temporary crop injury. Injury symptoms may appear as leaf tissue bleaching (whitening) and/or crop stunting. Corn plants usually recover from this injury without affecting yield.
- **Effect of variable soils on use rate:** The proper use rate of Covintro Herbicide is affected by several soil factors, including soil texture, organic matter, and soil pH. Soils which contain variations in one or more of these factors in a given area are termed variable soils and may be more likely to incur localized corn injury symptoms from an application of Covintro Herbicide. Characteristics of localized soil variants that are more likely to incur injury are a coarser soil texture, a lower organic matter and/or a higher pH (alkaline/calcareous soil) than other areas of the same field and include, among others, clay knolls, eroded hill sides, and terracing with scraped exposed subsoil. The user is responsible for selecting the rate of Covintro Herbicide that is appropriate for all soils in the area of application.

- **Corn hybrids and certain male pollinators:** Corn hybrids and certain male pollinators within blended corn varieties vary in their response to Covintro Herbicide. Not all hybrids or male pollinators within blended corn varieties have been tested for sensitivity to Covintro Herbicide. You should consult with your seed provider, your local Bayer CropScience representative, and/or other knowledgeable agricultural professionals for advice on hybrids or varieties containing male pollinator lines before applying Covintro Herbicide. If the tolerance of a hybrid or variety containing a male pollinator line is not known, you must apply Covintro Herbicide to a small area to first determine if the hybrid is tolerant prior to spraying large acreages of that hybrid.

SPECIAL PRECAUTIONS

Injury to corn may occur when Covintro Herbicide is used under the following conditions:

- When soils have a calcareous surface area or a pH of 7.5 or higher.
- When applied in conjunction with soil-applied organophosphate pesticides.
- Over application or boom overlapping may result in stand loss and soil residues.
- Uneven application can decrease the level of weed control and/or increase the level of injury.
- When applied to any soil with less than ½% organic matter.
- When sprayers are not calibrated accurately.
- When heavy rains occur soon after application, especially in poorly drained areas where water may stand for several days.
- When corn is planted less than 1.5 inches deep, particularly in preemergence application.

Activation: A minimum amount of soil moisture is required to activate Covintro Herbicide. In areas of low rainfall, preemergence applications to dry soil must be followed with light irrigation of 1/4 acre inch of water. **DO NOT** apply heavy irrigation immediately after application. As with many surface-applied herbicides, weed control and crop tolerance may vary with rainfall and/or soil texture.

Replanting: If replanting is necessary in fields treated with Covintro Herbicide as directed on this label, the field may be replanted to corn or soybeans (depending on the tank mix herbicide utilized). When replanting a minimum of tillage is recommended. **DO NOT** apply a second treatment as injury to corn may occur.

TANK MIX INSTRUCTIONS

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Covintro Herbicide must be used in tank mixture with other herbicides for improved control of certain broadleaf and grass weeds in corn. Preplant/preemergence tank mixtures with Covintro Herbicide may include but are not limited to those listed. Refer to and follow all parts of the label of each tank-mix partner. Tank-mix combinations may be used in either conventional, conservation tillage, or no-till cropping systems and applied at the same timings as Covintro Herbicide unless otherwise specified in the tank mix label. Multiple tank mixtures are allowed unless otherwise specified by the respective product labels. Check all tank-mix product labels for proper rates and compatibilities for multiple tank-mixes.

DO NOT TANK MIX ANY PRODUCT CONTAINING ISOXAFLUTOLE WITH THIS PRODUCT.

Possible Preplant/Preemergence Tank Mix Partners for Additional Weed Control

DiFlexx® (EPA Reg. No. 264-1173; *dicamba*)
Roundup PowerMAX® 3 (EPA Reg. No. 524-659; *glyphosate*)
RT 3® (EPA Reg. No. 524-544; *glyphosate*)
Harness® (EPA Reg. No. 524-473; *acetochlor*)
Degree Xtra® (EPA Reg. No. 524-511; *acetochlor*, *atrazine*)
Harness® Xtra (EPA Reg. No. 524-480; *acetochlor*, *atrazine*)
Harness® Xtra 5.6L (EPA Reg. No. 524-485; *acetochlor*, *atrazine*)
Harness® Max (EPA Reg. No. 524-636; *acetochlor*, *mesotrione*)

2,4-D	dicamba	glufosinate-ammonium	paraquat
flumetsulam	fluthiacet-methyl	glyphosate	clopyralid
dimethenamid-P	acetochlor	s-metolachlor	pyroxasulfone
	flufenacet	thiencarbazone-methyl	atrazine

SOYBEAN

Covintro Herbicide may be used in either conventional, conservation tillage, or no-till crop management systems and may be applied either preplant or preemergence. Covintro Herbicide treatments are most effective in controlling weeds when adequate rainfall is received within 14 days after application. If cultivation is necessary because of soil crusting, soil compaction, or weed germination before rain occurs, use shallow tillage including rotary hoe to lightly incorporate Covintro Herbicide. Make certain soybean seeds are below the tilled area. If treated soil is moved during tillage practices in such a way that the herbicide barrier is no longer intact, weeds may emerge from areas where treated soil has been removed. **DO NOT** incorporate with a drag harrow after planting. An appropriate tank mix partner herbicide must be used in order to broaden spectrum of weed control.

APPLICATION TIMING

Preplant Surface-Applied

Covintro Herbicide may be applied up to 30 days before planting soybean when used in a planned sequential application program including Covintro Herbicide followed by postemergence applied herbicides appropriate for control of the target weeds. An appropriate herbicide tank mix partner must be used in order to broaden spectrum of weed control. Total Covintro Herbicide applied may not exceed the listed rate for a preplant treatment on the predominant soil type in the field. Moving treated soil out of the row or moving untreated soil to the surface during planting may result in reduced weed control. For enhanced burndown of emerged broadleaf and grass weeds tank mix with glyphosate, dicamba, paraquat, or 2,4-D according to their labelled use rates. Follow all label directions, rotational crop guidelines, and use restrictions/precautions for Covintro Herbicide and any tank-mix partners and use the most restrictive guidelines.

Preemergence

Apply Covintro Herbicide during planting (behind the planter after furrow closure) or within 3 days after planting. Failure to thoroughly close and firm the seed furrow may allow herbicide to directly contact the seed which can cause injury. An appropriate tank mix herbicide partner must be used in order to broaden spectrum of weed control. For enhanced burndown of emerged broadleaf and grass weeds tank mix with glyphosate, dicamba, paraquat, or 2,4-D according to their labelled use rates. If applying Covintro Herbicide to emerged weeds, the inclusion of an appropriate adjuvant (Crop Oil Concentrate (COC), Methylated Seed Oil (MSO), or High Surfactant Oil Concentrate (HSOC)) will enhance burndown activity of controlled weeds. Follow all label directions, rotational crop guidelines, and use restrictions/precautions for Covintro Herbicide and any tank-mix partners and use the most restrictive guidelines.

Application in fall or early spring following harvest of previous crop

Covintro Herbicide may be applied after previous crop harvest and at least 30 days prior to planting soybean using the rates in the preplant section. For enhanced burndown of emerged broadleaf and grass weeds tank mix with glyphosate, dicamba, paraquat, or 2,4-D according to their labelled use rates. If applying SC500 Herbicide to emerged weeds, the inclusion of an appropriate adjuvant (Crop Oil Concentrate (COC), Methylated Seed Oil (MSO), or High Surfactant Oil Concentrate (HSOC)) will enhance burndown activity of controlled weeds. Follow all label directions, rotational crop guidelines, and use restrictions/precautions for Covintro Herbicide and any tank-mix partners and use the most restrictive guidelines.

<table>
<tr><th rowspan="3">Application Timing</th><th colspan="6">Maximum Rate in Fluid Ounces of Covintro Herbicide per Acre</th></tr>
<tr><th colspan="2">Coarse Soils

Sand, Loamy Sand, Sandy Loam</th><th colspan="2">Medium Soils

Loam, Silt Loam, Silt, Sandy Clay Loam</th><th colspan="2">Fine Soils

Silty Clay Loam, Clay Loam, Sandy Clay, Silty Clay, Clay</th></tr>
<tr><th>< 1.5% O.M.*</th><th>>=1.5% O.M.</th><th>< 1.5% O.M.</th><th>>=1.5% O.M.</th><th>< 1.5% O.M.</th><th>>=1.5% O.M.</th></tr>
<tr><td>Preplant 8 to 30 days prior to planting</td><td>2.4 (0.0784 lbs ai/A)</td><td colspan="2">3.3 (0.1076 lbs ai/A)</td><td colspan="2">4.1 (0.1334 lbs ai/A)</td><td>4.9 (0.1597 lbs ai/A)</td></tr>
<tr><td>Preemerge (0 to 7 days prior to planting or within 3 days of planting)</td><td colspan="2">2.4 (0.0784 lbs ai/A)</td><td>3.3 (0.1076 lbs ai/A)</td><td colspan="2">4.1 (0.1334 lbs ai/A)</td><td>4.1 - 4.9 (0.1334 lbs - 0.1597 lbs ai/A)</td></tr>
</table>

*Organic Matter

Application of Covintro Herbicide at less than listed rates for the appropriate soil will only provide suppression of sensitive weeds.

RESTRICTIONS FOR USE

- **DO NOT** apply more than 4.9 fluid ounces per acre (0.1597 lbs) of Covintro Herbicide per 365-day period or exceed the maximum labeled rate for any given soil type.
- **DO NOT** apply more than 4.9 fluid ounces (0.1597 lbs) per acre of Covintro Herbicide in a single application or exceed the maximum labeled rate for any given soil type or crop response may occur.
- **DO NOT** make more than one application per year.
- **DO NOT** apply under conditions that favor runoff
- **DO NOT** apply if soil is saturated with water or above field capacity.

PRECAUTIONS FOR USE

- Spray overlaps produce areas of over application which increase the potential for crop injury.
- **Planting depth:** Soybean seed must be planted a minimum of 1 ½ inches deep and must be completely covered with soil and furrow firmed or reduced crop stand or injury may occur.
- **Application Timing:** Applying Covintro Herbicide less than 8 days before soybean planting may increase the risk of crop injury, especially if irrigation or rainfall is received following the application. Injury symptoms may appear as leaf tissue bleaching (whitening), leaf chlorosis (yellowing), necrosis (browning), and/or temporary crop stunting. Applying Covintro Herbicide more than 8 days (but not more than 30 days) prior to planting may reduce the risk of crop injury.
- **Effect of variable soils on use rate:** The proper use rate of Covintro Herbicide is affected by several soil factors, including soil texture, organic matter, and soil pH. Soils which contain variations in one or more of these factors in a given area are termed variable soils and may be more likely to incur localized soybean injury symptoms from an application of Covintro Herbicide. Characteristics of localized soil variants that are more likely to incur injury are a more coarse soil texture, a lower organic matter and/or a higher pH (alkaline/calcareous soil) than other areas of the same field and include, among others, clay knolls, eroded hill sides, and terracing with scraped exposed subsoil. The user is responsible for selecting the rate of Covintro Herbicide that is appropriate for all soils in the area of application.
- **Effect of adverse weather:** Following an application of Covintro Herbicide, extended periods of cool/cold, wet conditions (cool/cold daytime/nighttime temperatures, saturated soil conditions, recurring rainfall events, etc.) during soybean seed germination and/or early crop development period may result in temporary crop injury. Injury symptoms may appear as leaf tissue bleaching (whitening) and/or crop stunting. Soybean plants usually recover from this injury without affecting yield.

SPECIAL PRECAUTIONS

Injury to soybeans may occur when Covintro Herbicide is used under the following conditions:

- When soils have a calcareous surface area or a pH of 7.5 or higher.
- When applied in conjunction with soil-applied organophosphate pesticides.
- Over application or boom overlapping may result in stand loss and soil residues.
- Uneven application can decrease the level of weed control and/or increase the level of injury.
- When applied to any soil with less than ½% organic matter.
- When sprayers are not calibrated accurately.
- When heavy rains occur soon after application, especially in poorly drained areas where water may stand for several days.
- When soybeans are planted less than 1 ½ inches deep, particularly in preemergence application.

Activation: A minimum amount of soil moisture is required to activate Covintro Herbicide. In areas of low rainfall, preemergence applications to dry soil must be followed with light irrigation of 1/4 acre inch of water. **DO NOT** apply heavy irrigation immediately after application. As with many surface-applied herbicides, weed control and crop tolerance may vary with rainfall and/or soil texture.

Rate Ranges: Where a rate range is shown, use a lower rate on soils that are coarse-textured or low in organic matter. Use a higher rate on soils that are relatively fine-textured or high in organic matter.

Replanting: If replanting is necessary in fields treated with Covintro Herbicide as directed on this label, the field may be replanted to corn (if 4.1 fluid ounces per acre or less was applied) or soybeans. Minimize tillage when replanting. **DO NOT** apply a second treatment as injury to soybeans may occur.

TANK MIX INSTRUCTIONS

TANK MIX INSTRUCTIONS

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable

restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive

directions for use and precautionary statements of each product in the tank mixture. Covintro Herbicide may be used in tank mixture with other herbicides for improved control of certain broadleaf and grass weeds in soybeans. Preplant/preemergence tank mixtures with Covintro Herbicide include but are not limited to those listed. Refer to and follow all parts of the label of each tank-mix partner. Tank-mix combinations may be used in either conventional, conservation tillage, or no-till cropping systems and applied at the same timings as Covintro Herbicide unless otherwise specified in the tank mix label. Multiple tank mixtures are allowed unless otherwise specified by the respective product labels. Check all tank-mix product labels for proper rates and compatibilities for multiple tank-mixes.

DO NOT TANK MIX ANY PRODUCT CONTAINING ISOXAFLUTOLE WITH THIS PRODUCT.

Possible Preplant/Preemergence Tank Mix Partners for Additional Weed Control

Roundup PowerMAX® 3 (EPA Reg. No. 524-659; *glyphosate*)			
RT 3® (EPA Reg. No. 524-544; *glyphosate*)			
Stryax® (EPA Reg. No. 264-1214; *dicamba*)			
Warrant® (EPA Reg. No. 524-591; *acetochlor*)			
acetochlor	dicamba	glufosinate-ammonium	paraquat
glyphosate	pyroxasulfone	s-metolachlor	dimethenamid-P
pendimethalin	trifluralin	flufenacet	sulfentrazone
saflufenacil	flumioxazin	2,4-D	chlorimuron-ethyl
cloransulam-methyl	metribuzin		

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING AND DISPOSAL:

CONTAINER HANDLING AND DISPOSAL STATEMENT AND REFILLING LIMITATION FOR NONREFILLABLE RIGID PLASTIC 2.5-GALLON CONTAINERS AND OTHER CONTAINERS OF GREATER THAN 1-GALLON BUT EQUAL TO OR LESS THAN 5-GALLON CAPACITY

Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state.

Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Once properly rinsed, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or Bayer at 1-800-768-6387. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

IMPORTANT NOTICE – PLEASE READ: LIMITATIONS OF WARRANTIES, LIABILITY, AND REMEDIES

This Notice of Limitation of Warranties, Liability, and Remedies ("Notice") and instructions to the purchaser and/or user ("Purchaser") contained in this product ("Product") label, including without limitation under Directions for Use (collectively, "Directions for Use"), are included in the terms of sale of this Product. Please read the Directions for Use and this Notice entirely before using this Product. The Purchaser accepts, acknowledges, and agrees to be bound by the Directions for Use and the terms of this Notice upon use of the Product. If Purchaser does not accept such terms, Purchaser must return the unopened Product container immediately. Any use and/or transfer of this Product must be authorized by Bayer CropScience LLC and accompanied by this Notice.

INHERENT RISKS OF USE: The Directions for Use of this Product are believed to be adequate, and Purchaser must carefully follow the Directions for Use. However, it is impossible to eliminate all risks associated with the use of this Product. Crop injury, ineffectiveness, or other unintended consequences may result because of factors and conditions beyond the control of Bayer CropScience LLC and its authorized Product distributors ("Seller"), including, among other things, adverse weather conditions, presence of other materials, and the manner of use or application. To the extent consistent with applicable law, Purchaser assumes all such risks.

To the extent the Product is a seed treatment product, Purchaser acknowledges that treatment of damaged seed (including, without limitation, highly mechanically damaged seed) or seed of low vigor or poor quality may result in reduced germination or seed and seedling vigor. Prior to use of this Product, Purchaser should inspect seed for damage and treat and conduct germination tests on a small portion of seed before treating a full seed lot with any seed treatment product.

EXPRESS WARRANTY: Seller's sole and exclusive warranty ("Exclusive Warranty") on the Product is the statements made on this Product label.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, EXCEPT FOR THE EXCLUSIVE WARRANTY SET FORTH ABOVE, SELLER DISCLAIMS ANY AND ALL WARRANTIES WITH RESPECT TO THIS PRODUCT, WHETHER EXPRESS OR IMPLIED (EITHER IN FACT OR BY OPERATION OF LAW), INCLUDING BUT NOT LIMITED TO: (A) THE IMPLIED WARRANTY OF MERCHANTABILITY; (B) THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; (C) THE IMPLIED WARRANTY AGAINST NONINFRINGEMENT (FOR THIS PRODUCT ALONE OR IN COMBINATION WITH ANY OTHER PRODUCTS); AND (D) ANY WARRANTIES OF CROP PERFORMANCE OR, IF APPLICABLE, CARRYOVER SEED PERFORMANCE.

LIMITATION OF LIABILITY AND REMEDIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW:

1. SELLER'S TOTAL LIABILITY AND PURCHASER'S EXCLUSIVE REMEDY FOR ANY AND ALL LOSSES, INJURIES AND/OR DAMAGES ARISING FROM THE PURCHASE, USE, OR HANDLING OF THIS PRODUCT, OR OTHERWISE ARISING OUT OF A BREACH BY SELLER OF THE EXCLUSIVE WARRANTY, HOWEVER SUCH LIABILITY MAY ARISE, WHETHER SUCH CLAIMS ARE BASED ON CONTRACT, NEGLIGENCE, STRICT LIABILITY, TORT, OR ANY OTHER THEORY OF RECOVERY OR REMEDY, SHALL BE, AT THE ELECTION OF SELLER OR SELLER'S DELEGATE, AN AMOUNT NOT TO EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THIS PRODUCT (AS SET FORTH IN THE APPLICABLE INVOICE) OR THE REPLACEMENT OF THE PRODUCT.

2. SELLER SHALL NOT BE LIABLE TO PURCHASER AND/OR ANY THIRD PARTY FOR ANY INCIDENTAL, CONSEQUENTIAL, RELIANCE, REMOTE, EXEMPLARY, PUNITIVE, SPECIAL, OR INDIRECT DAMAGES INCURRED OR EXPENDED IN THE PURCHASE, USE OR HANDLING OF THIS PRODUCT.

3. PURCHASER AGREES THAT IF THE PURCHASE PRICE PAID BY PURCHASER FOR THIS PRODUCT OR REPLACEMENT PRODUCT IS PROVIDED, THE REMEDY SET FORTH IN THIS NOTICE WILL NOT HAVE FAILED OF ITS ESSENTIAL PURPOSE.

PROMPT NOTICE OF CLAIMS REQUIRED: To the extent consistent with applicable law, as a condition to receiving Purchaser's limited remedy set forth above, any and all claims brought against the Seller must be brought within 30 days after the condition or event giving rise to the claim is discovered or should have been discovered, or prior to the harvest of any crop to which the Product was applied, whichever comes first, so that the claim can be investigated, and the Product or crop inspected.

MISCELLANEOUS: Purchaser agrees that this Notice is the entire agreement between Seller and Purchaser regarding Seller's warranty and liability for this Product. No modification of, addition to, or waiver of any of the terms of this Notice shall be binding unless set forth in writing and signed by an authorized representative of Bayer CropScience LLC. If any portion of this Notice not material to the remaining portions shall be held illegal, void, or ineffective by a governmental authority, the remaining portions shall remain in full force and effect. If any portion of this Notice is in conflict with any applicable statute or rule of law, then such portion shall be deemed to be modified to conform to such statute or rule of law.

Bayer (reg'd), Bayer Cross (reg'd), Covintro™ Herbicide, Roundup PowerMAX® 3, Warrant®, DiFlexx®, Stryax®, Harness®, Balance Flexx®, Corvus®, TriVolt®, Degree Xtra®, Harness® Xtra, Harness® Xtra 5.6L, Harness® Max, and Xtendimax® are trademarks of Bayer Group. ©2026 Bayer Group. All rights reserved.

Bayer

Covintro™ Herbicide

DIFLUFENICAN | GROUP 12 | HERBICIDE

For preemergence control of certain broadleaf weeds on field corn and soybeans

ACTIVE INGREDIENT:	
Diflufenican [N-(2,4-difluorophenyl)-2-[3-(trifluoromethyl)phenoxy]pyridine-3-carboxamide]	42.01%
OTHER INGREDIENTS:	57.99%
TOTAL:	100.00%

Contains 4.17 pounds per U.S. gallon (500 grams per liter) of the active ingredient per U.S. gallon

EPA Reg. No. 264-1213

KEEP OUT OF REACH OF CHILDREN

CAUTION PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.

Please refer to booklet for additional precautionary statements and directions for use.

For **MEDICAL** and **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours a Day 1-800-334-7577
For **PRODUCT USE** Information Call 1-866-99BAYER (1-866-992-2937)

MIX WELL BEFORE USE

NET CONTENTS: 2 1/2 GALLONS

1 97515 27521 1

FIRST AID

If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • **DO NOT** give anything by mouth to an unconscious person.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment advice.

In case of emergency, call the toll-free Bayer CropScience Emergency Response telephone number: 1-800-334-7577.

Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

Note to Physician: No specific antidote is available. All treatments should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

- Harmful if swallowed or absorbed through the skin.
- Causes moderate eye irritation.
- Avoid contact with skin, eyes or clothing.
- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove and wash contaminated clothing before reuse.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read the entire label before using this product.

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING AND DISPOSAL:

CONTAINER HANDLING AND DISPOSAL STATEMENT AND REFILLING LIMITATION FOR NONREFILLABLE RIGID PLASTIC 2.5-GALLON CONTAINERS AND OTHER CONTAINERS OF GREATER THAN 1-GALLON BUT EQUAL TO OR LESS THAN 5-GALLON CAPACITY

Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state.

Triple rinse or pressure rinse (or equivalent) this container promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Once properly rinsed, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or Bayer at 1-800-768-6387. If recycling is not available, dispose of in accordance with federal, state, and local regulations and procedures, which may include puncturing the properly rinsed container and disposing in a sanitary landfill.

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Produced for
Bayer CropScience LLC
800 N. Lindbergh Blvd.
St. Louis, MO 63167

Bayer

US91244017A 260630A 07/26

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	CONVINTRO™
Product code (UVP)	87322688
SDS Number	102000057596

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use	Herbicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer CropScience LLC 800 North Lindbergh Blvd. St. Louis, MO 63167 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-866-99BAYER (1-866-992-2937)

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Diflufenican	83164-33-4	42.01

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Rinse out mouth and give water in small sips to drink. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms	To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Specific hazards from the substance or mixture which can increase the fire

Flash point	>100 °C / 212 °F
Auto-ignition temperature	> 650 °C / > 1202 °F
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean

thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep away from direct sunlight.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Diflufenican	83164-33-4	5.5 mg/m3 (TWA)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)
Eye protection	Tightly fitting safety goggles
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	suspension
Colour	beige
Odour	almost odourless

Odour Threshold	No data available
pH	6.5 - 8.5 (10 %) (23 °C) (deionized water)
Melting point/ range	No data available
Boiling Point	No data available
Flash point	> 100 °C / 212 °F
Flammability	Not applicable
Auto-ignition temperature	> 650 °C / > 1202 °F
Thermal decomposition	No data available
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	ca. 1.19 g/cm³ (20 °C)
Water solubility	miscible
Partition coefficient: n-octanol/water	Diflufenican: log Pow: 4.2
Viscosity, dynamic	200 - 300 mPa.s (20 °C) Velocity gradient 20 /s 70 - 120 mPa.s (20 °C) Velocity gradient 100 /s
Viscosity, kinematic	232 mm²/s
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	No incompatible materials known.
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Skin contact, Eye contact, Inhalation

Immediate Effects

Eye	May cause temporary eye irritation.
Skin	May be harmful in contact with skin.
Ingestion	May be harmful if swallowed.
Inhalation	Not expected to produce significant adverse effects when recommended use instructions are followed.

Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 5,000 mg/kg Test conducted with a similar formulation.
Acute inhalation toxicity	LC50 (male/female combined Rat) > 5.05 mg/l Exposure time: 4 h Nose exposure only. No deaths Test conducted with a similar formulation.
Acute dermal toxicity	LD50 (Rat) > 4,000 mg/kg Test conducted with a similar formulation.
Skin corrosion/irritation	No skin irritation (Rabbit) Test conducted with a similar formulation.
Serious eye damage/eye irritation	No eye irritation (Rabbit) Test conducted with a similar formulation.
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Mouse) OECD Test Guideline 429, local lymph node assay (LLNA) Test conducted with a similar formulation.

Assessment STOT Specific target organ toxicity – single exposure

Diflufenican: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Diflufenican did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Diflufenican was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Diflufenican was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH

None.

NTP

None.

IARC

None.

Assessment toxicity to reproduction

Diflufenican did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Diflufenican did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

Information given is based on data obtained from similar substances.
The non-acute information pertains to the active ingredient(s).
No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) > 7.52 mg/l semi-static test; Exposure time: 96 h Test conducted with a similar formulation.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) > 4.46 mg/l semi-static test; Exposure time: 48 h Test conducted with a similar formulation.
Toxicity to aquatic plants	ErC50 (Raphidocelis subcapitata (freshwater green alga)) 1.41 µg/l static test; Exposure time: 72 h Test conducted with a similar formulation.
	NOEC (Raphidocelis subcapitata (freshwater green alga)) 0.293 µg/l

	Exposure time: 72 h Test conducted with a similar formulation.
	ErC50 (Ankistrodesmus falcatus) 0.000071 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient diflufenican.
	EC10 (Ankistrodesmus falcatus) 0.000029 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient diflufenican.
Biodegradability	Diflufenican: Not rapidly biodegradable
Koc	Diflufenican: Koc: 3417
Bioaccumulation	Diflufenican: Bioconcentration factor (BCF) 1,596 Does not bioaccumulate.
Mobility in soil	Diflufenican: criterion of mobility not fulfilled

Results of PBT and vPvB assessment

PBT and vPvB assessment	Diflufenican: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No other effects to be mentioned.
Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose in accordance with all local, state/provincial and federal regulations.
Contaminated packaging	Consult state and local regulations regarding the proper disposal of container. Follow advice on product label and/or leaflet.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR Not dangerous goods / not hazardous material

IMDG

UN number	**3082**
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN)

IATA

UN number	**3082**
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIFLUFENICAN)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations
TSCA list

Water	7732-18-5
1,2-Propanediol	57-55-6

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.
SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

US States Regulatory Reporting
CA Prop65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

US State Right-To-Know Ingredients

1,2-Propanediol	57-55-6	MN, RI

Environmental
CERCLA
None.
Clean Water Section 307(a)(1)
None.

Safe Drinking Water Act Maximum Contaminant Levels
None.

EPA/FIFRA Information:
This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word:	Caution!
Hazard statements:	Harmful if swallowed or absorbed through skin. Causes moderate eye irritation.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

ATE	Acute toxicity estimate
TWA	Time weighted average
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
ACGIH	US. ACGIH Threshold Limit Values
WHO	World health organisation
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
CAS-Nr.	Chemical Abstracts Service number
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
TDG	Transportation of Dangerous Goods
N.O.S.	Not otherwise specified
49CFR	Code of Federal Regulations, Title 49
OECD	Organization for Economic Co-operation and Development
UN	United Nations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
IARC	International Agency for Research on Cancer

NFPA 704 (National Fire Protection Association):
Health - 2 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Fourth Edition Ratings Guide)
Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard,
* = chronic health hazard

SAFETY DATA SHEET

Reason for Revision: The following sections have been revised: Section 3: Composition / Information on Ingredients. Section 11: Toxicological Information. Section 15: Regulatory information. Reviewed and updated for general editorial purposes.

Revision Date: 06/26/2025

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

BAYER

Xivana® Prime

NET CONTENTS:

1 Gallon

FLUOXAPIPROLIN	GROUP 49	FUNGICIDE

For: Fungicide for control or suppression of certain crop diseases

ACTIVE INGREDIENT:

FLUOXAPIPROLIN*	1.90%
OTHER INGREDIENTS:	98.10%
TOTAL:	100.00%

Contains 0.17 pounds active ingredient per U.S. gallon (20 grams AI/liter)

*CAS No. 1360819-11-9

EPA Reg. No. 264-1226

KEEP OUT OF REACH OF CHILDREN

CAUTION PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See Back Panel for First Aid Instructions and Booklet for Complete Precautionary Statements and Directions for Use.

For **MEDICAL** and **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours a Day 1-800-334-7577

For **PRODUCT USE** Information Call 1-866-99BAYER (1-866-992-2937)

Produced for: Bayer CropScience LLC
800 N. Lindbergh Blvd.
St. Louis, MO 63167

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EPA Est. No. 264-MO-3

US89804701A 260630A 07/26

FIRST AID

IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • **DO NOT** give anything by mouth to an unconscious person.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

- **In case of emergency, call the toll-free Bayer CropScience Emergency Response telephone number: 1-800-334-7577.**
- **For medical emergencies, call the poison control center at 1-800-222-1222.**
- **Have a product container or label with you when calling a poison control center or doctor, or going for treatment.**
- **For general information about this product, call 1-866-99BAYER, or contact the National Pesticides Information Center (NPIC) at 1-800-858-7378, Monday through Friday during hours of operation, or at http://npic.orst.edu**

Note to Physician: Treat symptomatically.

PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

- Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
- Harmful if swallowed.
- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- shoes plus socks
- chemical-resistant gloves made of any waterproof material

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

- Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides 40 CFR 170.607(d)(e)(f), the handler PPE requirements may be reduced or modified as specified in the WPS.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, oysters and shrimp.

Ground Water Advisory

This chemical has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a medium potential for reaching both surface water and aquatic sediment via runoff for several weeks after

application. This product breaks down into a degradate that is classified as having a high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of fluoxapiprolin from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

CONDITIONS OF SALE AND LIMITATIONS OF WARRANTY AND LIABILITY

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Bayer CropScience. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer CropScience is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

LIMITATIONS OF LIABILITY: TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT BAYER CROPSCIENCE'S ELECTION, THE REPLACEMENT OF PRODUCT.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read the entire label before using this product.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted entry interval **(REI) of 12 hours.**

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water), is:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves (made of any waterproof material)
- Shoes plus socks

PRODUCT INFORMATION

- XIVANA® PRIME fungicide is a foliar fungicide for vegetable and vine crops that is highly active on downy mildew, late blight, and other oomycete diseases.
- For best results, begin applications as soon as crop and/or environmental conditions become favorable for disease development.
- Consult your agricultural advisor, university specialist, or Cooperative Extension Service for disease management recommendations specific to your area.

LABELED USES

Brassica head and stem vegetables (Group 5-16); Bulb vegetables (Group 3-07); Cucurbit vegetables (Group 9); Fruiting vegetables (Group 8-10); Leafy vegetables (Group 4-16); Leaf petiole vegetables (Subgroup 22B); Small fruit vine climbing, except fuzzy kiwifruit (Subgroup 13-07F); Tuberous and corm vegetables (Subgroup 1C).

USE RESTRICTIONS

Refer to the specific use directions and restrictions in each Crop, Crop Group or Crop Subgroup table.

RESISTANCE MANAGEMENT

For resistance management, please note that XIVANA PRIME contains a Group 49 / OSBPI fungicide. Any fungal population may contain individuals naturally resistant to XIVANA PRIME and other Group 49 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of XIVANA PRIME or other Group 49 fungicides within a growing season sequence with different groups that control the same pathogens.
- **DO NOT** apply Group 49 fungicides for more than 33% of the total fungicide applications per season.
- Use tank mixtures with fungicide from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or recommendations for specific crops and pathogens.
- For further information or to report suspected resistance contact Bayer CropScience at 1-866-99BAYER (1-866-992-2937). You can also contact your pesticide distributor or university extension specialist to report resistance.

MANDATORY SPRAY DRIFT

Aerial Applications (Rotor or Fixed Wing)

- **DO NOT** release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Boom-less Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size - Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT - Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Boom-less Ground Applications:
Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:
Take precautions to minimize spray drift.

APPLICATION INSTRUCTIONS

Ground Application

For optimum disease control, apply in sufficient water to ensure thorough coverage of foliage, bloom, and fruit. See individual crop directions for minimum spray volume recommendations and dilution requirements.

Boom-less Ground Application

Air-assisted or air-blast sprayers move spray droplets into the crop canopy using a forced-air system. The fan must be set up to deliver only enough air volume to penetrate the canopy and provide good coverage. Adjust deflectors or other aiming devices to direct spray only to the target area. Equip sprayers with nozzles that provide accurate and uniform application.

Aerial Application

For optimum disease control, apply in sufficient water to ensure thorough coverage of foliage, bloom, and fruit. See individual crop directions for minimum spray volume recommendations and dilution requirements.

Ground Application (Banding)

XIVANA PRIME may be banded but rate and spray volume must be adjusted to treated acre area.

$$\frac{\text{band width (inches)}}{\text{row width (inches)}} * \text{broadcast rate per acre} = \text{banding rate per acre}$$

$$\frac{\text{band width (inches)}}{\text{row width (inches)}} * \text{broadcast spray volume per acre} = \text{banding spray volume per acre}$$

Spray Additives

Spray adjuvants are recommended for use with XIVANA PRIME and improve coverage and efficacy.

CHEMIGATION

Types of irrigation systems

Apply this product only through the following irrigations systems:

- Center pivot
- Motorized-lateral move
- Traveling gun
- Solid set
- Portable (wheel move, side roll, end tow, or hand move)

Uniform Water Distribution and System Calibration

The chemigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The chemigation system must be calibrated to uniformly apply the rates specified in crop-specific label sections. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.

Chemigation Monitoring

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Required System Safety Devices

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

DO NOT apply when wind speed favors drift beyond the area intended for treatment.

Using Water from Public Water Systems

DO NOT connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer **(RPZ)** or the functional equivalent in the water supply line upstream from the point of pesticide

introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There must be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must contain a functional normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

Injection for Chemigation

Inject the specified dosage of XIVANA PRIME into the irrigation main water stream: (1) through a constant flow, metering device; (2) into the center of the main line flow via a pitot tube or equivalent; (3) at a point ahead of at least one, right-angle turn in the main stream flow such that thorough mixing with the irrigation water is ensured.

Center-Pivot and Automatic-Move Linear Systems

For injections of pesticides, these continuously moving systems must use a positive displacement injection pump of either diaphragm or piston type and be constructed of materials that are compatible with pesticides. They must also be capable of being fitted with a system interlock and capable of injection at pressures approximately 2-3 times those encountered within the irrigation water line. Venturi applicator units cannot be used on these systems. Thoroughly mix required amount of this product for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run. Mixture in the chemical supply tank must be continuously agitated during the injection run. Shut off injection equipment after one revolution or run, but continue to operate irrigation system until this product has been cleared from the last sprinkler head.

Inject the specified dosage per acre continuously for one complete revolution (center pivot) or move of the system. Run system at maximum speed. It is advised that nozzles in the immediate area of control panels, chemical supply tanks, pumps, and system safety devices be plugged to prevent chemical contamination of these areas. The use of END GUNS is NOT ADVISED. End guns that provide uneven distribution of treated water can result in lack of effectiveness or illegal pesticide residues in or on the crop.

Solid Set and Manually Controlled Linear Systems

With stationary systems, an effectively designed in-line Venturi applicator unit is preferred to support even and quick distribution. However, a positive-displacement pump can also be used. For solid set systems, determine acreage covered by sprinkler. Fill the tank of injection equipment with water and adjust flow to use contents over 30 to 45 minutes. Mix desired amount of this product for acreage to be covered with water so that the total mixture of this product plus water in the injection tank is equal to the quantity of water used during calibration. Provide chemical supply tank agitation sufficient for mixing until chemigation is completed. Operate entire system at normal pressures as advised by the manufacturer of injection equipment used, for amount of time established during calibration. XIVANA PRIME can be injected during the irrigation cycle or as a separate application. Stop injection equipment with any system after treatment is completed and continue to operate irrigation system until this product has been cleared from the last sprinkler head.

Flushing and Cleaning the Chemical Injection System

At the end of the application period, allow time for all lines to flush the pesticide through all nozzles or emitters before turning off irrigation water. To ensure the lines are flushed and free of pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

In order to apply pesticides accurately, the chemical injection system must be kept clean and free of chemical or fertilizer residues and sediments. Refer to your owner's manual or ask your equipment supplier for the cleaning procedure for your injection system.

SPRAY MIXING AND COMPATIBILITY

Begin with clean spray equipment and add one-half of the required amount of water to the spray or mixing tank and start agitation. Add the required quantity of fungicide and the tank-mix partner if applicable to the water and complete filling with water to the required total volume. Follow the advice of your State Cooperative Extension Service for tank mixing with other products. In general, follow the order beginning first with water conditioners, water soluble packaging (wait for it to completely dissolve), wettable powders and water dispersible granular products, liquid flowables and suspension concentrates, emulsifiable concentrates, and adjuvants last. Maintain agitation throughout spraying. **DO NOT** allow spray mixture to remain in the tank overnight, or for long periods during the day without agitation.

XIVANA PRIME is physically compatible with most commonly used fungicide, herbicide, insecticide, and foliar nutrient products. However, the compatibility of XIVANA PRIME with all potential tank-mix partners has not been fully investigated. Compatibility with other pesticides can be tested by conducting a jar test with the volumes and rates typically used in agricultural application. Using a small container of water, add the proportionate amounts of the products: wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 15 minutes. Look for signs of separation, globules, sludge, flakes, or other precipitates. Physical compatibility is indicated if the combination remains mixed or can be remixed readily.

The crop safety of all potential tank-mixes with XIVANA PRIME has not been tested on all crops listed on the label. Before applying any tank-mixture not specified on this label, safety to the target crop must be confirmed on a small portion of the crop listed on the label to be treated to ensure an adverse response will not occur.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

ROTATIONAL CROP RESTRICTIONS

Follow the rotational crop restrictions on the label of any tank mix partners, in addition to the restrictions below for XIVANA PRIME.

IMMEDIATE PLANT-BACK:

Treated areas may be replanted with any crop specified on this label, including the following:

Brassica head and stem vegetables (Group 5-16), Bulb vegetables (Group 3-07), Cucurbit vegetables (Group 9), Fruiting vegetables (Group 8-10), Leafy vegetables (Group 4-16), Leaf petiole vegetables (Subgroup 22B), Small fruit vine climbing - except fuzzy kiwifruit (Subgroup 13-07F), and Tuberous and corm vegetables (Subgroup 1C)

30-DAY PLANT-BACK:

The following crops can be planted 30 days after the last application of XIVANA PRIME:

Strawberry and other berries in the Low growing berry subgroup (Subgroup 13-07G)

Cereal grains (Group 15)

12-MONTH PLANT-BACK:

All other crops not listed above, except Root vegetables (Subgroup 1A).

DO NOT ROTATE to Root vegetables (Subgroup 1A).

SPECIFIC CROP DIRECTIONS

CROP USE DIRECTIONS

BRASSICA HEAD and STEM VEGETABLES (Group 5-16)

Crops of Crop Group 5-16 including:

Broccoli; Brussels sprouts; Cabbage; Cabbage Chinese, napa; Cauliflower

Including all cultivars, varieties, and hybrids of these commodities.

Disease Controlled	Application Rate	Application Instructions
Downy mildew (*Peronospora parasitica*) White rust[1] (*Albugo candida*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease. Apply XIVANA PRIME in sufficient volume carrier (water + tank mix partner) to enable a minimum solution volume of **10 gallons/Acre** ground applications) and **2 gallons/Acre** (aerial applications).

Restrictions:

- Pre-Harvest Interval (PHI): **1 day**
- Minimum interval between applications: **7 days**
- Minimum application volumes: **10 gallons/Acre** (Ground); **2 gallons/Acre** (Aerial)
- Maximum single application rate: 13.7 fl oz/A of XIVANA PRIME (0.018 lb/A fluoxapiprolin).
- Maximum number of applications per year: 3 (at 13.7 fl oz/A of XIVANA PRIME).
- Maximum XIVANA PRIME allowed per year: 41.1 fluid ounces/Acre (0.054 lb fluoxapiprolin/Acre)
- Use XIVANA PRIME (or any other Group 49 fungicide) for no more than 33% of the total fungicide applications per season. Where the total number of fungicide applications targeting oomycetes is less than 3, make no more than 1 application of XIVANA PRIME (or any other Group 49 fungicide).

[1]Not registered for use on White rust (*Albugo candida*) in crop group 5-16 by California.

BULB VEGETABLES (Group 3-07)
Crops of Crop Group 3-07 including:

Onion, bulb subgroup: Bulb Daylily; Bulb Fritillaria; Bulb Garlic; Bulb Great-Headed Garlic; Bulb Serpent Garlic; Bulb Lily; Bulb Onion; Bulb Chinese Onion; Pearl Onion; Bulb Potato Onion; Bulb Shallot.

Onion, green subgroup: Fresh Leaves Chive; Fresh Leaves Chinese Chive; Elegans Hosta; Leaves Fritillaria; Kurrat; Lady's Leek; Leek; Wild Leek; Beltsville Bunching Onion; Fresh Onion; Green Onion; Macrostem Onion; Tree Onion Tops; Welsh Onion Tops; Fresh Leaves Shallot.

Including all cultivars, varieties, and hybrids of these commodities.

Disease Controlled	Application Rate	Application Instructions
Downy mildew (*Peronospora destructor*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease. Apply XIVANA PRIME in sufficient volume carrier (water + tank mix partner) to enable a minimum solution volume of **10 gallons/Acre** ground applications) and **2 gallons/Acre** (aerial applications).

Restrictions:

- Pre-Harvest Interval (PHI): **1 day**
- Minimum interval between applications: **7 days**
- Minimum application volumes: **10 gallons/Acre** (Ground); **2 gallons/Acre** (Aerial)
- Maximum single application rate: 13.7 fl oz/A XIVANA PRIME (0.018 lb/A fluoxapiprolin).
- Maximum number of applications per year: 3 (at 13.7 fl oz/A of XIVANA PRIME).
- Maximum XIVANA PRIME allowed per year: 41.1 fluid ounces/Acre (0.054 lb fluoxapiprolin/Acre)
- Use XIVANA PRIME (or any other Group 49 fungicide) for no more than 33% of the total fungicide applications per season. Where the total number of fungicide applications targeting oomycetes is less than 3, make no more than 1 application of XIVANA PRIME (or any other Group 49 fungicide).

CUCURBIT VEGETABLES (Group 9)
Crops of Crop Group 9 including:

Melon subgroup: Citron Melon; Muskmelon (hybrids and/or cultivars of *Cucumis melo* including True Cantaloupe, Cantaloupe, Casaba, Crenshaw Melon, Golden Pershaw Melon, Honeydew Melon, Honey Balls, Mango Melon, Persian Melon, Pineapple Melon, Santa Claus Melon, Snake Melon); Watermelon.

Squash/Cucumber subgroup: Chayote (Fruit); Chinese Waxgourd; Cucumber; Gherkin; Gourd, Edible; *Momordica* spp.; Pumpkin; Squash, Summer; Squash, Winter.

Including all cultivars, varieties, and hybrids of these commodities.

Disease Controlled	Application Rate	Application Instructions
Downy mildew (*Pseudoperonospora cubensis*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease. Apply XIVANA PRIME in sufficient volume carrier (water + tank mix partner) to enable a minimum solution volume of **10 gallons/Acre** ground applications) and **2 gallons/Acre** (aerial applications).
Disease Suppressed	**Application Rate**	**Application Instructions**
Phytophthora blight (*Phytophthora capsici*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease.

Restrictions:

- Pre-Harvest Interval (PHI): **1 day**
- Minimum interval between applications: **7 days**
- Minimum application volumes: **10 gallons/Acre** (Ground); **2 gallons/Acre** (Aerial)
- Maximum single application rate: 13.7 fl oz/A XIVANA PRIME (0.018 lb/A fluoxapiprolin).
- Maximum number of applications per year: 3 (at 13.7 fl oz/A of XIVANA PRIME).
- Maximum XIVANA PRIME allowed per year: 41.1 fluid ounces/Acre (0.054 lb fluoxapiprolin/Acre)
- Use XIVANA PRIME (or any other Group 49 fungicide) for no more than 33% of the total fungicide applications per season. Where the total number of fungicide applications targeting oomycetes is less than 3, make no more than 1 application of XIVANA PRIME (or any other Group 49 fungicide).

FRUITING VEGETABLES (Group 8-10)
Crops of Crop Group 8-10 including:

Tomato subgroup: Bush Tomato; Cocona; Currant Tomato; Garden Huckleberry; Goji Berry; Groundcherry; Naranjilla; Sunberry; Tomatillo; Tomato; Tree Tomato.

Pepper/Eggplant subgroup: African Eggplant; Bell Pepper; Eggplant; Martynia; Nonbell Pepper; Okra; Pea Eggplant; Pepino; Roselle; Scarlet Eggplant.

Including all cultivars, varieties, and hybrids of these commodities.

Disease Controlled	Application Rate	Application Instructions
Buckeye Rot[1] (*Phytophthora parasitica*) Late blight (*Phytophthora infestans*) Pepper Downy mildew[1] (*Peronospora tabacina*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease. Apply XIVANA PRIME in sufficient volume carrier (water + tank mix partner) to enable a minimum solution volume of **10 gallons/Acre** ground applications) and **2 gallons/Acre** (aerial applications).

Disease Suppressed	Application Rate	Application Instructions
Phytophthora blight (*Phytophthora capsici*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease.

Restrictions:

- Pre-Harvest Interval (PHI): **1 day**
- Minimum interval between applications: **7 days**
- Minimum application volumes: **10 gallons/Acre** (Ground); **2 gallons/Acre** (Aerial)
- Maximum single application rate: 13.7 fl oz/A XIVANA PRIME (0.018 lb/A fluoxapiprolin).
- Maximum number of applications per year: 3 (at 13.7 fl oz/A of XIVANA PRIME).
- Maximum XIVANA PRIME allowed per year: 41.1 fluid ounces/Acre (0.054 lb fluoxapiprolin/Acre)
- Use XIVANA PRIME (or any other Group 49 fungicide) for no more than 33% of the total fungicide applications per season. Where the total number of fungicide applications targeting oomycetes is less than 3, make no more than 1 application of XIVANA PRIME (or any other Group 49 fungicide).

[1]Not registered for use on Buckeye rot (*Phytophthora parasitica*) or Pepper downy mildew (*Peronospora tabacina*) in crop group 8-10 by California.

LEAFY VEGETABLES (Group 4-16)

Crops of Crop Group 4-16 including:

Leafy Greens subgroup: Amaranth, Chinese; amaranth, leafy; aster, Indian; blackjack; cat's whiskers; cham-chwi; cham-na-mul; chervil, fresh leaves; chipilin; chrysanthemum, garland; cilantro, fresh leaves; corn salad; cosmos; dandelion, leaves; dang-gwi, leaves; dillweed; dock; dol-nam-mul; ebolo; endive; escarole; fameflower; feather cockscomb; Good King Henry; huauzontle; jute, leaves; lettuce, bitter; lettuce, head; lettuce, leaf; orach; parsley, fresh leaves; plantain, buckhorn; primrose, English; purslane, garden; purslane, winter; radicchio; spinach; spinach, Malabar; spinach, New Zealand; spinach, tanier; Swiss chard; violet, Chinese, leaves; cultivars, varieties, and hybrids of these commodities.

Brassica Leafy Greens subgroup: Arugula; broccoli, Chinese; broccoli raab; cabbage, abyssinian; cabbage, Chinese, bok choy; cabbage, seakale; collards; cress, garden; cress, upland; hanover salad; kale; maca, leaves; mizuna; mustard greens; radish, leaves; rape greens; rocket, wild; shepherd's purse; turnip greens; watercress; cultivars, varieties, and hybrids of these commodities.

Including all cultivars, varieties, and hybrids of these commodities.

Disease Controlled	Application Rate (fl oz/A)	Application Instructions
Downy mildew (*Bremia lactucae*) (*Peronospora farinosa*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease. Apply XIVANA PRIME in sufficient volume carrier (water + tank mix partner) to enable a minimum solution volume of **10 gallons/Acre** ground applications) and **2 gallons/Acre** (aerial applications).

Restrictions:

- Pre-Harvest Interval (PHI): **1 day**
- Minimum interval between applications: **7 days**
- Minimum application volumes: **10 gallons/Acre** (Ground); **2 gallons/Acre** (Aerial)
- Maximum single application rate: 13.7 fl oz/A XIVANA PRIME (0.018 lb/A fluoxapiprolin).
- Maximum number of applications per year: 3 (at 13.7 fl oz/A of XIVANA PRIME).
- Maximum XIVANA PRIME allowed per year: 41.1 fluid ounces/Acre (0.054 lb fluoxapiprolin/Acre)
- Use XIVANA PRIME (or any other Group 49 fungicide) for no more than 33% of the total fungicide applications per season. Where the total number of fungicide applications targeting oomycetes is less than 3, make no more than 1 application of XIVANA PRIME (or any other Group 49 fungicide).
- For applications made to watercress, production fields must be drained of water at least 24 hours prior to each application and water must not be reapplied to the field for a minimum of 48 hours following each application.

LEAF PETIOLE VEGETABLES (Subgroup 22B)[1]

Crops of Crop Subgroup 22B including:

Leaf Petiole Vegetable subgroup: Cardoon; celery; celery, Chinese; fuki; rhubarb; udo; zuiki; cultivars, varieties, and hybrids of these commodities.

Including all cultivars, varieties, and hybrids of these commodities.

Disease Controlled	Application Rate	Application Instructions
Downy mildew (*Peronospora umbellifarum*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease. Apply XIVANA PRIME in sufficient volume carrier (water + tank mix partner) to enable a minimum solution volume of **10 gallons/Acre** ground applications) and **2 gallons/Acre** (aerial applications).

Restrictions:

- Pre-Harvest Interval (PHI): **1 day**
- Minimum interval between applications: **7 days**
- Minimum application volumes: **10 gallons/Acre** (Ground); **2 gallons/Acre** (Aerial)
- Maximum single application rate: 13.7 fl oz/A XIVANA PRIME (0.018 lb/A fluoxapiprolin).
- Maximum number of applications per year: 3 (at 13.7 fl oz/A of XIVANA PRIME).
- Maximum XIVANA PRIME allowed per year: 41.1 fluid ounces/Acre (0.054 lb fluoxapiprolin/Acre)
- Use XIVANA PRIME (or any other Group 49 fungicide) for no more than 33% of the total fungicide applications per season. Where the total number of fungicide applications targeting oomycetes is less than 3, make no more than 1 application of XIVANA PRIME (or any other Group 49 fungicide).

[1]Not registered for use on crop subgroup 22B by California.

SMALL FRUIT VINE CLIMBING - EXCEPT FUZZY KIWIFRUIT (Subgroup 13-07F)

Crops of Crop Group 13-07F including:

Amur River Grape; Gooseberry; Grape; Hardy Kiwifruit; Maypop; Schisandra Berry.

Including all cultivars, varieties, and hybrids of these commodities.

Disease Controlled	Application Rate	Application Instructions
Downy mildew (*Plasmopara viticola*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease. Apply XIVANA PRIME in sufficient volume carrier (water + tank mix partner) to enable a minimum solution volume of **10 gallons/Acre** ground applications) and **2 gallons/Acre** (aerial applications).

Restrictions:

- Pre-Harvest Interval (PHI): **14 days**
- Minimum interval between applications: **10 days**
- Minimum application volumes: **25 gallons/Acre** (Ground); **10 gallons/Acre** (Aerial)
- Maximum single application rate: 13.7 fl oz/A XIVANA PRIME (0.018 lb/A fluoxapiprolin).
- Maximum number of applications per year: 2 (at 13.7 fl oz/A of XIVANA PRIME).
- Maximum XIVANA PRIME allowed per year: 27.4 fluid ounces/Acre (0.036 lb fluoxapiprolin/Acre)
- Use XIVANA PRIME (or any other Group 49 fungicide) for no more than 33% of the total fungicide applications per season. Where the total number of fungicide applications targeting oomycetes is less than 3, make no more than 1 application of XIVANA PRIME (or any other Group 49 fungicide).

TUBEROUS AND CORM VEGETABLES (Subgroup 1C)

Crops of Crop Subgroup 1C including:

Tuberous and corm vegetables subgroup: Arracacha; Arrowroot; Chinese Artichoke; Artichoke, Jerusalem; Canna, Edible; Cassava, Bitter and Sweet; Chayote (Root); Chufa; Dasheen; Ginger; Leren; Potato; Sweet Potato; Tanier; Turmeric; Yam Bean; Yam, True.

Including all cultivars, varieties, and hybrids of these commodities.

Disease Controlled	Application Rate	Application Instructions
Late blight (*Phytophthora infestans*)	13.7 fl oz/A (0.018 lbs fluoxapiprolin/A)	Make no more than 2 sequential applications before rotating to a fungicide with a different mode of action. Tank mix XIVANA PRIME with a second fungicide with a different mode of action that is also labeled on the targeted disease. Apply XIVANA PRIME in sufficient volume carrier (water + tank mix partner) to enable a minimum solution volume of **10 gallons/Acre** ground applications) and **2 gallons/Acre** (aerial applications).

Restrictions:

- Pre-Harvest Interval (PHI): **7 days**
- Minimum interval between applications: **7 days**
- Minimum application volumes: **10 gallons/Acre** (Ground); **2 gallons/Acre** (Aerial)
- Maximum single application rate: 13.7 fl oz/A XIVANA PRIME (0.018 lb/A fluoxapiprolin).
- Maximum number of applications per year: 3 (at 13.7 fl oz/A of XIVANA PRIME).
- Maximum XIVANA PRIME allowed per year: 41.1 fluid ounces/Acre (0.054 lb fluoxapiprolin/Acre)
- Use XIVANA PRIME (or any other Group 49 fungicide) for no more than 33% of the total fungicide applications per season. Where the total number of fungicide applications targeting oomycetes is less than 3, make no more than 1 application of XIVANA PRIME (or any other Group 49 fungicide).

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE:

Store in original container and keep tightly closed when not in use. Store in a cool dry place. Avoid cross-contamination with other pesticides.

PESTICIDE DISPOSAL:

Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be disposed of by use according to label instruction, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

CONTAINER HANDLING:

Non-Refillable Containers

Rigid, Non-refillable containers (equal to or less than 5 gallons)

Non-refillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill.

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Bayer

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XIVANA® PRIME

FLUOXAPIPROLIN	GROUP 49	FUNGICIDE

For: Fungicide for control or suppression of certain crop diseases

ACTIVE INGREDIENT:	
FLUOXAPIPROLIN*	1.90%
OTHER INGREDIENTS:	98.10%
TOTAL:	100.00%

Contains 0.17 pounds active ingredient per U.S. gallon (20 grams AI/liter)
*CAS No. 1360819-11-9

EPA Reg. No. 264-1226

KEEP OUT OF REACH OF CHILDREN

CAUTION PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See Back Panel for First Aid Instructions and Booklet for Complete Precautionary Statements and Directions for Use.

For **MEDICAL** and **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours a Day 1-800-334-7577. For **PRODUCT USE** Information Call 1-866-99BAYER (1-866-992-2937)

FIRST AID: IF SWALLOWED: • Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • **DO NOT** give anything by mouth to an unconscious person. **IF ON SKIN OR CLOTHING:** • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice. **IF IN EYES:** • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice. **IF INHALED:** • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

• In case of emergency, call the toll-free Bayer CropScience Emergency Response telephone number: 1-800-334-7577. • For medical emergencies, call the poison control center at 1-800-222-1222. • Have a product container or label with you when calling a poison control center or doctor, or going for treatment. • For general information about this product, call 1-866-99BAYER, or contact the National Pesticides Information Center (NPIC) at 1-800-858-7378, Monday through Friday during hours of operation, or at http://npic.orst.edu

Note to Physician: Treat symptomatically.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

• Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. • Harmful if swallowed. • Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. • Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

DIRECTIONS FOR USE: It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read the entire label before using this product.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. **PESTICIDE STORAGE:** Store in original container and keep tightly closed when not in use. Store in a cool dry place. Avoid cross-contamination with other pesticides. **PESTICIDE DISPOSAL:** Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be disposed of by use according to label instruction, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods. **CONTAINER HANDLING: Non-Refillable Containers: Rigid, Non-refillable containers (equal to or less than 5 gallons).** Non-refillable container. **DO NOT** reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill.

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Produced for: Bayer CropScience LLC
800 N. Lindbergh Blvd.
St. Louis, MO 63167

Bayer

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	XIVANA® PRIME
Product code (UVP)	85401157
SDS Number	102000033755
EPA Registration No.	264-1226

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use	Fungicide
Restrictions on use	See product label for restrictions.

Information on supplier

Supplier	Bayer CropScience LLC 800 North Lindbergh Blvd. St. Louis, MO 63167 USA
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-866-99BAYER (1-866-992-2937)

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Skin sensitisation: Category 1B

Labelling in accordance with regulation HCS 29CFR §1910.1200



Signal word: Warning

Hazard statements
May cause an allergic skin reaction.

Precautionary statements
Avoid breathing mist/ vapours/ spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
IF ON SKIN: Wash with plenty of water/ soap.
If skin irritation or rash occurs: Get medical attention.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)
No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Fluoxapiprolin	1360819-11-9	1.90
Docusate sodium	577-11-7	1 – 5

The specific chemical identity and/or concentration range is being withheld because it is trade secret information.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.

Eye contact Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms	To date no symptoms are known.

Indication of any immediate medical attention and special treatment needed

Treatment	Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet
Special hazards arising from the substance or mixture	Dangerous gases are evolved in the event of a fire.

Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Specific hazards from the substance or mixture which can increase the fire

Flash point	> 102 °C / > 215.6 °F at 1,013 hPa
Auto-ignition temperature	420 °C / 788 °F
Lower explosion limit	No data available
Upper explosion limit	No data available
Explosivity	Not explosive

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Protect from freezing. Keep away from direct sunlight.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Fluoxapiprolin	1360819-11-	10 mg/m3		OES BCS*

	9	(TWA)		

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
Hand protection	Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)
Eye protection	Tightly fitting safety goggles
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Liquid
Colour	white to beige
Odour	No data available
Odour Threshold	No data available
pH	5.0 - 7.5 (100 %) (23 °C)
Melting point/ range	No data available
Boiling Point	No data available
Flash point	> 102 °C / > 215.6 °F (1,013 hPa),closed cup
Flammability	No data available
Auto-ignition temperature	420 °C / 788 °F
Thermal decomposition	No data available
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available

Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	1.05 g/cm³ (20 °C)
Water solubility	No data available
Partition coefficient: n-octanol/water	Fluoxapiprolin: log Pow: 3.4 (25 °C) (pH 7)
Viscosity, dynamic	300 - 450 mPa.s (20 °C) Velocity gradient 20 /s
Viscosity, kinematic	No data available
Surface tension	32 mN/m (25 °C) Determined as a 0,1% solution in distilled water (1 g/l).
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	No incompatible materials known.
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Inhalation, Eye contact, Skin contact

Immediate Effects

Eye	Not expected to produce significant adverse effects when recommended use instructions are followed.
Skin	May be harmful in contact with skin. May cause sensitisation by skin contact.
Ingestion	May be harmful if swallowed.
Inhalation	Not expected to produce significant adverse effects when recommended use instructions are followed.

Information on toxicological effects

Acute oral toxicity	LD50 (male/female combined Rat) > 2,000 mg/kg
Acute inhalation toxicity	LC50 (male/female combined Rat) > 4.17 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration.
Acute dermal toxicity	LD50 (male/female combined Rat) > 2,000 mg/kg
Skin corrosion/irritation	No skin irritation (Rabbit)
Serious eye damage/eye irritation	No eye irritation (Rabbit) No eye irritation (Isolated chicken eyes)
Respiratory or skin sensitisation	Skin: Sensitising (Mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment STOT Specific target organ toxicity – single exposure

Fluoxapiprolin: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Fluoxapiprolin did not cause any significant specific adverse effects or target organ toxicity in subchronic toxicity studies.

Assessment neurotoxicity

Fluoxapiprolin did not demonstrate the potential to cause neurotoxicity in standard toxicity studies using laboratory animals.

Assessment mutagenicity

Fluoxapiprolin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Fluoxapiprolin is not considered carcinogenic.

ACGIH (US)

None.

NTP (US)

None.

IARC (US)

None.

Assessment toxicity to reproduction

Fluoxapiprolin did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Fluoxapiprolin did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

Only acute toxicity studies have been performed on the formulated product.
The non-acute information pertains to the active ingredient(s).
No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) > 100 mg/l static test; Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) > 100 mg/l static test; Exposure time: 48 h
Chronic toxicity to aquatic invertebrates	NOEC (Daphnia magna (Water flea)): 32 µg/l Exposure time: 21 d The value mentioned relates to the active ingredient.
Toxicity to aquatic plants	ErC50 (Raphidocelis subcapitata (freshwater green alga)) > 96.2 mg/l static test; Exposure time: 72 h
	NOEC (Raphidocelis subcapitata (freshwater green alga)) 11.5 mg/l static test; Exposure time: 72 h
	ErC50 (Lemna gibba (gibbous duckweed)) > 100 mg/l static test; Exposure time: 7 d
Toxicity to other organisms	LC50 (Eisenia fetida (earthworms)) > 1,000 mg/kg Exposure time: 14 d
Biodegradability	Fluoxapiprolin: 0 %, Exposure time: 28 d Not readily biodegradable.
Koc	Fluoxapiprolin: Koc: 6548
Bioaccumulation	Fluoxapiprolin: Bioconcentration factor (BCF) 8.00 - 8.62 Does not bioaccumulate.
Mobility in soil	Fluoxapiprolin: mobile in soil

Results of PBT and vPvB assessment

PBT and vPvB assessment	Fluoxapiprolin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No other effects to be mentioned.
Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose in accordance with all local, state/provincial and federal regulations.
Contaminated packaging	Consult state and local regulations regarding the proper disposal of container. Follow advice on product label and/or leaflet.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

SECTION 15: REGULATORY INFORMATION

If more information is required, call the product information number listed in Section 1.

EPA Registration No. 264-1226
US Federal Regulations
TSCA list

Water	7732-18-5
Glycerine	56-81-5
Docusate sodium	577-11-7

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No export notification needs to be made.
SARA Title III - Section 302 - Notification and Information
Not applicable.

SARA Title III - Section 313 - Toxic Chemical Release Reporting
None.

US States Regulatory Reporting
CA Prop65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

US State Right-To-Know Ingredients

Glycerine	56-81-5	MN, RI

Environmental
CERCLA
None.
Clean Water Section 307(a)(1)
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

EPA/FIFRA Information:
This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

Signal word:	Caution!
Hazard statements:	Harmful if swallowed. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified

NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2	Flammability - 1	Instability - 0	Others - none

HMIS (Hazardous Materials Identification System, based on the Fourth Edition Ratings Guide)

Health - 2	Flammability - 1	Physical Hazard - 0	PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard,
* = chronic health hazard

Reason for Revision: The following sections have been revised: Section 11: Toxicological Information. Section 15: Regulatory information. Reviewed and updated for general editorial purposes.

Revision Date: 07/21/2026

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.

Antorix™

Trifludimoxazin	Group	14	Herbicide
Saflufenacil	Group	14	Herbicide

Herbicide

For use as a postemergence-directed broadleaf and grass herbicide in the following bearing and nonbearing crops: citrus fruit trees, nut trees, and pome fruit trees

Powered by Tirexor™ and Kixor® herbicides

Active Ingredients:	
trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione	10.76%
saflufenacil: N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3,6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide	21.51%
Other Ingredients:	67.73%
Total:	100.00%

Contains 1.043 pounds active ingredient trifludimoxazin and 2.086 pounds active ingredient saflufenacil per gallon formulated as a water-based suspension concentrate

EPA Reg. No. 7969-493

EPA Est. No. 241-PR-002

KEEP OUT OF REACH OF CHILDREN
CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See full label for complete **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents: 1.72 pints (27.5 fl oz)

4081177771 NVA 2025-05-0657-0194

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

8 04338 33206 8

BASF
We create chemistry

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • **DO NOT** give anything by mouth to an unconscious person.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling the poison control center 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.607(d-e)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **applicators and other handlers** and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS
Users should:
• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. • Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

For terrestrial uses, **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory. Trifludimoxazin and saflufenacil have properties and characteristics associated with chemicals detected in groundwater. This product may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory. Trifludimoxazin and saflufenacil may impact surface water due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between

areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Non-target Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift.

Pollinator Advisory: This product is potentially toxic to bee larvae. Avoid application of this product to crops in bloom or if bees are actively collecting pollen or nectar from the treatment area.

Reporting Ecological Incidents: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents.

Directions For Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Observe all precautions and restrictions in this label and the labels of products used in combination with **Antorix™ herbicide**. The use of **Antorix** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

BASF does not advise or authorize the use of this product in manufacturing, processing, or preparing custom blends with other products for application in crops.

Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s).

For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides.

Pesticide Disposal

Wastes resulting from this product must be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Plastic Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

(continued)

STORAGE AND DISPOSAL *(continued)*

Container Handling *(continued)*

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

Antorix™ herbicide provides contact burndown control of broadleaf and select grass weeds (refer to **Table 1** for list). **Antorix** may be used sequentially or tank mixed with another herbicide for a complete weed control program. Refer to **Crop-specific Information** section for recommendations on herbicide tank mixtures or sequential programs.

Make burndown applications of **Antorix** when broadleaf and grass weeds are small and actively growing. Burndown activity may be reduced on weeds previously mowed or cut. An adjuvant is required with **Antorix** for optimum burndown activity (refer to **Additives** section for details). Burndown activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing in drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf and grass weeds, use higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Antorix™ herbicide

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Broadleaf Weeds			
Amaranth, palmer[3]	*Amaranthus palmeri*	C	6
Bedstraw, catchweed	*Galium aparine*	C	3
Beggarticks, hairy	*Bidens pilosa*	C	6
Beggarweed, Florida	*Desmodium tortuosum*	C	6
Bindweed, field	*Convolvulus arvensis*	S[1]	6
Buckwheat, wild	*Polygonum convolvulus*	C	6
California burclover	*Medicago polymorpha*	C	5
Canola, volunteer (rapeseed)	*Brassica* spp.	C	6
Carpetweed	*Mollugo verticillata*	C	6
Chickweed, common	*Stellaria media*	C	6
Chickweed, field	*Cerastium arvense*	C	6
Chickweed, mouseear	*Cerastium vulgatum*	C	6
Cocklebur, common	*Xanthium strumarium*	C	6
Cotton, volunteer[2]	*Gossypium hirsutum*	C	6
Cowcockle	*Vaccaria pyramidata*	C	4
Cudweed, purple	*Gnaphalium purpureum*	C	6
Dandelion, common	*Taraxacum officinale*	S	6
Eveningprimrose, cutleaf	*Oenothera laciniata*	C	4
Falseflax, smallseed	*Camelina microcarpa*	C	4
Fiddleneck	*Amsinckia menziesii*	C	4
Filaree, broadleaf	*Erodium botrys*	C	6
Filaree, redstem	*Erodium cicutarium*	S	3
Filaree, whitestem	*Erodium moschatum*	C	6
Fleabane, hairy	*Conyza bonariensis*	C	4 rosette
Flixweed	*Descurainia sophia*	C	6
Geranium/Cranesbill, Carolina	*Geranium carolinianum*	C	6
Goatweed	*Scoparia dulcis*	C	6
Groundcherry, cutleaf	*Physalis angulata*	C	6
Groundsel, cressleaf	*Senecio glabellus*	C	6
Groundsel, common	*Senecio vulgaris*	C	4

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Antorix™ herbicide *(continued)*

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Broadleaf Weeds *(continued)*			
Hairy indigo	*Indigofera hirsuta*	C	4
Hawksbeard, narrowleaf[2]	*Crepis tectorum*	C	4
Hemlock, poison[2]	*Conium maculatum*	C	6
Henbit	*Lamium amplexicaule*	C	6
Jointvetch, Indian	*Aeschynomene indica*	C	4
Knotweed, common	*Polygonum arenastrum*	C	4
Knotweed, prostrate	*Polygonum aviculare*	C	3
Kochia	*Kochia scoparia*	C	1-inch to 3-inch Suppression of button/puffball stage at < 1-inch tall
Ladysthumb	*Polygonum persicaria*	C	6
Lambsquarters, common	*Chenopodium album*	C	6
Lambsquarters, narrowleaf	*Chenopodium pratericola*	C	6
Lettuce, prickly	*Lactuca serriola*	C	6 rosette
Mallow, common	*Malva neglecta*	C	6
Mallow, little (Cheeseweed)	*Malva parviflora*	C	3
Mallow, Venice	*Hibiscus trionum*	C	6
Marestail (Horseweed)	*Conyza canadensis*	C	4
Marshelder	*Iva xanthifolia*	C	4
Morningglory, entireleaf	*Ipomoea hederacea* var. *integriuscula*	C	6
Morningglory, ivyleaf	*Ipomoea hederacea*	C	6
Morningglory, palmleaf	*Ipomoea wrightii*	C	6
Morningglory, pitted	*Ipomoea lacunosa*	C	6
Morningglory, tall	*Ipomoea purpurea*	C	6
Mustard, black	*Brassica nigra*	C	6 rosette
Mustard, tumble	*Sisymbrium altissimum*	C	6 rosette
Mustard, wild	*Sinapis arvensis*	C	6 rosette
Needles, Spanish[2]	*Bidens pilosa*	C	6
Nettle, burning	*Urtica urens*	C	4
Nightshade, black	*Solanum, nigrum*	C	6
Nightshade, cutleaf	*Solanum, triflorum*	C	6

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Antorix™ herbicide *(continued)*

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Broadleaf Weeds *(continued)*			
Nightshade, Eastern black	*Solanum, ptycanthum*	C	6
Nightshade, hairy	*Solanum, saccharoides*	C	6
Panicle willowherb	*Epilobium brachycarpum*	C	6
Parthenium (ragweed)	*Parthenium hysterophorus*	C	6
Pennycress, field	*Thlaspi arvense*	C	6
Pigweed, green	*Amaranthus viridus*	C	6
Pigweed, prostrate	*Amaranthus blitoides*	C	6
Pigweed, redroot	*Amaranthus retroflexus*	C	6
Pigweed, smooth	*Amaranthus hybridus*	C	6
Puncturevine	*Tribulus terrestris*	C	6
Purslane, common	*Portulaca oleracea*	C	3
Pusley, Florida	*Richardia scabra*	C	3
Radish, wild	*Raphanus raphanistrum*	C	4
Ragweed, common[3]	*Ambrosia artemisiifolia*	C	6
Ragweed, giant	*Ambrosia trifida*	C	6
Redmaids	*Calandrinia ciliata*	C	6
Rocket, London	*Sisymbrium irio*	C	6
Sesbania, hemp	*Sesbania exaltata*	C	4
Shepherd's-purse	*Capsella bursa-pastoris*	C	6
Sida, arrowleaf	*Sida rhombifolia*	C	6
Sida, prickly	*Sida spinosa*	C	6
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C	6
Sowthistle, annual	*Sonchus oleraceus*	C	6 rosette
Sowthistle, spiny	*Sonchus asper*	C	6 rosette
Spurge, leafy	*Euphorbia esula*	C	4
Spurge, spotted	*Euphorbia maculata*	C	6
Sunflower, common	*Helianthus annuus*	C	6
Swinecress, lesser	*Coronopus didymus*	C	4
Tansymustard, pinnate	*Descurainia pinnata*	C	6
Texasweed	*Caperonia palustris*	C	4

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Antorix™ herbicide *(continued)*

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Broadleaf Weeds *(continued)*			
Thistle, Canada	*Cirsium arvense*	C	6
Thistle, Russian	*Salsola kali*	C	3
Tropical spiderwort	*Commelina benghalensis*	C	4
Velvetleaf	*Abutilon theophrasti*	C	6
Vetch, common	*Vicia sativa*	C	4
Waterhemp[3]	*Amaranthus tuberculatus*	C	6
Willowweed	*Epilobium adenocaulon*	C	3
Woolly Croton	*Croton capitatus*	C	4
Grass Weeds			
Barnyardgrass	*Echinochloa crus-galli*	C	3
Bluegrass, annual	*Poa annua*	C	2
Crabgrass, large	*Digitaria sanguinalis*	S	4
Foxtail, giant	*Setaria faberi*	C	2
Goosegrass	*Eleusine indica*	S	3
Ryegrass, Italian	*Lolium multiflorum*	S	2
Signalgrass, broadleaf	*Brachiaria platyphylla*	S	2

[1] Control of seedling stage and suppression of perennial growth stage.
[2] Not controlled in California
[3] Populations of noted weeds exist that are known to be resistant to burndown applications of **Group 14** herbicides and may not be controlled by herbicides like **Antorix**. See the **Herbicide Resistance Management** section for practices to manage and minimize the impact of resistant weeds (e.g. tank mixes or alternation with other herbicide modes of action, crop rotation, and mechanical control).

Mode of Action

Saflufenacil and trifludimoxazin, the active ingredients in **Antorix™ herbicide**, are potent inhibitors of protoporphyrinogen-oxidase belonging to herbicide mode of action **Group 14**. **Antorix** is rapidly absorbed by roots and foliage. Following inhibition of protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible emerging weed seedlings usually die as they reach the soil surface or shortly after emergence.

Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to **Antorix** and other **Group 14** herbicides. Weed species with resistance to **Group 14** may dominate the weed population if **Group 14** herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Antorix** or other **Group 14** herbicides. Proper stewardship practices should be employed to ensure the long-term effectiveness of **Antorix** including mixture or sequential use of other effective herbicides to mitigate resistance development with **Antorix**.

To delay herbicide resistance, consider:

- Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, and optimum seeding rate/row spacing. Start with clean fields using tillage or an effective burndown herbicide program. These practices encourage crop growth and improve competitiveness against weeds.
- Clean equipment before moving to a different field to avoid spread of resistant weeds.
- Scout fields prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Always follow labeled application rate and weed growth stage specifications.
- Use sequential programs with preemergence herbicides that provide soil residual control of weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes or premixes with other herbicides possessing different sites of action that are also effective on the target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- If a weed population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action.
- Contact your **Antorix** supplier and/or your local BASF representative to report weed escapes.
- Consult your local BASF representative, local or state cooperative extension service, professional consultants or crop advisors, or other qualified authority to determine appropriate actions if you suspect resistant weeds.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  1. Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  2. A spreading patch of noncontrolled plants of a particular weed species; and
  3. Surviving plants mixed with controlled individuals of the same species.

Crop Tolerance

Crops listed on this label are tolerant to **Antorix** when applied according to label directions as a postemergence-directed treatment and under normal environmental conditions. Crop injury may occur under stressful growing conditions (e.g. low soil fertility, seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought).

Severe crop injury will result if **Antorix** is applied postemergence (over the top) to any tree crop.

Application Instructions

Antorix must be applied as a postemergence-directed spray application either as a uniform broadcast, banded, or spot application to emerged broadleaf and grass weeds.

Table 3. Use Rate Equivalency

Amount of Antorix (fl ozs/A)	**Amount of Saflufenacil** (lb ai/A)	**Amount of Trifludimoxazin** (lb ai/A)
1.4	0.023	0.011
2.0	0.033	0.016
2.73	0.044	0.022

Application Methods and Equipment

Antorix can **ONLY** be applied using ground spray equipment. Thorough spray coverage is required for optimum broadleaf and grass weed control and can be improved with proper adjuvant, nozzle, and spray volume selection.

Use and configure application equipment for adequate spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label. **DO NOT** apply broadcast or banded using high pressure hand wands.

Antorix may **ONLY** be applied using water as the spray carrier.

Ground Spray Carrier Volume. Use 10 to 15 or more gallons of water per treated acre. Increased efficacy has been observed at water volumes of 20 to 40 gallons per acre. Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent thorough spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Ground Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver coarse to very coarse droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE §572). Nozzles that deliver coarse or very coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e., weeds).

Spray Drift Retardants. Addition of some spray drift retardants (drift reducing agents, e.g. DRA) can significantly increase the droplet size but reduce spray coverage and efficacy. If a spray drift retardant is used, ensure that it is compatible for use with **Antorix™ herbicide** and spray equipment being used and the desired level of weed control is maintained.

Cleaning Spray Equipment

Before applying **Antorix** all application equipment must be thoroughly cleaned. All spray equipment, hoses, and nozzles must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply **Antorix**.

Spray equipment used to apply **Antorix** should not be used to apply other materials to any crop unless the proper cleanout procedures are followed. Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions, followed by triple rinsing the equipment after applying this product.

Mitigating Off-Target Movement

MANDATORY SPRAY DRIFT MANAGEMENT

All Ground Boom Applications

- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- Wind speed and direction must be measured on location using a windsock or an anemometer (including systems to measure wind speed or velocity on ground application equipment).
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- **DO NOT** apply during temperature inversions.
- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a nozzle height of 24 inches above the spray target (i.e., top of weed canopy). Set boom to lowest effective height over the target pest based on equipment manufacturer's directions.
- Applicators should select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but **DO NOT** exceed a ground speed of 15 miles per hour.

Mandatory Spray Drift Mitigations

Ecological spray drift buffers are required for this product for ground boom applications to field crops. Access EPA's **Mitigation Menu** website (www.epa.gov/pesticides/mitigation-menu) for the full list of parameters to evaluate whether your field is subject to the required spray drift buffer.

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions.

Outside a PULA. A minimum down-wind spray drift buffer must be maintained between the application area and any unmanaged areas for applications to field crops. Unmanaged areas are defined in comparison to managed areas – anything that is not a managed area is an unmanaged area. Refer to the list of **Managed Areas** in this label.

Mandatory Spray Drift Buffers

For ground applications, maintain a wind-directional (downwind) buffer distance from the edge of the treated area as follows:

Application Method	Minimum Required Buffer Distance
Ground	15 feet

Reduction Options for All Ecological Wind-Directional Drift Buffers

The applicator may choose among the ecological drift buffer reduction options on EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) to reduce the wind-directional buffer distance before applying this product. All buffer reduction options selected must align with the minimum droplet size and release height requirements on this label.

Examples of buffer reduction options include: using larger droplets, lowering the boom height, reducing the maximum single application rate, reducing the number of passes across the field, maintaining a windbreak or hedgerow, or using directed sprayers.

The buffer reduction options must be employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website. When using more than one option during the application, the percent reduction in the buffer distances may be added together. The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive of the products' label or bulletin requirements must be followed (e.g., drift buffers that are not wind-directional, Application Exclusion Zone drift requirements, drift buffers to residences, schools, and parks where people could be present, use prohibitions, timing restrictions, and application method prohibitions).

Managed Areas

Managed areas that can be included as part of wind-directional spray drift buffer footage include the following:

- Agricultural fields, pastures, forage fields, and private rangelands, including untreated portions of the treated field/site;
- Roads, paved or gravel surfaces, mowed grassy/fallowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area;
- Buildings and their perimeters, or other on-farm man-made structures with walls and/or roof;
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement;
- Areas present and/or maintained as a drift buffer reduction measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative windbreaks, hedgerows, shelterbelts, riparian areas, private forests, woodlots, and shrublands;
- Conservation Reserve Program (CRP) and Agricultural Conservation Easement Program (ACEP) lands;

• On-site contained irrigation water resources that are not connected to adjacent water bodies, including on-site irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, ponds, and tailwater collection ponds.

Managed areas can be included as part of the buffer footage if they are downwind and immediately adjacent/contiguous to the treated field and people are not present in those areas.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

Importance of Droplet Size
An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom
Volume. Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure. Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle. Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Release Height - Ground Boom
For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Hooded (or Shielded) Sprayers
Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded (or shielded) sprayers. Verify that the hoods (or shields) are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversion
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Wind
Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Measuring Wind Speed and Wind Direction
- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:
  - Relying on equipment on the application equipment that measures wind speed.
  - Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
  - Using a windsock. Wind can be estimated with a wind-sock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
  - Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

Mandatory Runoff Mitigation

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the section below.

The minimum of 6 mitigation points must be achieved for the following agricultural crop use sites: bearing and non-bearing fruit and nut trees.

Step 1. To achieve the mitigation points specified above, visit EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.

Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (e.g., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).

Step 3. If the application site does not meet the field/application parameters specified on EPA's **Mitigation Menu** website, choose among the mitigation and/or mitigation relief options on EPA's **Mitigation Menu** website to meet or exceed the required points noted here before applying this product.

Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:
- Employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's **Mitigation Menu** website. EPA may periodically update the **Mitigation Menu** website, for example, by adding new mitigation measures or updating a mitigation measure description.

Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

Additives

For optimum burndown with **Antorix™ herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
methylated seed oil[1] (MSO)	1 gal/100 gals[2] (1% v/v)
PLUS	**PLUS**
ammonium sulfate (AMS)	8.5 to 17 lbs/100 gals (1% to 2% w/v)
or	**or**
urea ammonium nitrate (UAN)	1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

[1] MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.

[2] **DO NOT** use less than 1 pint/A of MSO with low-volume (less than 12.5 gallons per acre) ground application.

Use of AMS fertilizer is highly advised when mixing **Antorix** with glyphosate-based herbicides and glufosinate-based herbicides.

DO NOT use nonionic surfactant (NIS) as a substitute for MSO, or poor performance on broadleaf and/or grass weeds will occur.

When an adjuvant is to be used with this product, BASF recommends the use of a Council of Producers & Distributors of Agrotechnology (CPDA) certified adjuvant.

Tank Mixing Information

It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and precautions and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Antorix may be tank mixed or applied sequentially with other herbicide products registered for use in any labeled crop found in this label for a broader spectrum of control of emerged weeds and/or residual weed control. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on the labeled crop. Read and follow tank mix product labels for application instructions, use restrictions and precautions, and rotational cropping guidance.

When tank mixing, the most restrictive of the products' label or bulletin (BLT) requirements must be followed (e.g., use prohibition, timing restriction, application method restriction, sandy soil application restriction, etc.).

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

Mixing Order

Maintain agitation throughout mixing and application until spraying is completed.

1. **Water** - Fill tank 1/2 to 3/4 full with clean water and start agitation.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble additives** (including dry and liquid fertilizers AMS or UAN)
5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions, add **Antorix** now)
6. **Water-soluble products**
7. **Emulsifiable concentrates** (including MSO adjuvants)
8. **Remaining quantity of water**

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Restrictions

- **Maximum annual use rate** - Refer to **Crop-specific Information** section for maximum application use rates for each crop use.
- If additional saflufenacil and/or trifludimoxazin is applied from other product sources, refer to the **Crop-specific Restrictions** section for each crop use for the maximum cumulative amount per year.
- **DO NOT** apply **Antorix** by aerial spray.
- **DO NOT** contaminate water used for irrigation or domestic purposes.
- **DO NOT** apply **Antorix** through any type of irrigation system (e.g. chemigation).
- **DO NOT** apply during rain.

- **DO NOT** apply this product when soil is saturated or at field capacity, or when a storm event likely to produce runoff from the treated area is expected to occur within 24 hours following application.
- Within 24 hours after application, **DO NOT** irrigate the treatment area to the point of runoff.
- **Antorix™ herbicide is not for sale, distribution, or use in Alaska, Hawaii, US Territories (including American Samoa, Guam, Puerto Rico, Mariana Islands, US Virgin Islands), and in Nassau and Suffolk counties in New York State.**

Use Precautions

- **Rainfastness** - **Antorix** is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.
- **Emergency Replanting Intervals** - If any labeled crop treated with **Antorix** is lost to adverse weather or for other reasons, the area treated may be replanted to citrus fruit trees 1 month after treatment and to nut trees and pome fruit trees 3 months after treatment. Corn and small grains may be planted immediately after crop removal. Wait 9 months before planting any other crop. Be sure to determine the rotational crop interval for tank mix products and follow the most restrictive interval of all products applied.

Crop-specific Information

This section provides use directions for **Antorix** in specific crops. Read product information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions.

Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Bearing and Nonbearing Fruit and Nut Trees

Antorix may be applied in the following individual bearing or nonbearing fruit tree and tree nut crops:

Citrus Fruits
Citrus citron
Clementine
Grapefruit
Lemon
Lime
Mandarin (satsuma)
Orange (sweet)
Pummelo
Tangelo
Tangerine
Pome Fruits
Apple
Pear
Tree Nuts
Almond
Filbert (hazelnut)*
Pistachio
Walnut

* Not for use in California.

Application Rate, Method, and Timing

Apply **Antorix** at 2.73 fl ozs/A in citrus fruit, pome fruit, and tree nuts plus the required adjuvants (refer to **Additives** section for details) as a postemergence-directed spray either as a uniform broadcast, banded, or spot application directed at the base of the tree trunks while targeting emerged broadleaf weeds and grasses (refer to **Table 1** for weeds controlled). **Antorix** can **ONLY** be applied using ground spray equipment. Spray contact of tree foliage, flowers, buds, or fruit either directly via improper nozzle orientation or indirectly via physical drift will result in crop injury. The use of shielded sprayers is highly advised when applying in citrus trees and other trees with low-hanging branches and fruit.

Applications can be made to newly planted or replacement citrus trees after irrigation or rainfall has settled the soil; nut trees and pome fruit trees must be established for at least 9 months before application. Trunk shields must be used until adequate bark has formed to protect trees from potential herbicide injury (typically by 2 to 3 years after establishment).

Antorix may be applied either in a single application or sequentially up to 3 times per year with applications occurring either in-season or separated between dormant period and in-season as described in paragraphs that follow. Sequential applications must be separated by at least 30 days regardless of the time of year.

Dormant Period Application in Tree Nuts and Pome Fruit Trees. Antorix™ herbicide may be applied during the dormant period of postharvest through winter dormancy. Make one or two (no more than two) applications of **Antorix** during the period of postharvest through winter dormancy. In-season **Antorix** applications may begin in the spring when trees are in the bud-swell stage. A maximum of three (3) **Antorix** applications are permitted per year (i.e., across tree growth periods including postharvest through winter dormancy, and bud-swell to crop harvest).

Spot Treatment

Consult the following chart for the amount of **Antorix** for making various gallons of spray mix to be used for spot treatments applied to actively growing broadleaf and grass weeds and sizes in **Table 1**. Coverage is important. Spray thoroughly to wet the weed foliage but not to point of runoff. To maximize performance, refer to the **Additives** section for the adjuvant and rate to be added to the spray mix. Each spray mix is equivalent to applying **Antorix** at a use rate of 2.73 fl ozs/A in a spray volume of 100 gallons per acre. Application of a spot spray mix must not be made to an equivalent area less than what is shown in the chart or exceed the equivalent broadcast rate of 2.73 fl ozs/A. Spot treatments may be applied with backpack sprayers or via an ATV-mounted (all-terrain vehicle-mounted) or tractor/truck mounted sprayers equipped for hand wand applications. Spot applications can be made sequentially and/or be combined with broadcast/banded applications, but the maximum cumulative amount applied must not exceed the total use rate for the crop per year (see **Crop-specific Restrictions**). **DO NOT** apply spot treatments using high-pressure hand wands.

Gallons Spray Mix	**Spray Mix Treatment Area** (sq ft)	**Amount of Antorix**	
		(mL)	(fl ozs)
5.0	2,178	4	0.14
10.0	4,356	8	0.27
25.0	10,890	20	0.68
50.0	21,780	40	1.35

Crop-specific Restrictions

- **DO NOT** apply more than 2.73 fl ozs/A of **Antorix** (0.044 lb ai/A saflufenacil + 0.022 lb ai/A trifludimoxazin) in a single application in bearing and nonbearing fruit/nut trees.
- **DO NOT** apply more than 8.25 fl ozs/A of **Antorix** (0.134 lb ai/A saflufenacil + 0.067 lb ai/A trifludimoxazin) as a maximum cumulative amount from sequential applications per year in bearing and nonbearing fruit/nut trees.
- Sequential applications must be separated by at least 30 days.
- Maximum number of applications per year: 3
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in bearing and nonbearing fruit/nut trees: 0.134 lb ai/A.
- If additional trifludimoxazin is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of trifludimoxazin per year in bearing and nonbearing fruit/nut trees: 0.089 lb ai/A.
- For spot applications, apply as needed for the desired weed control but **DO NOT** exceed the equivalent of 0.066 lb ai/A (0.063 fl oz per 1000 square feet) per application or 0.201 lb ai/A (0.189 fl oz per 1000 square feet) from applications per year.
- **Antorix** may be applied any time up to or on the day of citrus or pome fruit harvest.
- **Preharvest interval (PHI)** for tree nuts: 7 days.
- **DO NOT** use in tree nurseries.

Tank Mixes

Broad-spectrum postemergence control of additional annual and perennial weeds will usually require a tank mix with a herbicide including glyphosate. **Antorix** may be tank mixed or applied sequentially with one or more of, but not limited to, the following herbicide products for additional burndown or residual weed control:

- glufosinate-ammonium
- glyphosate
- indaziflam
- oxyfluorfen
- pendimethalin
- rimsulfuron

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF. 1108

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BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

BASF
We create chemistry

Antorix™

Trifludimoxazin	Group	14	Herbicide
Saflufenacil	Group	14	Herbicide

Herbicide

For use as a postemergence-directed broadleaf and grass herbicide in the following bearing and nonbearing crops: citrus fruit trees, nut trees, and pome fruit trees

Powered by Tirexor™ and Kixor® herbicides

Active Ingredients:

trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione 10.76%

saflufenacil: N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3,6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide 21.51%

Other Ingredients: 67.73%

Total: 100.00%

Contains 1.043 pounds active ingredient trifludimoxazin and 2.086 pounds active ingredient saflufenacil per gallon formulated as a water-based suspension concentrate

EPA Reg. No. 7969-493 **EPA Est. No. 241-PR-002**

KEEP OUT OF REACH OF CHILDREN
CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

See attached label for complete **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

FIRST AID

If swallowed: Call a poison control center or doctor immediately for treatment advice. **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. Have person sip a glass of water if able to swallow. **DO NOT** give anything by mouth to an unconscious person. **If in eyes:** Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. Call a poison control center for treatment advice. **If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.

HOTLINE NUMBER

Have the product container or label with you when calling the poison control center 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).

Precautionary Statements: Hazards to Humans and Domestic Animals. CAUTION. Harmful if swallowed. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. **Environmental Hazards:** For terrestrial uses, **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. See attached booklet for full **Environmental Hazards**, inculding **Groundwater Advisory**, **Surface Water Advisory**, **Non-target Organism Advisory**, **Pollinator Advisory**, and **Reporting Ecological Incidents**.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. **Pesticide Storage: DO NOT** use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides. **Pesticide Disposal:** Wastes resulting from this product must be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. **Container Handling: Nonrefillable Plastic Container. DO NOT** reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities. **Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Triple rinse containers too large to shake (capacity > 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. **Triple rinse as follows:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

Net Contents: 1.72 pints (27.5 fl oz)

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Safety Data Sheet
Antorix™ Herbicide

1. Identification

Product identifier used on the label

Antorix™ Herbicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, herbicide

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27709
USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number:	892280
Chemical family:	No applicable information available.
Synonyms:	Trifludimoxazin + Saflufenacil

2. Hazards Identification

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Repr.	1B (fertility)	Reproductive toxicity
Repr.	2 (unborn child)	Reproductive toxicity
STOT RE	2	Specific target organ toxicity — repeated exposure

Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:



Signal Word:
Danger

Hazard Statement:

H373	May cause damage to organs through prolonged or repeated exposure.
H360	May damage fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing and eye protection or face protection.
P260	Do not breathe mist or vapour.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P308 + P313	IF exposed or concerned: Get medical attention.
P391	Collect spillage.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

Labeling of special preparations (GHS):
Product contains the following components and may cause an allergic skin reaction: The substance may cause sensitization of the skin in particularly sensitive individuals. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. 1,2-benzisothiazol-3(2H)-one, mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

3. Composition / Information on Ingredients

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Saflufenacil
CAS Number: 372137-35-4

Content (W/W): 21.51 %
Synonym: Saflufenacil

1,3,5-Triazine-2,4(1H,3H)-dione, dihydro-1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3,4-dihydro-3-oxo-4-(2-propyn-1-yl)-2H-1,4-benzoxazin-6-yl]-
CAS Number: 1258836-72-4
Content (W/W): 10.76 %
Synonym: No data available.

Benzenesulfonic acid, hydroxy-, polymer with formaldehyde, phenol and urea, sodium salt
Content (W/W): >= 1.0 - < 5.0%
Synonym: No data available.

bronopol
CAS Number: 52-51-7
Content (W/W): < 0.1%
Synonym: 2-Bromo-2-nitro-1,3-propanediol; Bronopol

mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)
CAS Number: 55965-84-9
Content (W/W): < 0.1%
Synonym: 5-Chloro-2-methyl-3(2H)-isothiazolone mixt. with 2-methyl-3(2H)-isothiazolone

1,2-benzisothiazol-3(2H)-one
CAS Number: 2634-33-5
Content (W/W): <= 0.1%
Synonym: No data available.

The actual concentration is withheld as a trade secret.

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
Immediately wash thoroughly with soap and water, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If swallowed:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far
Hazards: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, hydrogen fluoride, hydrogen bromide, Hydrogen chloride, nitrogen oxides, silicon oxides, sulfur oxides, halogenated compounds, cyanides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then

spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:
No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with occupational exposure limits

Saflufenacil	TWA value 0.824 mg/m3 ;

Advice on system design:
No applicable information available.

Personal protective equipment
RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Physical state:	liquid
Form:	liquid
Odour:	faint, sweetish
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	off-white
pH value:	approx. 5 - 7 (100 %(m), 23 °C)
Freezing point:	approx. -5 °C
Boiling point:	> 110 °C
Sublimation point:	No applicable information available.
Flash point:	Non-flammable.
Flammability:	not applicable
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Autoignition:	460 °C
SADT:	> 75 °C
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.
Density:	approx. 1.16 g/cm3 (20 °C)
Relative vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	The statements are based on the properties of the individual components.
Information on: saflufenacil	
Partitioning coefficient n-octanol/water (log Pow):	2.6 (20 °C)
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Thermal decomposition:	> 190 °C, 620 kJ/kg (DSC (OECD 113)) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.
Viscosity, dynamic:	approx. 58 mPa.s (20 °C)

Viscosity, kinematic:	No data available.
Solubility in water:	dispersible
Solubility (quantitative):	No data available.
Solubility (qualitative):	No data available.
Molecular weight:	No data available.
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

Particle characteristics
Particle size distribution: The substance / product is marketed or used in a non solid or granular form.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid
See SDS section 7 - Handling and storage.

Incompatible materials
strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
> 190 °C (DSC (OECD 113))

Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Oral
Type of value: LD50
Species: rat (female)
Value: > 2,000 mg/kg
No mortality was observed.

Inhalation
Type of value: LC50
Species: rat (male/female)
Value: > 3.4 mg/l
Exposure time: 4 h
An aerosol was tested.
Highest concentration technically achievable.

Dermal
Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg
No mortality was observed.

Assessment other acute effects
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion
Assessment of irritating effects: Not irritating to eyes and skin.

Skin
Species: rabbit
Result: non-irritant

Eye
Species: rabbit
Result: non-irritant

Sensitization
Assessment of sensitization: The product contains 1,2-benzisothiazolin-3-one (CAS-No.: 2634-33-5). The product contains a mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one (3:1) (CAS-No.:55965-84-9). The substance may cause sensitization of the skin in particularly sensitive individuals. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Buehler test
Species: guinea pig
Result: Non-sensitizing.

Aspiration Hazard
not applicable

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Trifludimoxazin
Assessment of repeated dose toxicity: Repeated oral exposure may affect certain organs.

Genetic toxicity
Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity
Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Trifludimoxazin
Assessment of carcinogenicity: In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. Due to the species specific mode of action, the effects are not expected to occur in humans.

Reproductive toxicity
Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Trifludimoxazin
Assessment of reproduction toxicity: Causes impairment of fertility in laboratory animals.

Teratogenicity
Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: saflufenacil
Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

Other Information
Misuse can be harmful to health.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:
Very toxic to aquatic life with long lasting effects.
The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish

Information on: Trifludimoxazin
LC50 (96 h) > 1.76 mg/l, Oncorhynchus mykiss
LC50 (96 h) > 1.68 mg/l, Cyprinus carpio

Information on: saflufenacil
LC50 (96 h) > 96.8 mg/l, Pimephales promelas (OECD Guideline 203, static)

Aquatic invertebrates

Information on: Trifludimoxazin
EC50 (48 h) > 1.95 mg/l, Daphnia magna
LC50 (48 h) 0.574 mg/l, Americamysis bahia

Information on: saflufenacil
EC50 (48 h) > 100 mg/l, Daphnia magna

Aquatic plants

Information on: Trifludimoxazin
EC50 (72 h) 0.000821 mg/l (growth rate), Pseudokirchneriella subcapitata
EC10 (72 h) 0.000486 mg/l (growth rate), Pseudokirchneriella subcapitata
EC50 (72 h) 0.000460 mg/l (growth rate), Navicula pelliculosa
EC10 (72 h) 0.000225 mg/l (growth rate), Navicula pelliculosa

Information on: saflufenacil
EC50 (96 h) 0.113 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
EC10 (96 h) 0.041 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201)
EC50 (7 d) 0.1436 mg/l, Lemna gibba (OECD Guideline 221)
No observed effect concentration (7 d) 0.0101 mg/l, Lemna gibba (OECD Guideline 221)

Chronic toxicity to fish

Information on: Trifludimoxazin
No observed effect concentration (34 d) 0.0027 mg/l, Cyprinodon variegatus

Information on: saflufenacil
No observed effect concentration (33 d) >= 10 mg/l, Pimephales promelas
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Chronic toxicity to aquatic invertebrates

Information on: Trifludimoxazin
No observed effect concentration (21 d) 0.0106 mg/l, Daphnia magna

Information on: saflufenacil
No observed effect concentration (21 d) 2.5 mg/l, Daphnia magna

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Persistence and degradability

Assessment biodegradation and elimination (H2O)
The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment biodegradation and elimination (H2O)

Information on: Trifludimoxazin

Not readily biodegradable (by OECD criteria).

Information on: saflufenacil

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential
The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment bioaccumulation potential

Information on: saflufenacil

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Bioaccumulation potential

Information on: Trifludimoxazin

Bioconcentration factor: 81.6

Mobility in soil

Assessment transport between environmental compartments
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Trifludimoxazin

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: saflufenacil

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:
Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:
Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains SAFLUFENACIL, TRIFLUDIMOXAZINE)

Air transport
IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains SAFLUFENACIL, TRIFLUDIMOXAZINE)

Further information
Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

15. Regulatory Information

Federal Regulations

Registration status:
Crop Protection TSCA, US released / exempt

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK	CAS Number	Chemical name
NJ	57-55-6	Propylene glycol
PA	57-55-6	Propylene glycol

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Labeling requirements under FIFRA

This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.
CAUTION:
HARMFUL IF SWALLOWED.
Avoid contact with the skin, eyes and clothing.
Wash thoroughly after handling.

16. Other Information

SDS Prepared by:
BASF Agricultural Solutions US NA Product Regulations
SDS Prepared on: 2025/12/18

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

Date / Revised: 2025/12/18 Version: 5.1
Date / Previous version: 2025/12/16 Previous version: 5.0

END OF DATA SHEET

Voraxor™

Trifludimoxazin	Group	14	Herbicide
Saflufenacil	Group	14	Herbicide

Herbicide

For use in corn, legume vegetables, small grains, sorghum, soybean, and in postharvest and fallow
Powered by Tirexor™
Active Ingredients:

trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione.	10.76%
saflufenacil: N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3, 6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide.	21.51%
Other Ingredients:.	67.73%
Total:	100.00%

Contains 1.043 pounds active ingredient trifludimoxazin and 2.086 pounds active ingredient saflufenacil per gallon product formulated as a water-based suspension concentrate

EPA Reg. No. 7969-495 **EPA Est. No. 241-PR-002**

KEEP OUT OF REACH OF CHILDREN
CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

See full label for complete **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

Net Contents: 1 Gallon

4081168027 NVA 2026-05-0634-0558

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

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FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. • Have person sip a glass of water if able to swallow. • **DO NOT** give anything to an unconscious person.
If in eyes	• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling the poison control center at 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).	

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION. Harmful if swallowed. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves

User Safety Requirements

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **applicators and other handlers** and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

For terrestrial uses, **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Groundwater Advisory. Trifludimoxazin and saflufenacil have properties and characteristics associated with chemicals detected in groundwater. These chemicals may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory. Trifludimoxazin and saflufenacil may impact surface water due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features including ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

Nontarget Organism Advisory: This product is toxic to plants and may adversely impact the forage and habitat of nontarget organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of nontarget organisms by minimizing spray drift.

Pollinator Advisory: This product is potentially toxic to bee larvae. Avoid application of this product to crops in bloom or if bees are actively collecting pollen or nectar from the treatment area.

Reporting Ecological Incidents: For guidance on reporting ecological incidents, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents.

Directions For Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Observe all precautions and restrictions in this label and the labels of products used in combination with **Voraxor™ herbicide**. The use of **Voraxor** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

BASF does not advise or authorize the use of this product in manufacturing, processing, or preparing custom blends with other products for application in crops.

Endangered and Threatened Species Protection Requirements

Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s).

For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **12 hours**.

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

DO NOT use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides.

Pesticide Disposal

Wastes resulting from this product must be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling

Nonrefillable Plastic Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

(continued)

STORAGE AND DISPOSAL

(continued)

Container Handling *(continued)*

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Triple rinse containers too large to shake (capacity > 5 gallons) as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

(continued)

STORAGE AND DISPOSAL

(continued)

Container Handling *(continued)*

Pressure rinse as follows: Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

(continued)

STORAGE AND DISPOSAL

(continued)

Container Handling *(continued)*

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

In Case of Emergency

In case of large-scale spill of this product, call:

- CHEMTREC 1-800-424-9300
- BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

Product Information

Voraxor™ herbicide provides contact burndown control of broadleaf and grass weeds (refer to **Table 1** for list). It can be used in select field and row crops: chickpea (garbanzo beans), corn (field, seed, silage, sweet, and popcorn), field pea, lentil, small grains, sorghum (grain), soybean, fallow, and postharvest croplands. Refer to **Crop-specific Information** section for specific use directions.

Make burndown applications of **Voraxor** when broadleaf and grass weeds are small and actively growing. An adjuvant is required with **Voraxor** for optimum burndown activity (refer to **Additives** section for details). Burndown activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing in drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf and grass weeds, use a higher application rate within an application rate range and/or higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	**1.0**	**1.4**
Broadleaf Weeds		**Maximum Weed Height or Diameter**		
		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Amaranth, Palmer[2]	*Amaranthus palmeri*	C (3")	C	C
Bedstraw, catchweed	*Galium aparine*		C	C
Beggarticks, hairy	*Bidens pilosa*			C
Beggarweed, Florida	*Desmodium tortuosum*			C
Bindweed, field	*Convolvulus arvensis*			S[1]
Buckwheat, wild	*Polygonum convolvulus*		C	C
Canola, volunteer (rapeseed)	*Brassica* spp.			C
Carpetweed	*Mollugo verticillata*		C	C
Chickweed, common	*Stellaria media*	C	C	C
Chickweed, field	*Cerastium arvense*			C
Chickweed, mouseear	*Cerastium vulgatum*	C	C	C
Cocklebur, common	*Xanthium strumarium*			C
Cotton, volunteer	*Gossypium hirsutum*			C
Cowcockle	*Vaccaria pyramidata*			C
Cudweed, purple	*Gnaphalium purpureum*	C	C	C
Dandelion, common	*Taraxacum officinale*		S[1]	S
Eveningprimrose, cutleaf	*Oenothera laciniata*		C	C
Falseflax, smallseed	*Camelina microcarpa*			C
Fiddleneck	*Amsinckia menziesii*			C

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide *(continued)*

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	**1.0**	**1.4**
Broadleaf Weeds *(continued)*		**Maximum Weed Height or Diameter**		
		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Field pansy	*Viola bicolor Pursh*		C	C
Filaree, redstem	*Erodium cicutarium*			S
Fleabane, hairy	*Conyza bonariensis*	C	C	C
Flixweed	*Descurainia sophia*			C
Geranium/Cranesbill, Carolina	*Geranium carolinianum*		C	C
Groundcherry, cutleaf	*Physalis angulata*			C
Groundsel, cressleaf	*Senecio glabellus*	C	C	C
Groundsel, common	*Senecio vulgaris*			C
Hawksbeard, narrowleaf	*Crepis tectorum*			C
Hemlock, poison	*Conium maculatum*			C
Henbit	*Lamium amplexicaule*	C	C	C
Horseweed (marestail)	*Conyza canadensis*	C (3")	C	C
Jointvetch, Indian	*Aeschynomene indica*		C	C
Knotweed, prostrate	*Polygonum aviculare*			C
Kochia	*Kochia scoparia*	C 1-inch to 3-inch Suppression of button/puffball stage at < 1-inch tall	C 1-inch to 3-inch Suppression of button/puffball stage at < 1-inch tall	C

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide *(continued)*

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	**1.0**	**1.4**
Broadleaf Weeds *(continued)*		**Maximum Weed Height or Diameter**		
		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Ladysthumb	*Polygonum persicaria*			C
Lambsquarters, common	*Chenopodium album*	C	C	C
Lambsquarters, narrowleaf	*Chenopodium pratericola*			C
Lesser swinecress	*Lepidium didymum*	C	C	C
Lettuce, prickly	*Lactuca serriola*			C
Mallow, common	*Malva neglecta*			C
Mallow, little (Cheeseweed)	*Malva parviflora*			C
Mallow, Venice	*Hibiscus trionum*			C
Marestail (Horseweed)	*Conyza canadensis*	C (3")	C	C
Marshelder	*Iva xanthifolia*			C
Morningglory, entireleaf	*Ipomoea hederacea* var. *integriuscula*			C
Morningglory, ivyleaf	*Ipomoea hederacea*	C	C	C
Morningglory, palmleaf	*Ipomoea wrightii*			C
Morningglory, pitted	*Ipomoea lacunosa*	C	C	C
Morningglory, tall	*Ipomoea purpurea*			C
Mustard, black	*Brassica nigra*			C
Mustard, tumble	*Sisymbrium altissimum*			C
Mustard, wild	*Sinapis arvensis*		C	C
Needles, Spanish	*Bidens pilosa*			C

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide *(continued)*

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	**1.0**	**1.4**
Broadleaf Weeds *(continued)*		**Maximum Weed Height or Diameter**		
		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Nettle, burning	*Urtica urens*			C
Nightshade, black	*Solanum, nigrum*			C
Nightshade, cutleaf	*Solanum, triflorum*			C
Nightshade, Eastern black	*Solanum, ptycanthum*			C
Nightshade, hairy	*Solanum, saccharoides*			C
Parthenium	*Parthenium hysterophorus*			C
Pennycress, field	*Thlaspi arvense*	C	C	C
Pigweed, prostrate	*Amaranthus blitoides*			C
Pigweed, redroot	*Amaranthus retroflexus*	C	C	C
Pigweed, smooth	*Amaranthus hybridus*			C
Plantain, buckhorn	*Plantago lanceolata L.*			C
Puncturevine	*Tribulus terrestris*			C
Purple Deadnettle	*Lamium purpureum*	C	C	C
Purslane, common	*Portulaca oleracea*	C	C	C
Pusley, Florida	*Richardia scabra*			C
Radish, wild	*Raphanus raphanistrum*		C	C
Ragweed, common[2]	*Ambrosia artemisiifolia*		C	C
Ragweed, giant	*Ambrosia trifida*		C	C
Rocket, London	*Sisymbrium irio*			C
Sesbania, hemp	*Sesbania exaltata*	C	C	C

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide *(continued)*

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	**1.0**	**1.4**
Broadleaf Weeds *(continued)*		**Maximum Weed Height or Diameter**		
		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Shepherd's-purse	*Capsella bursa-pastoris*	C	C	C
Sida, prickly	*Sida spinosa*		C	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*			C
Sowthistle, annual	*Sonchus oleraceus*			C
Sowthistle, spiny	*Sonchus asper*			C
Speedwell, Bird's-eye	*Veronica persica*	C	C	C
Speedwell, Field	*Veronica agrestis L.*	C	C	C
Speedwell, Persian	*Veronica persica Poir.*	C	C	C
Speedwell, purslane	*Veronica peregrina L.*	C	C	C
Spurge, leafy	*Euphorbia esula*	C	C	C
Sunflower, common	*Helianthus annuus*		C	C
Swinecress, lesser	*Coronopus didymus*	C	C	C
Tansymustard, pinnate	*Descurainia pinnata*			C
Texasweed	*Caperonia palustris*			C
Thistle, Canada	*Cirsium arvense*			C
Thistle, Russian	*Salsola kali*	S	C	C
Velvetleaf	*Abutilon theophrasti*	C	C	C
Vetch, common	*Vicia sativa*			C
Waterhemp[2]	*Amaranthus tuberculatus*	C (3")	C	C

(continued)

Table 1. Broadleaf and Grass Weeds Controlled with a Burndown Application of Voraxor™ herbicide *(continued)*

Common Name	Scientific Name	Voraxor Use Rate (fl ozs/A)		
		0.7	**1.0**	**1.4**
Broadleaf Weeds *(continued)*		**Maximum Weed Height or Diameter**		
		(4 inches)	(4 to 6 inches)	(4 to 6 inches)
Willowweed	*Epilobium adenocaulon*			C
Woolly Croton	*Croton capitatus*			C
• Additional broadleaf weeds controlled (or suppressed) at rate of 2.75 fl ozs/A: curly dock *(Rumex crispus)*, panicle willowweed *(Epilobium paniculatum)*, white clover *(Trifolium repens)*				
Grass Weeds and Sedges		**Maximum Weed Size** (2 to 3 leaves)		
Barnyardgrass	*Echinochloa crus-galli*			C
Bluegrass, annual	*Poa annua*	S	S	C
Crabgrass, large	*Digitaria sanguinalis*			S
Foxtail, giant	*Setaria faberi*			C
Goosegrass	*Eleusine indica*			S
Nutsedge, annual	*Cyperus esculentus*		S	S
Nutsedge, yellow	*Cyperus compressus*		S	S
Ryegrass, Italian	*Lolium multiflorum*			S
Signalgrass, broadleaf	*Brachiaria platyphylla*			S

C = Control, S = Suppression

[1] Control of seedling stage and suppression of perennial growth stage.

[2] Populations of noted weeds exist that are known to be resistant to burndown applications of **Group 14** herbicides and may not be controlled by herbicides like **Voraxor**. See the **Herbicide Resistance Management** section for practices to manage and minimize the impact of resistant weeds (e.g. tank mixes or alternation with other herbicide modes of action, crop rotation, and mechanical control).

Mode of Action

Saflufenacil and trifludimoxazin, the active ingredients in **Voraxor™ herbicide**, are potent inhibitors of protoporphyrinogen-oxidase belonging to herbicide mode of action **Group 14**. **Voraxor** is rapidly absorbed by roots and foliage. Following inhibition of protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days.

Herbicide Resistance Management

Any weed population may contain or develop plants naturally resistant to **Voraxor** and other **Group 14** herbicides. Weed species with resistance to **Group 14** may dominate the weed population if **Group 14** herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by **Voraxor** or other **Group 14** herbicides. Proper stewardship practices should be employed to ensure the long-term effectiveness of **Voraxor** including mixture or sequential use of other effective herbicides to mitigate resistance development with **Voraxor**.

To delay herbicide resistance, consider:

- Resistance management should be part of a diversified weed control strategy that integrates chemical, cultural, and mechanical (tillage) control tactics. Cultural control tactics include crop rotation, proper fertilizer placement, and optimum seeding rate/row spacing. Start with clean fields using tillage or an effective burndown herbicide program. These practices encourage crop growth and improve competitiveness against weeds.
- Clean equipment before moving to a different field to avoid spread of resistant weeds.
- Scout fields prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective.
- Always follow labeled application rate and weed growth stage specifications.
- Use sequential programs with preemergence herbicides that provide soil residual control of weeds to reduce early season weed competition and allow for timely in-crop postemergence herbicide applications.
- **DO NOT** rely on a single herbicide site of action for weed control during the growing season.
- Avoid application of herbicides with the same site of action more than twice a season.
- Use tank mixes or premixes with other herbicides possessing different sites of action that are also effective on the target weeds.
- Scout fields after herbicide application to identify areas where weed control was ineffective.
- Control weed escapes with herbicides possessing a different site of action or use a mechanical control measure. Weed escapes should not be allowed to reproduce by seed or to proliferate vegetatively.
- If a weed population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action.

- Contact your **Voraxor™ herbicide** supplier and/or your local BASF representative to report weed escapes.
- Consult your local BASF representative, local or state cooperative extension service, professional consultants or crop advisors, or other qualified authority to determine appropriate actions if you suspect resistant weeds.
- Suspected herbicide-resistant weeds may be identified by these indicators:

1. Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
2. A spreading patch of noncontrolled plants of a particular weed species; and
3. Surviving plants mixed with controlled individuals of the same species.

Crop Tolerance

Crops listed on this label are tolerant to **Voraxor** when applied according to label directions and under normal environmental conditions. Crop injury may occur under stressful growing conditions (e.g. low soil fertility, seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought).

Severe crop injury will result if **Voraxor** is applied postemergence (over the top) to any crop.

Application Instructions

Voraxor may only be applied before crop emergence.

Application Rates

Application rates of **Voraxor** vary depending on soil texture and organic matter. Refer to **Table 2** for soil texture groups used in this label.

Table 2. Soil Texture Groups

Coarse	Medium	Fine
Sand Loamy sand Sandy loam	Silt Silt loam Loam Sandy clay loam	Sandy clay Silty clay Silty clay loam Clay loam Clay
Low Organic Matter – soils (regardless of texture) with ≤ 2% organic matter		

Refer to the **Crop-specific Information** section for specific application rate, timing, and restrictions and precautions by crop and use pattern.

Table 3. Use Rate Equivalency

Amount of Voraxor (fl ozs/A)	**Amount of Saflufenacil** (lb ai/A)	**Amount of Trifludimoxazin** (lb ai/A)
0.7	0.011	0.006
1.0	0.016	0.008
1.4	0.023	0.011
2.75	0.045	0.022

Application Methods and Equipment

Voraxor™ herbicide may be applied by ground spray or aerial spray. Thorough spray coverage is required for optimum broadleaf and grass weed control and can be improved with proper adjuvant, nozzle, and spray volume selection.

Use and configure application equipment for adequate spray volume, accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above use rates specified in this label.

Voraxor may be applied using water or sprayable fluid nitrogen fertilizer solutions as the spray carrier.

Aerial Spray Carrier Volume. Use 15 or more gallons of water per acre for helicopter applications. Use 3 or more gallons of water per acre for fixed-wing aircraft applications.

Ground Spray Carrier Volume. Use 15 or more gallons of water per treated acre or 20 or more gallons of sprayable fluid nitrogen fertilizer per treated acre. Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent thorough spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Aerial Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver very coarse or coarser droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 641 (ASABE §641).

Ground Spray Nozzle Selection. Applicators must select nozzles and pressure that deliver coarse to very coarse droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE §572). Nozzles that deliver coarse or very coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e., weeds).

Spray Drift Retardants. Addition of some spray drift retardants (drift reducing agents, e.g. DRA) can significantly increase the droplet size but reduce spray coverage and efficacy. If a spray drift retardant is used, ensure that it is compatible for use with **Voraxor** and spray equipment being used and the desired level of weed control is maintained.

Cleaning Spray Equipment

Before applying **Voraxor** all application equipment must be thoroughly cleaned. All spray equipment, hoses, and nozzles must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply **Voraxor**.

Spray equipment used to apply **Voraxor™ herbicide** should not be used to apply other materials to any crop unless the proper cleanout procedures are followed. Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions, followed by triple rinsing the equipment after applying this product.

Mitigating Off-Target Movement

MANDATORY SPRAY DRIFT MANAGEMENT

All Applications – Aerial and Ground Boom

- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- Wind speed and direction must be measured on location using a windsock, an anemometer (including systems to measure wind speed or velocity on an aircraft or ground application equipment), or an aircraft smoke system.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- **DO NOT** apply during temperature inversions.

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MANDATORY SPRAY DRIFT MANAGEMENT *(continued)*

Aerial Applications – Fixed-wing Aircraft and Helicopter

- When applying via aerial application equipment, the spray boom must be mounted on the aircraft to minimize drift caused by wing tip or rotor blade vortices.
- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is required for pilot safety.
- The boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters. But when the wind speed is between 11 to 15 miles per hour, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters.
- Applicators must use a minimum of 1/2 swath displacement upwind at the downwind edge of the field. But when the wind speed is between 11 to 15 miles per hour, applicators must use a minimum of 3/4 swath displacement upwind at the downwind edge of the field.

(continued)

MANDATORY SPRAY DRIFT MANAGEMENT *(continued)*

Ground Boom Applications

- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a nozzle height of 24 inches above the spray target (i.e., top of weed canopy). Set boom to lowest effective height over the target pest based on equipment manufacturer's directions.
- Applicators should select a ground speed that will deliver the desired spray volume while maintaining the desired spray pressure, but **DO NOT** exceed a ground speed of 15 miles per hour.

Mandatory Spray Drift Mitigations

Ecological spray drift buffers are required for this product for aerial and ground boom applications to field crops. Access EPA's **Mitigation Menu** website (www.epa.gov/pesticides/mitigation-menu) for the full list of parameters to evaluate whether your field is subject to the required spray drift buffer.

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the "Outside a PULA" section below. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions.

Outside a PULA. A minimum down-wind spray drift buffer must be maintained between the application area and any unmanaged areas for applications to field crops. Unmanaged areas are defined in comparison to managed areas – anything that is not a managed area is an unmanaged area. Refer to the list of **Managed Areas** in this label.

Mandatory Spray Drift Buffers

For aerial and ground applications, maintain a wind-directional (downwind) buffer distance from the edge of the treated area as follows:

Application Method	Minimum Required Buffer Distance
Aerial	110 feet
Ground	15 feet

Reduction Options for All Ecological Wind-Directional Drift Buffers

The applicator may choose among the ecological drift buffer reduction options on EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) to reduce the wind-directional buffer distance before applying this product. All buffer reduction options selected must align with the minimum droplet size and release height requirements on this label.

Examples of buffer reduction options include: using larger droplets, lowering the boom height, reducing the maximum single application rate, reducing the number of passes across the field, maintaining a windbreak or hedgerow, or using directed sprayers.

The buffer reduction options must be employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website. When using more than one option during the application, the percent reduction in the buffer distances may be added together. The maximum buffer reduction that can be achieved by a combination of buffer reduction options is 100% (i.e., no drift buffer).

Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive of the products' label or bulletin requirements must be followed (e.g., drift buffers that are not wind-directional, Application Exclusion Zone drift requirements, drift buffers to residences, schools, and parks where people could be present, use prohibitions, timing restrictions, and application method prohibitions).

Managed Areas

Managed areas that can be included as part of wind-directional spray drift buffer footage include the following:

- Agricultural fields, pastures, forage fields, and private rangelands, including untreated portions of the treated field/site;
- Roads, paved or gravel surfaces, mowed grassy/fallowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area;
- Buildings and their perimeters, or other on-farm man-made structures with walls and/or roof;
- Areas present and/or maintained as a runoff/erosion measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement;
- Areas present and/or maintained as a drift buffer reduction measure as listed on EPA's **Mitigation Menu** website. Examples include vegetative windbreaks, hedgerows, shelterbelts, riparian areas, private forests, woodlots, and shrublands;
- Conservation Reserve Program (CRP) and Agricultural Conservation Easement Program (ACEP) lands;
- On-site contained irrigation water resources that are not connected to adjacent water bodies, including on-site irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, ponds, and tailwater collection ponds.

Managed areas can be included as part of the buffer footage if they are downwind and immediately adjacent/contiguous to the treated field and people are not present in those areas.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. Be aware of nearby non-target sites and environmental conditions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

Volume. Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure. Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle. Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

Adjust Nozzles. Follow nozzle manufacturers' directions for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

Release Height - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Release Height – Aircraft

Higher release heights increase the potential for spray drift.

Hooded (or Shielded) Sprayers

Shielding the boom or individual nozzles can reduce spray drift. Consider using hooded (or shielded) sprayers. Verify that the hoods (or shields) are not interfering with the uniform deposition of the spray on the target area.

Temperature and Humidity

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

Temperature Inversion

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

Wind

Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Measuring Wind Speed and Wind Direction

- Applicators should check and acquire the predicted wind speed and direction for the application site within 12 hours prior to conducting applications to determine the time periods wind speed is likely to fall outside the applicable thresholds.
- Applicators should reassess wind speed and direction at the application site at least every hour while applications are in progress.
- Measuring wind speed and direction can be done by:

- Relying on equipment on the application equipment that measures wind speed (e.g., aerial or ground equipment).
- Using a tower anemometer with telemetry or handheld anemometer. Users should read user manual on how to calibrate, operate and interpret the output from an anemometer. Ground applicators should stop at least every hour to take a reading with a tower anemometer with telemetry or handheld anemometer. Some anemometers may have software that would allow users to view wind measurements in real time while making an application, and, those cases, applicators would not have to stop to take measurements.
- Using a windsock. Wind can be estimated with a windsock using the strips on a windsock. The applicator should consult the user manual for the windsock on wind speed estimation and direction of wind. Applicators should look at the sock at least every hour to estimate wind speed and direction.
- Using an aircraft smoke system. Laying down several puffs of smoke along different lines using an aircraft smoke system can provide an accurate view of what the wind speed and direction for the application.
- Checking behind the spray rig at least every hour to see if the spray has changed direction from when the application started.

Mandatory Runoff Mitigation

Applicators must access and search **Bulletins Live! Two** (BLT) at https://www.epa.gov/pesticides/bulletins within six months prior to or on the day of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA). If you are located inside a PULA, follow the instructions in the the BLT bulletin. If the application site falls outside of a PULA, follow the instructions in the section below.

The minimum of 6 mitigation points must be achieved for the following agricultural crop use sites: corn, postharvest/fallow, legume vegetables, small grains, sorghum, and soybean.

Step 1. To achieve the mitigation points specified above, visit EPA's **Mitigation Menu** website (http://www.epa.gov/pesticides/mitigation-menu) for a full list of mitigation and mitigation relief options.

Step 2. Determine if you are eligible for mitigation relief. Runoff/erosion mitigation is NOT required if certain field/application parameters are present at the time of application (e.g., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc).

Step 3. If the application site does not meet the field/application parameters specified on EPA's **Mitigation Menu** website, choose among the mitigation and/or mitigation relief options on EPA's **Mitigation Menu** website to meet or exceed the required points noted here before applying this product.

Step 4. To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:

- Employed in accordance with the instructions and descriptions on EPA's **Mitigation Menu** website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's **Mitigation Menu** website. EPA may periodically update the **Mitigation Menu** website, for example, by adding new mitigation measures or updating a mitigation measure description.

Step 5. Additional restrictions may be present in bulletins—always follow the most restrictive bulletin instructions. If you are located in an area where PULAs overlap, follow the most restrictive requirements across all bulletins. When tank mixing, the most restrictive requirements must be followed between the products' labels and bulletins.

Additives

For optimum burndown with **Voraxor™ herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
methylated seed oil[1] (MSO)	1 gal/100 gals[2] (1% v/v)
PLUS	**PLUS**
ammonium sulfate (AMS) **or** urea ammonium nitrate (UAN)	8.5 to 17 lbs/100 gals (1% to 2% w/v) **or** 1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

[1] MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.

[2] **DO NOT** use less than 1 pint/A of MSO with low-volume (less than 12.5 gallons per acre) aerial or ground application.

Use of AMS fertilizer is highly advised when mixing **Voraxor** with glyphosate-based herbicides.

DO NOT use nonionic surfactant (NIS) as a substitute for MSO, or poor performance on broadleaf and/or grass weeds will occur.

When an adjuvant is to be used with this product, BASF recommends the use of a Council of Producers & Distributors of Agrotechnology (CPDA) certified adjuvant.

DO NOT add acidifying agents to the spray tank when applying **Voraxor™ herbicide**.

Tank Mixing Information

It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and precautions and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Voraxor may be tank mixed or applied sequentially with other herbicide products registered for use in any labeled crop found in this label for a broader spectrum of control of emerged weeds and/or residual weed control. Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on the labeled crop. Read and follow tank mix product labels for application instructions, use restrictions and precautions, and rotational cropping guidance.

Tank mixes with contact herbicides (e.g. carfentrazone, paraquat) may reduce the burndown activity of **Voraxor**.

When tank mixing, the most restrictive of the products' label or bulletin (BLT) requirements must be followed (e.g., use prohibition, timing restriction, application method restriction, sandy soil application restriction, etc.).

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
2. Add components in the sequence indicated in **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. When the components have all been added to the jar, let the solution stand for 15 minutes.
5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

Mixing Order

Maintain agitation throughout mixing and application until spraying is completed.

1. **Water** - Fill tank 1/2 to 3/4 full with clean water and start agitation.
2. **Inductor** - If an inductor is used, rinse it thoroughly after each component has been added.
3. **Products in PVA bags** - Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-soluble additives** (including dry and liquid fertilizers AMS or UAN)
5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions, add **Voraxor™ herbicide** now)
6. **Water-soluble products**
7. **Emulsifiable concentrates** (including MSO adjuvants)
8. **Remaining quantity of water**

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

Use Restrictions

- **Maximum annual use rate** - Refer to **Crop-specific Information** section for maximum application use rates for each crop use. A cropping season is defined as the period following harvest of the preceding crop through the harvest of the planned or current crop.
- If additional saflufenacil is applied from other product sources, refer to the **Crop-specific Restrictions** section for each crop use for the maximum cumulative amount per year.
- **DO NOT** apply **Voraxor** after crop emergence or severe crop injury will occur.
- **DO NOT** apply **Voraxor** through any type of irrigation system (e.g. chemigation).
- **DO NOT** contaminate water used for irrigation or domestic purposes.
- **DO NOT** feed or allow domestic animals to graze areas or crops not included in the use directions of this label within 365 days of **Voraxor** application.
- **DO NOT** apply during rain.
- **DO NOT** apply this product when soil is saturated or at field capacity, or when a storm event likely to produce runoff from the treated area is expected to occur within 24 hours following application.
- Within 24 hours after application, **DO NOT** irrigate the treatment area to the point of runoff.

- **Voraxor™ herbicide is not for sale, distribution, or use in Alaska, Hawaii, US Territories (including American Samoa, Guam, Puerto Rico, Mariana Islands, US Virgin Islands), and in Nassau and Suffolk counties in New York State.**

Use Precautions

- **Rainfastness** - **Voraxor** is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.
- **Emergency Replanting Intervals** - In the event of crop failure (because of environmental factors, including drought, frost, hail, etc.), the following labeled crops may be planted immediately after an application of **Voraxor** according to the rates specified in the **Crop-specific Information** section: Field corn, popcorn, seed corn, processing sweet corn, chickpea, field pea, barley, wheat, grain sorghum and soybean.

Crop Rotation Intervals

Refer to **Table 4** for the proper interval between **Voraxor** application and planting of rotational crops. Determine the rotational crop interval for tank mix products and use the most restrictive interval of all products applied.

Table 4. Rotational Crop Intervals by Voraxor™ herbicide Application Rate

Crop	Voraxor Rate (fl ozs/A)	
	≤ 1.4	2.75
	Rotational Crop Interval (months after application)[1]	
Corn (field, pop, seed, processing sweet)	0	1
Chickpea	0	2
Pea, dry field	0	2
Barley and wheat	0	1
Sorghum (grain)	0	1
Soybean[2]	0 to 1	1 to 1.5
Alfalfa	4	6
Corn, fresh sweet (and sweet seed)	0.5	2
Cotton	4	4
Edible peas	1.5	3
Edible beans	1	2
Lentil	1.5	3
Grass (forage, seed) Establishment	4	4
Peanut	4	5
Rice	4	4
Small grains (other than barley and wheat)	1	1
Sorghum (all other than grain)	1	1
Sugar beet	5	5
Sugarcane	4	4

(continued)

Table 4. Rotational Crop Intervals by Voraxor™ herbicide Application Rate *(continued)*

Crop	Voraxor Rate (fl ozs/A)	
	≤ 1.4	2.75
	Rotational Crop Interval (months after application)[1]	
Sunflower	5	5
Cover crops (winter, spring)[3]	1	2
Other field crops	5	6
Citrus fruit trees	1	1
Nut trees	3	3
Pome fruit trees	3	3
Other fruit trees	4	6
Avocado trees	9	9
Grape	9	9

[1] **DO NOT** include time when the soil is frozen, or months when less than 1 inch of precipitation or irrigation occurred.

[2] The planting interval for these crops and rates are further defined in the respective **Crop-specific Information** section of this label. Use longer interval within listed ranges for indicated crops grown on coarse-texture soils with organic matter less than 2%.

[3] Cover crops (winter, spring) may be planted after application of **Voraxor**, either inter-seeded into the current crop before harvest or after harvest of the current crop. Depending on the sensitivity of the sown cover crop to **Voraxor**, stand establishment may be reduced. If cover crops were sown less than 4 months after **Voraxor** application, **DO NOT** harvest cover crops as a food or feed crop and **DO NOT** allow livestock to graze cover crops.

Crop-specific Information

This section provides use directions for **Voraxor™ herbicide** in specific crops. Read product information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions.

Depending on specific crop application directions, **Voraxor** may be applied for burndown control of emerged broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled) before crop planting (preplant and/or preseed) or after planting but before crop emergence (preemergence).

For all crop-specific uses in this section, refer to **Table 4** for crop rotation intervals.

Thorough spray coverage is required for control of emerged broadleaf and grass weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) also requires thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

Field Corn (grain, silage), Popcorn, Seed Corn, and Sweet Corn

Voraxor may be applied prior to corn emergence for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Corn in this label refers to field corn (grown for grain or silage), popcorn, seed corn, and sweet corn (processing varieties only, not including sweet corn grown for seed or fresh market varieties). Before applying **Voraxor** to seed corn, processing sweet corn, or popcorn, verify the selectivity of **Voraxor** on your inbred line or hybrid with your local seed company (supplier) to help avoid potential injury to sensitive inbreds or hybrids.

Application Rate, Method, and Timing

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds as preplant surface or preemergence application. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity.

Voraxor may only be applied in a single application.

Fall Application

Apply **Voraxor** at 1.4 fl ozs/A for burndown after the prior crop is harvested. Application must be made before first killing frost. Fall application can be made to all soil types.

Early Preplant Surface Application (greater than 14 days before planting)

Apply **Voraxor™ herbicide** at 1.0 to 1.4 fl ozs/A. Early preplant surface applications are not advised: on coarse soils, in areas where average annual rainfall (or rainfall plus irrigation) typically exceeds 40 inches, or for popcorn or processing sweet corn. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

Preplant Surface Application

Apply **Voraxor** within 14 days of planting at the rates provided in **Table 5**.

Preemergence Surface Application

Apply **Voraxor** at the rates provided in **Table 5** after planting and before crop emergence. **Voraxor** must be applied before crop emergence or injury will occur.

Table 5. Preplant Surface and Premergence Surface Application Rates of Voraxor in Corn

Soil Texture[1]	**Rate by Soil Texture** (fl ozs/A)
Low Organic soils	1.0
Coarse	
Medium	1.0 to 1.4
Fine	

[1] Refer to **Table 2** for definition of soil texture groups.

Crop-specific Restrictions

- **DO NOT** apply **Voraxor** after corn emergence or severe crop injury will occur.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application in corn.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) per year in corn.
- **DO NOT** apply **Voraxor** where an at-planting application of an organophosphate (OP) or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.

  EXCEPTION: Voraxor may be applied when **Aztec® 2.1% granular insecticide**, **Aztec® 4.67 G granular insecticide**, or **SmartChoice™ 5G granular insecticide** is applied at planting as a band, T-band, or in-furrow. **Voraxor** may be applied with all other classes of at-planting insecticides including neonicotinoid and pyrethroid.
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in corn: 0.134 lb ai/A.

- There is no required (preharvest) interval between a preplant surface or preemergence application of **Voraxor™ herbicide** and the harvest of field corn grain, popcorn, seed corn and sweet corn ears.
- Corn forage and silage must not be harvested, fed, or grazed sooner than 80 days after application. Sweet corn cannery waste may be fed to livestock after harvest.

Crop-specific Precautions

- **Voraxor** use may result in delayed corn emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the corn seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed corn emergence or stunting.
- **Voraxor** applied to processing sweet corn planted at depth of 1/2 inch or less may result in crop injury.

Fallow and Postharvest

Voraxor may be applied for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled) following crop harvest and/or at any time of the year during a fallow period in all labeled crops (corn, legume vegetables, small grains, sorghum, soybean), and canola, cotton, rice, sugar beet, and sunflower. **DO NOT** apply **Voraxor** after harvest of any other crop or in fallow period preceding any other crop.

Application Rate, Method, and Timing

Apply **Voraxor** at 1.4 to 2.75 fl ozs/A as a broadcast burndown spray targeting emerged weeds. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity. For best product performance, apply when broadleaf and grass weeds are small and actively growing. Thorough coverage of existing weeds is essential and higher spray volumes may be needed for best performance.

Voraxor may only be applied in a single application.

Use-specific Restrictions

- **DO NOT** apply more than 2.75 fl ozs/A of **Voraxor** (0.045 lb ai/A saflufenacil + 0.022 lb ai/A trifludimoxazin) in a single application.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 2.75 fl ozs/A of **Voraxor** (0.045 lb ai/A saflufenacil + 0.022 lb ai/A trifludimoxazin) per year in postharvest and fallow.
- Specific rotational crop intervals must be observed between an application of **Voraxor** and planting of the following crop (see **Table 4** for crop rotation intervals).

Legume Vegetables [chickpea, field pea (dry), and lentil]

Voraxor™ herbicide may be applied prior to legume vegetable emergence of crops specified in this section for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Before applying **Voraxor** to any of the specified legume crops, verify the selectivity of **Voraxor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Method, Rate, and Timing

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds as preplant surface or preemergence application. See the specific application rates and timings as they vary by legume crop. With burndown application, an adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity.

Chickpea (garbanzo bean)

Voraxor is for use in all types of chickpeas.

Voraxor may only be applied in a single application.

Apply **Voraxor** early preplant through preemergence at 0.7 to 1.4 fl ozs/A before crop emergence.

Field Peas

Voraxor is for use **ONLY** on dry field peas including Austrian winter peas.

Voraxor may only be applied in a single application.

Apply **Voraxor** early preplant through preemergence at 0.7 to 1.4 fl ozs/A before crop emergence.

Lentils

Voraxor may be applied to green-type and red-type lentils. **DO NOT** apply **Voraxor** to Spanish brown lentils.

Voraxor may only be applied in a single application.

Apply **Voraxor** early preplant through preemergence at 0.7 fl oz/A before crop emergence. Higher use rates must be avoided or crop injury may result.

Use Advisory for Lentils: Rainfall shortly after product application can result in slight injury to the crop. Lentils will be more susceptible to injury on course texture and low organic matter soils. Injury will usually appear as leaf tissue necrosis on the outer edges of the leaves. Lentils will grow out of injury symptoms, and yield will not be impacted at labeled rates. The addition of other soil applied herbicides may increase the sensitivity of lentils to **Voraxor** and injury may result.

Crop-specific Restrictions for all Legume Vegetables

- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor™ herbicide** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) per year in legume vegetables.
- **DO NOT** apply **Voraxor** if cold and/or wet conditions are present or predicted to occur within 1 week of application.
- **DO NOT** apply when legumes have reached the cracking stage or after emergence or severe crop injury will occur.
- **DO NOT** apply **Voraxor** with other products containing **Group 14** herbicides (including sulfentrazone or flumioxazin) as a tank mix partner or sequential application within 30 days of planting because crop injury may result.
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in legume vegetables: 0.089 lb ai/A.
- There is no required (preharvest) interval between an application of **Voraxor** and the harvest of mature legume pods or seeds.
- Legume forage must not be fed or grazed sooner than 65 days after application.

Crop-specific Precautions

- Plant legumes at least 1/2 inch deep to reduce risk of crop injury from **Voraxor** application.
- Ensure the seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed crop emergence or stunting.
- Use of **Voraxor** may result in delayed crop emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.

Small Grains (barley and wheat)

Voraxor may be applied prior to small grain emergence for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Small grains in this label refers to wheat (including durum, spring, and winter) and barley. Before applying **Voraxor** to small grains, verify the selectivity of **Voraxor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Voraxor™ herbicide may only be applied in a single application.

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds as preplant surface or preemergence application. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity.

Apply **Voraxor** early preplant through preemergence at the rates provided in **Table 6**.

Table 6. Application Rates of Voraxor in Small Grains

Soil Texture[1]	Rate by Crop and Soil Texture (fl ozs/A)	
	Winter Wheat	**Spring Wheat, Durum Wheat, Barley**
Low Organic soils	1.0	1.0 to 1.4
Coarse		
Medium	1.0 to 1.4	
Fine		

[1] Refer to **Table 2** for definition of soil texture groups.

Crop-specific Restrictions

- **DO NOT** apply after small grain emergence or crop injury will occur.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application in small grains.
- Maximum number of applications per year: 1
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) per year in small grains.
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in small grains: 0.134 lb ai/A.
- Small grain forage and hay must not be fed or grazed sooner than 30 days after application.

Crop-specific Precautions

- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.

Sorghum (grain)

Voraxor may be applied prior to grain sorghum emergence for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Before applying **Voraxor** to grain sorghum, verify with your local seed company (supplier) the selectivity of **Voraxor** on your hybrid or variety to help avoid potential injury to sensitive hybrids or varieties.

Application Rate, Method, and Timing

Apply **Voraxor™ herbicide** as a broadcast spray for burndown control of emerged broadleaf and grass weeds in the fall or in spring as preplant surface or preemergence application. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity.

Voraxor may only be applied in a single application.

Fall Application

Apply **Voraxor** at 1.4 fl ozs/A for burndown after the prior crop is harvested. Application must be made before first killing frost. Fall application can be made to all soil types.

Early Preplant Surface Application (greater than 14 days before planting)

Apply **Voraxor** at 1.0 to 1.4 fl ozs/A. Early preplant surface application is not advised on coarse soils, in areas where average annual rainfall (or rainfall plus irrigation) typically exceeds 40 inches. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

Preplant Surface Application

Apply **Voraxor** within 14 days of planting at the rates provided in **Table 7**.

Preemergence Surface Application

Apply **Voraxor** at the rates provided in **Table 7** after planting and before crop emergence. **Voraxor** must be applied before crop emergence or injury will occur.

Table 7. Preplant Surface and Premergence Surface Application Rates of Voraxor in Grain Sorghum

Soil Texture[1]	Rate by Soil Texture (fl ozs/A)
Low Organic soils	1.0
Coarse	
Medium	1.0 to 1.4
Fine	

[1] Refer to **Table 2** for definition of soil texture groups.

Crop-specific Restrictions

- **DO NOT** apply **Voraxor** after grain sorghum emergence or crop injury will occur.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application in grain sorghum.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) per year in sorghum.
- Maximum number of applications per year: 1

- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in grain sorghum: 0.111 lb ai/A.
- **DO NOT** apply **Voraxor™ herbicide** where an at-planting application of an organophosphate (OP) or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.

  EXCEPTION: Voraxor may be applied when **Aztec® 2.1% granular insecticide**, **Aztec® 4.67 G granular insecticide**, or **SmartChoice™ 5G granular insecticide** is applied at planting as a band, T-band, or in-furrow. **Voraxor** may be applied with all other classes of at-planting insecticides including neonicotinoid and pyrethroids.
- Grain sorghum forage must not be harvested, fed, or grazed sooner than 70 days after application.

Crop-specific Precautions

- **Voraxor** use may result in delayed grain sorghum emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/irrigation, and/or persistent wet soil conditions occurring after application.
- Ensure the grain sorghum seed row is closed. Soil conditions that cause poor seed furrow closure and coverage may result in delayed sorghum emergence or stunting.

Soybean

Voraxor may be applied prior to soybean emergence in conventional-till, reduced-till, or no-till systems for burndown control of broadleaf and grass weeds (refer to **Table 1** for list of weeds controlled). Before applying **Voraxor** to soybean, verify the selectivity of **Voraxor** on your variety with your seed company (supplier) to help avoid potential injury to sensitive varieties.

Application Rate, Method, and Timing

Apply **Voraxor** as a broadcast spray for burndown control of emerged broadleaf and grass weeds in the fall or in spring as preplant surface or preemergence application. An adjuvant system (refer to the **Additives** section for details) is required for optimum burndown activity.

Sequential applications of **Voraxor** may be made before soybean emergence as part of a split program between fall and spring applications. Fall followed by spring early preplant surface or preemergence applications may be applied as part of a split program with the application timings described in this label. However, the cumulative total rates of the sequential applications must not exceed the maximum rate per year.

Fall Application

Apply **Voraxor** at 1.4 fl ozs/A for burndown after the prior crop is harvested. Application must be made before first killing frost. Fall application can be made to all soil types.

Spring Application

Apply **Voraxor™ herbicide** early preplant through preemergence at 1.0 to 1.4 fl ozs/A before crop emergence.

Soybean Planting Interval

Depending on **Voraxor** use rate, soil texture, and organic matter, an interval between **Voraxor** application and planting may be required (see **Table 8**) or crop injury may occur.

Table 8. Minimum Soybean Planting Intervals

Minimum Preplant Interval (days) **Required between Voraxor Application and Soybean Planting**		
Voraxor Use Rate (fl ozs/A)	**Soil Texture**[1]	
	Coarse Soils with ≤ 2.0% Organic Matter	**All Other Soils**
1.0	14	0
1.4	30	0

[1] Refer to **Table 2** for definition of soil texture groups.

Crop-specific Restrictions

- Prior to soybean emergence, **DO NOT** tank mix or sequentially apply another **Group 14** herbicide with **Voraxor**.
- **DO NOT** apply when soybean has reached the cracking stage or after emergence or severe crop injury will occur.
- **DO NOT** apply more than 1.4 fl ozs/A of **Voraxor** (0.023 lb ai/A saflufenacil + 0.011 lb ai/A trifludimoxazin) in a single application in soybean.
- **DO NOT** apply more than a maximum cumulative amount of 2.75 fl ozs/A of **Voraxor** (0.045 lb ai/A saflufenacil + 0.022 lb ai/A trifludimoxazin) from sequential application per year in soybean.
- Sequential applications must be separated by at least 14 days.
- Maximum number of applications per year: 2
- If additional saflufenacil is applied from other product sources, **DO NOT** apply more than the following maximum cumulative amount of saflufenacil per year in soybean: 0.089 lb ai/A.
- **DO NOT** apply **Voraxor** within 30 days of planting where an at-planting application of an organophosphate or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.
- Always use the most restrictive preplant interval of all inclusive herbicides when applying **Voraxor** as part of a tank mix.
- Soybean forage must not be fed or grazed sooner than 65 days after application.
- There is no required (preharvest) interval between a preplant or preemergence application of **Voraxor** and the harvest of soybean grain.

Crop-specific Precautions

- Use of **Voraxor™ herbicide** may result in delayed crop emergence and stunting under certain environmental conditions including cool temperatures, excessive rainfall/ irrigation, and/or persistent wet soil conditions occurring after application.
- Contact your local retailer or BASF representative before applying **Voraxor** to natto soybeans to verify tolerance and help avoid potential injury.
- Ensure the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.
- **Group 14** herbicides labeled for postemergence application in soybean may be used 14 days or more after soybean emergence. Refer to other products' labels for use directions.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

(continued)

Conditions of Sale and Warranty

(continued)

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF. 1108

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007969-00495.20260702.**NVA 2026-04-0634-0147**
Based on: NVA 2022-04-0634-0089

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

We create chemistry

Voraxor™

Trifludimoxazin	Group	14	Herbicide
Saflufenacil	Group	14	Herbicide

Herbicide

For use in corn, legume vegetables, small grains, sorghum, soybean, and in postharvest and fallow
Powered by Tirexor™

Active Ingredients:

trifludimoxazin: 1,5-dimethyl-6-thioxo-3-[2,2,7-trifluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4-dihydro-2H-1,4-benzoxazin-6-yl]-1,3,5-triazinane-2,4-dione 10.76%

saflufenacil: N′-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3, 6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide 21.51%

Other Ingredients: 67.73%

Total: 100.00%

Contains 1.043 pounds active ingredient trifludimoxazin and 2.086 pounds active ingredient saflufenacil per gallon product formulated as a water-based suspension concentrate

EPA Reg. No. 7969-495 **EPA Est. No. 241-PR-002**

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See full label for complete **Precautionary Statements**, **Directions For Use**, **Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions. **In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

FIRST AID: If swallowed: Call a poison control center or doctor immediately for treatment advice. **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. Have person sip a glass of water if able to swallow. **DO NOT** give anything to an unconscious person. **If in eyes:** Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. Call a poison control center for treatment advice. **If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.

(continued)

FIRST AID *(continued)*: **HOTLINE NUMBER:** Have the product container or label with you when calling the poison control center at 1-800-222-1222 or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information at 1-800-832-HELP (4357).

Precautionary Statements: Hazards to Humans and Domestic Animals. CAUTION. Harmful if swallowed. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. **Environmental Hazards:** For terrestrial uses, **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. See label for complete **Environmental Hazards** including **Groundwater Advisory**, **Surface Water Advisory**, **Nontarget Organism Advisory**, **Pollinator Advisory**, and **Reporting Ecological Incidents**.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. **Pesticide Storage: DO NOT** use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs. Avoid cross-contamination with other pesticides. **Pesticide Disposal:** Wastes resulting from this product must be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. **Container Handling: Nonrefillable Plastic Container. DO NOT** reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities. **Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. See label for complete **Container Handling** instructions.

Net Contents: 1 Gallon 4081168027 NVA 2026-05-0634-0558

BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27713

BASF
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Safety Data Sheet
Voraxor™ Herbicide

1. Identification

Product identifier used on the label

Voraxor™ Herbicide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, herbicide

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF Agricultural Solutions US LLC
2 TW Alexander Drive
Research Triangle Park, NC 27709
USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number: 892280
Synonyms: Trifludimoxazin + Saflufenacil

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Repr.	1B (fertility)	Reproductive toxicity
Repr.	2 (unborn child)	Reproductive toxicity
STOT RE	2	Specific target organ toxicity — repeated exposure

Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:



Signal Word:
Danger

Hazard Statement:

H373	May cause damage to organs through prolonged or repeated exposure.
H360	May damage fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing and eye protection or face protection.
P260	Do not breathe mist or vapour.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P308 + P313	IF exposed or concerned: Get medical attention.
P391	Collect spillage.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

Labeling of special preparations (GHS):
Product contains the following components and may cause an allergic skin reaction: The substance may cause sensitization of the skin in particularly sensitive individuals. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. 1,2-benzisothiazol-3(2H)-one

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Trifludimoxazin
CAS Number: 1258836-72-4
Content (W/W): 10.76 %
Synonym: Trifludimoxazin

saflufenacil
CAS Number: 372137-35-4
Content (W/W): 21.51 %
Synonym: Saflufenacil

Benzenesulfonic acid, hydroxy-, polymer with formaldehyde, phenol and urea, sodium salt
Content (W/W): >= 1.0 - < 3.0%
Synonym: No data available.

bronopol
CAS Number: 52-51-7
Content (W/W): > 0.0 - < 0.1%
Synonym: 2-Bromo-2-nitro-1,3-propanediol; Bronopol

1,2-benzisothiazol-3(2H)-one
CAS Number: 2634-33-5
Content (W/W): > 0.0 - < 0.1%
Synonym: No data available.

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
Immediately wash thoroughly with soap and water, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If swallowed:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, hydrogen fluoride, hydrogen bromide, Hydrogen chloride, nitrogen oxides, silicon oxides, sulfur oxides, halogenated compounds, cyanides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with occupational exposure limits

Saflufenacil	TWA value 0.824 mg/m3 ;

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	liquid
Odour:	faint, sweetish
Odour threshold:	Not determined due to potential health hazard by inhalation.

Colour:	off-white
pH value:	approx. 5 - 7 (100 %(m), 23 °C)
Freezing point:	approx. -5 °C
Boiling point:	The product has not been tested.
Flash point:	Non-flammable.
Flammability:	not applicable
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Autoignition:	460 °C
SADT:	> 75 °C
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.
Density:	approx. 1.16 g/cm3 (20 °C)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	The statements are based on the properties of the individual components.
Information on: saflufenacil	
Partitioning coefficient n-octanol/water (log Pow):	2.6 (20 °C)
---	---
Thermal decomposition:	> 190 °C, 620 kJ/kg (DSC (OECD 113)) Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.
Viscosity, dynamic:	approx. 58 mPa.s (20 °C)
Solubility in water:	dispersible
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid
See SDS section 7 - Handling and storage.

Incompatible materials
strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
> 190 °C (DSC (OECD 113))

Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Oral
Type of value: LD50
Species: rat (female)
Value: > 2,000 mg/kg
No mortality was observed.

Inhalation
Type of value: LC50
Species: rat (male/female)
Value: > 3.4 mg/l
Exposure time: 4 h
An aerosol was tested.
Highest concentration technically achievable.

Dermal
Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg
No mortality was observed.

Assessment other acute effects

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion
Assessment of irritating effects: Not irritating to eyes and skin.

Skin
Species: rabbit
Result: non-irritant

Eye
Species: rabbit
Result: non-irritant

Sensitization
Assessment of sensitization: No sensitizing effect.

Buehler test
Species: guinea pig
Result: Non-sensitizing.

Aspiration Hazard
not applicable

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Trifludimoxazin
Assessment of repeated dose toxicity: Repeated oral exposure may affect certain organs.

Genetic toxicity
Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity
Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Trifludimoxazin
Assessment of carcinogenicity: In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. Due to the species specific mode of action, the effects are not expected to occur in humans.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Trifludimoxazin
Assessment of reproduction toxicity: Causes impairment of fertility in laboratory animals.

Teratogenicity
Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: saflufenacil
Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen in animal studies.

Other Information
Misuse can be harmful to health.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Very toxic to aquatic life with long lasting effects.
The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish

Information on: Trifludimoxazin
LC50 (96 h) > 1.76 mg/l, Oncorhynchus mykiss
LC50 (96 h) > 1.68 mg/l, Cyprinus carpio

Information on: saflufenacil
LC50 (96 h) > 96.8 mg/l, Pimephales promelas (OECD Guideline 203, static)

Aquatic invertebrates

Information on: Trifludimoxazin
EC50 (48 h) > 1.95 mg/l, Daphnia magna
LC50 (48 h) 0.574 mg/l, Americamysis bahia

Information on: saflufenacil
EC50 (96 h) 8.0 mg/l, Daphnia magna (static)

Aquatic plants

Information on: Trifludimoxazin
EC50 (72 h) 0.000821 mg/l (growth rate), Pseudokirchneriella subcapitata
EC10 (72 h) 0.000486 mg/l (growth rate), Pseudokirchneriella subcapitata

EC50 (72 h) 0.000460 mg/l (growth rate), Navicula pelliculosa
EC10 (72 h) 0.000225 mg/l (growth rate), Navicula pelliculosa

Information on: saflufenacil
EC50 (96 h) 0.113 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

Chronic toxicity to fish

Information on: Trifludimoxazin
No observed effect concentration (34 d) 0.0027 mg/l, Cyprinodon variegatus

Information on: saflufenacil
No observed effect concentration (33 d) >= 10 mg/l, Pimephales promelas
---

Chronic toxicity to aquatic invertebrates

Information on: Trifludimoxazin
No observed effect concentration (21 d) 0.0106 mg/l, Daphnia magna

Information on: saflufenacil
No observed effect concentration (21 d) 2.5 mg/l, Daphnia magna
---

Persistence and degradability

Assessment biodegradation and elimination (H2O)
The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment biodegradation and elimination (H2O)

Information on: Trifludimoxazin

Not readily biodegradable (by OECD criteria).

Information on: saflufenacil

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential
The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment bioaccumulation potential

Information on: saflufenacil

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Bioaccumulation potential

Information on: Trifludimoxazin

Bioconcentration factor: 81.6

Mobility in soil

Assessment transport between environmental compartments
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Trifludimoxazin

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: saflufenacil

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:
Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:
Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM

Marine pollutant: YES
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains SAFLUFENACIL, TRIFLUDIMOXAZINE)

Air transport
IATA/ICAO
Hazard class: 9
Packing group: III
ID number: UN 3082
Hazard label: 9, EHSM
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains SAFLUFENACIL, TRIFLUDIMOXAZINE)

Further information
Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

15. Regulatory Information

Federal Regulations

Registration status:
Crop Protection TSCA, US released / exempt

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK	CAS Number	Chemical name
NJ	57-55-6	Propylene glycol
PA	57-55-6	Propylene glycol

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

Labeling requirements under FIFRA

This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.
CAUTION:

HARMFUL IF SWALLOWED.
Avoid contact with the skin, eyes and clothing.
Wash thoroughly after handling.

16. Other Information

SDS Prepared by:
BASF Agricultural Solutions US NA Product Regulations
SDS Prepared on: 2023/12/20

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

Memorandum

To: Board of Pesticides Control
From: Alexander Peacock, Director
Subject: Registration Process, ERAC, MAC

November 13, 2026

Background:

The Board of Pesticides Control (BPC) has recently received comments from the Maine Water Accountability Project that raise concerns about pesticides that are classified as PFAS in Maine and their potential to break down into trifluoroacetic acid (TFA), which may pose a risk as water contaminants.

Purpose:

The purpose of this discussion is to outline the pesticide registration process and tools available to evaluate a particular federally registered pesticide if the Board has determined that use of this pesticide within the State of Maine may cause unreasonable adverse effects on the environment and/or human health.

Attached Documents for Reference:

Written Comment from the Maine Water Accountability Project
MRS Title 7, §607. REGISTRATION
MRS Title 7, §609. REFUSAL TO REGISTER; CANCELLATION; SUSPENSION; LEGAL RECOURSE
BPC Policy Relating to the Environmental Risk Advisory Committee (ERAC)
BPC Policy Relating to the Medical Advisory Committee

ALEXANDER PEACOCK, DIRECTOR
90 BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-2731
WWW.THINKFIRSTSPRAYLAST.ORG

Written Comment for the November 13, 2026 Meeting

PFAS in Pesticides, the Unpublished TFA Breakdown, and the Trefinti Renewal

Maine Board of Pesticides Control — submitted in writing for the meeting record

Maine Water Accountability Project · 515 Molunkus Rd, Cornville, ME 04976

For submission ahead of the Board's deadline for written communications: 8:00 AM, November 10, 2026 (Board policy, as provided by Director Peacock on October 14, 2026)

The Maine Water Accountability Project submits this comment in writing. We will not attend the November 13 meeting, and this comment is written to stand on its own in the record. Director Peacock has advised us (October 14, 2026) that our inquiries will be presented to the Board at this meeting. This comment covers three things: what the record now shows about how many Maine-registered pesticides meet Maine's PFAS definition; two parts of that record that remain unpublished or unknown — the Board's full report on trifluoroacetic acid (TFA) breakdown, and the inert ingredients in these products; and the renewal of one PFAS product, Trefinti, whose renewal period opened on November 1.

1. How many PFAS pesticides are registered in Maine — three counts, three sources

Three counts now sit in the record, each with its own date and source. They were built at different times by different methods, and they land in the same place.

Figure	Count	Date	Source
PFAS pesticidal active ingredients under the Department's interpretation of Maine's PFAS definition	about 90, raised from roughly 50	September 24, 2026	Memorandum to the Board from Doug Van Hoewyk, Board staff
Distinct PFAS active ingredients found in Maine-registered products	84	Catalog built October 26, 2026, from the Board's registration list generated September 18, 2026	Maine Water Accountability Project catalog of the Board's published list
Currently Active registered products containing a PFAS active ingredient	1,464 of 10,769 Active registrations (1,615 flagged across all statuses, of 12,195 registrations on the list)	Same catalog, October 26, 2026	Same
Products known to meet Maine's PFAS definition	approximately 1,600, and the number affected "may very well exceed" that	October 26, 2026	Director Alexander R. Peacock, in writing

Two things follow. First, the Board's own staff figure and an independent count of the Board's published list agree: the number of PFAS active ingredients in products registered in Maine is on the order of 84 to 90, not the roughly 50 counted before the Department's interpretation was better understood. Second, by the Director's own answer, the count of affected products — approximately 1,600 known, possibly more, out of more than 12,000 registered — has not finished moving. The renewals now open will be processed against a definition whose full product count the Department itself says is still being determined.

2. What the record does not yet contain

The full TFA breakdown report is unpublished, with no timeline. On October 5, 2026, Director Peacock wrote that the Board toxicologists' full report on TFA breakdown "will be available when complete." We asked on October 26 whether that report exists and when it is expected. The Director answered, in writing, on October 26, 2026:

> "We currently do not have a timeline for a full report on TFA breakdown."

The September 24, 2026 staff memorandum addresses which PFAS pesticides are known or predicted to degrade into trifluoroacetate, and it puts the yield of TFA from pesticides as "a great unknown," with estimates ranging from about 1% to 100%. Only the full report can narrow that range, and as of the Director's October 26 answer there is no date for it.

The inert ingredients are unknown. In the same October 26 answer, the Director wrote: "Although we know which active ingredients meet Maine's PFAS definition, the inerts are unknown." Every count in the record — the staff memorandum's, the Director's, and ours — is a count of active ingredients. What these products contain beyond their active ingredients, on the PFAS question, is not known to the Department.

The registrant affidavit answers are not published. The Board collects a PFAS affidavit from every registrant. The per-product answers are held by the Board and are not published. For this renewal cycle, Director Peacock confirmed (October 14, 2026) that "all registrants are required to answer the affidavit questions to complete registration." The answers will therefore exist, product by product, for every product renewed — the public simply cannot see them.

3. Trefinti and the November 1 renewal opening

Trefinti (active ingredient cyclobutrifluram; registrant Syngenta Crop Protection LLC; EPA Registration No. 100-1722; Maine State Registration No. 2025001269) is registered **Active** in Maine on the Board's list generated September 18, 2026. Our catalog verifies from the federal composition record that cyclobutrifluram, at 38.5% of the product, meets Maine's PFAS definition.

Director Peacock confirmed on October 14, 2026 that "the registration of Trefinti Nematicide/Fungicide, EPA Reg. No. 100-1722, was approved by Board staff pursuant to 7 MRS § 607 on December 22, 2025," and that the "registration renewal period opens November 1, 2026." (Both dates rest on Director Peacock's October 14, 2026 answers.) The renewal of a TFA-forming PFAS active — the September 24 staff memorandum treats TFA-forming PFAS pesticides as a class, and TFA as extremely persistent and increasingly detected in groundwater — therefore opened twelve days before this meeting, in the same season in which the Board's full TFA breakdown report remains unpublished and its own product count remains unfinished.

In that same October 14 answer, the Director noted that the Board may decide to convene the Environmental Risk Advisory Committee (ERAC) and/or the Medical Advisory Committee (MAC) to take a closer look at these chemistries. We ask the Board to do so during this renewal cycle, and to give TFA-forming products product-specific scrutiny at renewal under the authority the Director cited, 7 M.R.S. §609.

What we ask of the Board

1. **Set and announce a timeline** for the toxicologists' full report on TFA breakdown, and publish the report when it is complete.
2. **Publish the affidavit answers** collected in this renewal cycle — product by product, or in aggregate tallies — so the count of PFAS products rests on what registrants themselves certify.
3. **Convene the Environmental Risk Advisory Committee and/or the Medical Advisory Committee** to review TFA-forming active ingredients, including cyclobutrifluram, during the 2026–27 renewal cycle.
4. **State on the record** how the Board weighed its staff's September 24, 2026 analysis — approximately 90 PFAS active ingredients under the Department's interpretation — in the renewals that opened November 1.

Thank you for the Board's work on this record, and for taking this comment in writing.

Anthony Salisbury Maine Water Accountability Project

§607. Registration

1. Conditions requiring registration. A pesticide may not be distributed in this State unless it is registered with the board in accordance with the provisions of this subchapter, except that registration is not required if:

A. A pesticide is shipped from one plant or warehouse to another plant or warehouse operated by the same person and is used solely at that plant or warehouse as a constituent part to make a pesticide that is registered under the provisions of this subchapter; or [PL 2005, c. 620, §6 (NEW).]

B. A pesticide is distributed under the provisions of an experimental use permit issued by EPA. [PL 2005, c. 620, §6 (NEW).]

[PL 2005, c. 620, §6 (AMD).]

2. Contents of statement made by applicant. The applicant for registration shall file a statement with the board, which must include:

A. The name and address of the applicant and the name and address of the person whose name will appear on the label, if other than applicant's; [PL 1975, c. 382, §3 (NEW).]

B. The name of the pesticide; [PL 1975, c. 382, §3 (NEW).]

C. Other necessary information required by the board; and [PL 2005, c. 620, §6 (AMD).]

D. A complete copy of the labeling accompanying the pesticide and a statement of all claims to be made for it, including the directions for use and the use classification as provided for in FIFRA. [PL 1975, c. 382, §3 (NEW).]

[PL 2005, c. 620, §6 (AMD).]

3. Submission of formula. The board, when it determines it necessary in the administration of this subchapter, may require the submission of the complete formula of any pesticide, including the active and inert ingredients.

[PL 2005, c. 620, §6 (AMD).]

4. Test results. The board may require a full description of all tests made and the results of those tests on any pesticide not registered pursuant to FIFRA, Section 3 or on any pesticide on which restrictions are being considered by the board. In the case of renewal of registration, the board may require a statement only with respect to test result information that is different from that furnished when the pesticide was registered or last reregistered.

[PL 2005, c. 620, §6 (AMD).]

5. Power to require other information. The board may by rules adopted under section 610 require the submission of other necessary information.

[PL 2005, c. 620, §6 (AMD).]

5-A. Confidentiality. Notwithstanding Title 1, section 402, data submitted pursuant to subsections 3, 4 and 5 that have been determined confidential by the Administrator of the United States Environmental Protection Agency in accordance with 7 United States Code, Section 136h (2007) are confidential and may not be available for public inspection.

[PL 2007, c. 597, §8 (AMD).]

6. Registration fee; programs funded. The applicant desiring to register a pesticide must pay an annual registration fee of $215 for each pesticide registered for that applicant. Annual registration periods expire on December 31st or in a manner consistent with Title 5, section 10002, whichever is later.

The board shall monitor fee revenue and expenditures under this subsection to ensure that adequate funds are available to fund board and related department programs and, to the extent funds are available,

to provide grants to support stewardship programs. The board shall use funds received under this subsection to provide:

A. An annual grant of no less than $135,000 to the University of Maine Cooperative Extension, on or about April 1st, for development and implementation of integrated pest management programs; [PL 2019, c. 243, §1 (AMD).]

B. Funding for public health-related mosquito monitoring programs or other pesticide stewardship and integrated pest management programs, if designated at the discretion of the board, as funds allow after expenditures under paragraph A. The board may seek the advice of the Integrated Pest Management Council established in section 2404 in determining the most beneficial use of the funds, if available, under this subsection; and [PL 2019, c. 243, §1 (AMD).]

C. An annual grant of not less than $65,000 to the University of Maine Cooperative Extension, on or about April 1st, for the development and revision of training manuals for applicator certification, licensing and recertification and to perform other aspects of pesticide education programs. The University of Maine Cooperative Extension may seek the advice of the board in establishing the pesticide education programs and shall submit an annual report on the use of the funds under this paragraph, no later than January 15th, to the board and the joint standing committee of the Legislature having jurisdiction over pesticide education and certification matters. [PL 2019, c. 243, §1 (NEW).]

The University of Maine may not charge overhead costs against grants under this subsection.

By February 15th annually, the board shall submit a report to the joint standing committee of the Legislature having jurisdiction over agriculture, conservation and forestry matters detailing the grants funded by the fee under this subsection. The annual report must include a recommendation by the board as to whether the amount of the fee is adequate to fund the programs described in this subsection. The joint standing committee may report out a bill to the Legislature based on the board's recommendations.
[PL 2023, c. 22, §1 (AMD).]

7. Renewal of registration. Registrations must be renewed annually prior to January 1st. The board shall mail forms for reregistration to registrants at least 30 days prior to the due date.
[PL 2005, c. 620, §6 (AMD).]

8. Approval of application for registration.

[PL 2005, c. 620, §6 (RP).]

8-A. Approval of application for registration. The processing of an application for registration is governed by this subsection.

A. The board shall consider the required information set forth under subsections 2, 3, 4 and 5 and shall register a pesticide if it determines that:

(1) Its composition warrants the proposed claims for it;

(2) Its labeling and other material required to be submitted comply with the requirements of this subchapter;

(3) It will perform its intended function without unreasonable adverse effects on the environment;

(4) When used in accordance with widespread and commonly recognized practice, it will not generally cause unreasonable adverse effects on the environment; and

(5) A need for the pesticide exists. [PL 2005, c. 620, §6 (NEW).]

B. If, within 180 days from the date the completed application for registration is submitted, the board fails to act upon an application for registration of a pesticide that has been certified by EPA, the pesticide is deemed registered under this chapter unless the board issues a written statement containing the reasons for the failure to act upon the application. The statement of the board is deemed a refusal to register pursuant to section 609. [PL 2005, c. 620, §6 (NEW).]

C. Paragraphs A and B do not apply if the registrant fails to provide any information required to be submitted under this subchapter or does not provide other information requested by the board in order to determine whether the pesticide should be registered.

Nothing in this paragraph affects the rights of the board to make further inquiry regarding the registration of a pesticide or to refuse reregistration, to suspend or revoke registration or to otherwise restrict or condition the use of pesticides in order to protect public health and the environment. [PL 2005, c. 620, §6 (NEW).]

D. Prior to registering a pesticide for a special local need, the board shall classify the uses of the pesticide for general or restricted use in conformity with FIFRA, Section 3(d). The board may not make any lack of essentiality a criterion for denying registration of any pesticide. When 2 pesticides meet the requirements of this paragraph, the board may not register one in preference to the other. [PL 2005, c. 620, §6 (NEW).]

E. The board may establish such other requirements by rule in accordance with section 610 as are necessary to carry out the provisions of this subsection. [PL 2005, c. 620, §6 (NEW).]

[PL 2005, c. 620, §6 (NEW).]

9. Adverse environmental effects. If, at any time after the registration of a pesticide, the registrant has additional factual information regarding unreasonable adverse effects of a pesticide on the environment, the registrant shall submit that information to the board.

[PL 2005, c. 620, §6 (AMD).]

SECTION HISTORY

PL 1975, c. 382, §3 (NEW). PL 1977, c. 694, §§52-55 (AMD). PL 1979, c. 644, §1 (AMD). PL 1981, c. 9 (AMD). PL 1983, c. 568, §1 (AMD). PL 1985, c. 592 (AMD). PL 1985, c. 627, §1 (AMD). PL 1987, c. 310, §1 (AMD). PL 1987, c. 723, §1 (AMD). PL 1989, c. 878, §E5 (AMD). PL 1993, c. 410, §S1 (AMD). PL 2001, c. 498, §1 (AMD). PL 2003, c. 282, §1 (AMD). PL 2005, c. 585, §1 (AMD). PL 2005, c. 620, §6 (AMD). PL 2007, c. 466, Pt. A, §25 (AMD). PL 2007, c. 597, §8 (AMD). PL 2013, c. 290, §1 (AMD). PL 2013, c. 290, §4 (AFF). PL 2019, c. 243, §1 (AMD). PL 2023, c. 22, §1 (AMD).

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§609. Refusal to register; cancellation; suspension; legal recourse

1. Procedure. The following provisions govern the board when refusing to register a pesticide, refusing to renew a pesticide registration, canceling a pesticide registration or suspending a pesticide registration.

A. If it does not appear to the board that a pesticide warrants the proposed claims for it or if the pesticide and its labeling and other material required to be submitted do not comply with the provisions of this subchapter or rules adopted under this subchapter, the board shall notify the applicant of the manner in which the pesticide, labeling or other material required to be submitted fails to comply with the provisions of this subchapter so as to afford the applicant an opportunity to make the necessary corrections. [RR 2005, c. 2, §7 (COR).]

B. When the board determines that a pesticide or its labeling does not comply with the provisions of this subchapter or rules adopted under this subchapter, the board may cancel or refuse to renew the registration of a pesticide or change its classification, after notice and opportunity for hearing has been provided in a manner consistent with the Maine Administrative Procedure Act. [PL 2005, c. 620, §9 (AMD).]

C. When the board determines that there is an imminent hazard, it may, on its own motion, suspend the registration of a pesticide in accordance with Title 5, section 10004. [PL 2005, c. 620, §9 (AMD).]

D. When the board becomes cognizant of any possible hazard or violation involving a registered product, it shall cause notice of the possible hazard or violation to be delivered by registered mail, return receipt requested, to the registrant and may cancel or refuse to renew the registration of the pesticide or change its classification after notice and opportunity for hearing has been provided in a manner consistent with the Maine Administrative Procedure Act. [PL 2005, c. 620, §9 (AMD).]

E. [PL 2005, c. 620, §9 (RP).]

[RR 2005, c. 2, §7 (COR).]

2. Federally registered pesticides. If the board determines that any federally registered pesticide, with respect to the use of such pesticide within this State, does not warrant the claims for it, or might cause unreasonable adverse effects on the environment, the board may refuse to register the pesticide as required in section 607 or, if the pesticide is registered under section 607, may cancel or suspend the registration in accordance with subsection 1. If the board believes the pesticide does not comply with the provisions of FIFRA or the regulations adopted by EPA pursuant to FIFRA, it shall advise EPA of the manner in which the pesticide, labeling or other material required to be submitted fails to comply with the provisions of FIFRA and suggest necessary corrections.

[PL 2005, c. 620, §9 (AMD).]

3. Person adversely affected by board action. Any person adversely affected by a final action of the board under this section may obtain judicial review thereof by filing in the District Court, within 60 days after the entry of that final action, a petition praying that the action be set aside in whole or in part. A copy of the petition must be forthwith transmitted by the clerk of the court to the board and upon receipt the board shall file in the court the record of the proceedings on which it based its final action. The court has jurisdiction to affirm or set aside the final action complained of in whole or in part. The findings of the board with respect to questions of fact must be sustained if supported by substantial evidence when considered on the record as a whole. Upon application, the court may remand the matter to the board to take further testimony if there are reasonable grounds for the failure to adduce the evidence in the prior hearing. The board may modify its findings and final action by reason of the additional evidence and shall file the additional record and any modification of the findings or final action with the clerk of the court.

[PL 2005, c. 620, §9 (NEW).]

SECTION HISTORY

PL 1975, c. 382, §3 (NEW). PL 1977, c. 694, §§59-61 (AMD). PL 1989, c. 878, §E8 (AMD). PL 2005, c. 620, §9 (AMD). RR 2005, c. 2, §7 (COR).

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PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0028

WALTER E. WHITCOMB
COMMISSIONER

HENRY S. JENNINGS
DIRECTOR

MAINE BOARD OF PESTICIDES CONTROL POLICY RELATING TO THE ENVIRONMENTAL RISK ADVISORY COMMITTEE (ERAC)

Adopted June 25, 1999
Amended September 29, 2000
Amended March 28, 2014

Background

The Maine BPC recognizes the potential impact of some pesticides on the environment from their federally approved label uses. Evaluation of risks specific to Maine situations and conditions is critical to reducing potential adverse effects on the environment. The Board needs impartial scientists, knowledgeable in the fields of biology, environmental toxicology, environmental chemistry, and ecology, who can provide expert assessments of environmental risks and provide guidance and recommendations to the Board.

Establishing an Environmental Risk Advisory Committee

The Board will select scientists with the appropriate expertise to serve voluntarily on the Board's Environmental Risk Advisory Committee (ERAC) on an ad hoc basis when the Board deems it is necessary to seek outside scientific expertise. The Board will provide a clear charge to the ERAC regarding the purpose and scope of the committee's work.

Membership

The ERAC will be chaired by a Board member. Additional committee members will be determined by the Board based on the current issue. The Board should appoint persons whose disciplines in aggregate are suitable for evaluating potential adverse environmental effects, and, where appropriate, for recommending courses of action to mitigate potential adverse effects.

Term

The committee will serve until it has issued a final report to the Board.

Meetings

The Committee will meet on an as needed basis at the invitation of the ERAC chair.

Compensation

The ERAC is voluntary and no compensation for services is available. However, all reasonable travel expenses will be reimbursed, subject to the approval of the staff director, in a manner consistent with State Travel Policy.

JOHN ELIAS BALDACCI
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, FOOD AND RURAL RESOURCES
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0028

SETH H. BRADSTREET III
COMMISSIONER

HENRY JENNINGS
DIRECTOR

MAINE BOARD OF PESTICIDES CONTROL POLICY RELATING TO THE MEDICAL ADVISORY COMMITTEE

Adopted August 1, 2008
Revised August 27, 2021

Background

The Maine Board of Pesticides Control recognizes the potential impact of some pesticides on human health, as well as the importance of protecting the beneficial uses of most pesticides when used carefully by responsible applicators. In order to separate potentially harmful chemicals from the essentially safe ones, the Board needs expert advisors, knowledgeable in the field of human health research or clinical practice, who can add their assessments to the economic and benefit recommendations of others prior to the Board initiating and ruling on pesticide restrictions.

These persons will be established as a volunteer Medical Advisory Committee to the Board of Pesticides Control.

Membership

The MAC will be composed of three standing members and *ad hoc* members. One standing member will be the Board member appointed with medical expertise. This member will also chair the committee. The other two standing members will be a scientist with clinical or human toxicology experience with preference for the State Toxicologist or their designee, from the Environmental Toxicology Program at the Maine Centers for Disease Control and the Medical Director of the Northern New England Poison Center or their designee. In addition, up to six members may be chosen *ad hoc* with expertise specific to the issue at hand. The Board will solicit and review resumes for positions on the MAC.

The Board should appoint as members persons whose disciplines in aggregate are suitable for identifying and evaluating health hazards or risks. Members are not required to be physicians, but should be qualified professionals in a related health care or medical research discipline.

Term

Ad hoc MAC members will be appointed by the Board for the duration of specific reviews.

Meetings

The Committee will meet on an as needed basis at the invitation of the MAC chairman.

Compensation

The MAC is voluntary and no compensation for services is available. However, all reasonable travel expenses will be reimbursed, subject the approval of the staff director, in a manner consistent with State Travel Policy.

Board Enforcement Case Pre-Review
Background Summary

Subject:

Orkin Exterminating Co. Inc.
960 Riverside Street
Portland, Maine 04103

Date of /Incidents: April and June 2025

Background Narrative:

On April 25, 2025, the Board received an email from a resident of Freeport, Maine, in which the resident reported that she arrived at her home that afternoon to discover an Orkin pesticide application sign in her yard. She further reported that she does not contract with Orkin for any services. In response to the complaint, on April 30, 2025, a Board inspector conducted a follow-up inspection with Board-licensed Company employees Christopher Kent and Dennis Day, in which the inspector ascertained that on April 25, 2025, Dennis Day mistakenly applied Patrol (insecticide), EPA Reg. No. 100-1066, to the residential property located at 4 Harbor Ridge Road in Freeport, Maine, instead of the intended property located at 6 Harbor Ridge Road in Freeport.

On June 25, 2025, the Board received an email from a Falmouth resident who stated that he returned home to discover an Orkin pesticide application sign at his residence. The complainant did not contract with the Company for any services. In response to the complaint, on July 3, 2025, a Board inspector conducted a follow-up inspection with Board-licensed Company employees Christopher Kent and Kaleb Kimmelman. During the course of the inspection, the inspector ascertained that on June 25, 2025, Kaleb Kimmelman mistakenly applied Patrol (insecticide), EPA Reg. No. 100-1066, to the residential property located at 124 Brook Road in Falmouth, Maine instead of the intended property located 124 Brook Road in Portland, Maine.

Summary of Violations:

CMR 01-026, ch. 20, Section 7 (A)

Commercial applicators making outdoor treatments to residential properties to implement a system, based on Board-approved methods, to positively identify the property of their customers.

01-026 CMR ch. 20, Section 6 D (2)

No person may apply a pesticide to a property of another unless prior authorization for the pesticide application has been obtained from the owner, manager, or legal occupant of that property. The term “legal occupant” includes tenants of rented property.

Rationale for Settlement: The Orkin Portland branch, as well as its parent company, Rollins, Inc., does not dispute the violations and has agreed to pay the fine in full. Furthermore, they have

been working directly with BPC staff to ensure compliance in the future. BPC staff believe that if Orkin utilizes the address verification methods that were discussed and submitted to BPC staff for approval, then future violations of these kind will be avoided. To avoid expensive and prolonged court proceedings, BPC staff, with the guidance of the Office of the Attorney General, negotiated this settlement with Orkin of Portland and Rollins, Inc.

Attachments: Inspection reports and photos

OCT 26 2026

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL

In the Matter of:	)	ADMINISTRATIVE CONSENT
Orkin Exterminating Co. Inc.	)	AGREEMENT
960 Riverside Street	)	AND
Portland, Maine 04103	)	FINDINGS OF FACT

This Agreement by and between Orkin Exterminating Co. Inc. (hereinafter referred to as the "Company") and the State of Maine Board of Pesticides Control (hereinafter referred to as the "Board"), as approved by the Office of the Attorney General ("OAG"), is entered into pursuant to 22 M.R.S. § 1471 M(2)(D), and in accordance with the Enforcement Protocol, as amended by the Board on December 13, 2013.

The parties to this Agreement agree as follows:

1) That the Company provides structural pest control services internationally operating out of over 400 branch offices, including one in Portland, Maine.

2) That on April 25, 2025, the Board received an email from a resident of Freeport, Maine, in which the resident reported that she arrived at her home that afternoon to discover a Company pesticide application sign on her yard. She further reported that she does not contract with the Company for any services.

3) That in response to the complaint described in Paragraph 2, on April 30, 2025, a Board inspector conducted a follow-up inspection with Board-licensed Company employees Christopher Kent and Dennis Day.

4) That during the course of the inspection described in Paragraph 3, the inspector ascertained that on April 25, 2025, Dennis Day mistakenly applied Patrol (insecticide), EPA Reg. No. 100-1066, to the residential property located at 4 Harbor Ridge Road in Freeport, Maine instead of the intended property located 6 Harbor Ridge Road.

5) That 01-026 C.M.R. ch. 20, § 7 (2024) requires commercial applicators making outdoor treatments to residential properties to implement a system, based on Board-approved methods, to positively identify the property of their customers.

6) That the Company did not implement a system to positively identify the property of their customer for the application described in Paragraph 4.

7) That the circumstances described in Paragraphs 2 through 6 constitute a violation of 01-026 C.M.R. ch. 20, § 7.

8) That 01-026 C.M.R. ch. 20, § 6(D)(2) prohibits the application of pesticides to the property of another unless prior authorization has been obtained from the owner, manager, or legal occupant of that property.

9) That the Company did not obtain prior authorization for the pesticide application described in Paragraph 4.

10) That the circumstances described in Paragraphs 8 and 9 constitute a violation of 01-026 C.M.R. ch. 20, § 6(D)(2).

11) That on June 25, 2025, the Board received an email from a Falmouth resident who stated that he returned home to discover a Company pesticide application sign at his residence. The complainant did not contract for any services from the Company.

12) That in response to the complaint described in Paragraph 11, on July 3, 2025, a Board inspector conducted a follow-up inspection with Board-licensed Company employees Christopher Kent and Kaleb Kimmelman.

13) That during the course of the inspection described in Paragraph 12, the inspector ascertained that on June 25, 2025, Kaleb Kimmelman mistakenly applied Patrol (insecticide), EPA Reg. No. 100-1066, to the residential property located at 124 Brook Road in Falmouth, Maine instead of the intended property located 124 Brook Road in Portland, Maine.

14) That 01-026 C.M.R. ch. 20, § 7 requires commercial applicators making outdoor treatments to residential properties to implement a system, based on Board-approved methods, to positively identify the property of their customers.

15) That the Company did not implement a system to positively identify the property of their customer for the application described in Paragraph 13.

16) That the circumstances described in Paragraphs 11 through 15 constitute a second violation of 01-026 C.M.R. ch. 20, § 7 within a 4-year period, pursuant to 7 M.R.S. § 616-A(2)(A)(2).

17) That 01-026 C.M.R. ch. 20, § 6(D)(2) prohibits the application of pesticides to the property of another unless prior authorization has been obtained from the owner, manager, or legal occupant of that property.

18) That the Company did not obtain prior authorization for the pesticide application described in Paragraph 13.

19) That the circumstances described in Paragraphs 17 and 18 constitute a second violation of 01-026 C.M.R. ch. 20, § 6(D)(2) within a 4-year period, pursuant to 7 M.R.S. § 616-A(2)(A)(2).

20) That the Company expressly waives:

A. Notice of or opportunity for hearing;

B. Any and all further procedural steps before the Board; and

C. The making of any further findings of fact before the Board.

21) That this Agreement shall not become effective unless and until the Board accepts it.

22) That in consideration for the release by the Board of the cause of action which the Board has against the Company resulting from the violations referred to in Paragraphs 7, 10, 16 and 19, the Company agree to pay a penalty to the State of Maine in the sum of $11,000, with all defenses waived by the Company. (Please make checks payable to Treasurer, State of Maine.)

23) That in the event the Company commits any future violations of 01-026 C.M.R. ch. 20, § 7, as determined by the Board staff in the normal course of compliance investigations, the Board expressly reserves its right use its authority pursuant to 22 M.R.S. § 1471-D(7) to temporarily suspend the license of the commercial operator applicator and/or commercial master applicator, as outlined in 01-026 C.M.R. ch. 20, § 7(B), pending notice and an opportunity for hearing as provided in statute. If so warranted, the Board further expressly reserves its right to seek suspension or revocation of implicated licenses and/or certifications pursuant to 22 M.R.S. § 1471-D(8).

24) The Board and OAG grant a release of their causes of actions against the Company for the specific violations cited in Paragraph 22 on the express condition that all actions listed in Paragraph 22 of this Agreement are completed in accordance with the express terms and conditions of this Agreement and to the satisfaction of the Board and the OAG. The release shall not become effective until the Company has completed its obligations pursuant to Paragraph 22.

25) Any non-compliance with any term or condition of this Agreement, as determined by the Board and OAG in their sole discretion, voids the release set forth in Paragraph 22 of this Agreement and may lead to an enforcement, suspension/revocation, equitable, and/or civil violation action pursuant to Titles 7 and 22 of the Maine Revised Statutes, as well as the pursuit of other remedies, including those pursuant to 14 M.R.S. § 3138.

26) By signing and executing this Agreement, the Company knowingly, voluntarily, intentionally, permanently, and irrevocably waives any and all defenses related to the enforcement of this Agreement, including the enforcement of this Agreement as a final administrative order and a money judgment pursuant to 14 M.R.S. § 3138, and expressly agrees that it will not assert:

a) Any claim or defense that the Company's obligations under this Agreement are illegal, invalid, or otherwise unenforceable;

b) Any claim or defense pertaining to any payment obligation;

c) Any claim or defense pertaining to the timing and efficacy of notice and/or process regarding this Agreement and the Board's enforcement of the terms of this Agreement; and/or

d) Any other circumstance which might otherwise constitute a defense available to, or a discharge of any obligation of, the Company with respect to this Agreement.

27) Nothing in this Agreement shall be construed to be a relinquishment of the Board's or OAG's powers under Titles 7 and 22 of the Maine Revised Statutes against the Company for any other violations other than those expressly listed in this Agreement.

28) This instrument contains the entire agreement between the parties, and no statements, promises, or inducements made by either party or agent of either party that are not contained in this written contract shall be valid or binding; this contract may not be enlarged, modified, or altered except in writing signed by the parties and indorsed on this Agreement.

29) The provisions of this Agreement shall apply to, and be binding on, the parties and their officers, agents, servants, employees, successors, and assigns, and upon those persons in active concert or participation with them who receive actual notice of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement of 4 pages.

ORKIN EXTERMINATING CO. INC.

By: _____ Date: 10/13/2026

Type or Print Name: William Siegel

BOARD OF PESTICIDES CONTROL

By: _____ Date: _____
Alexander Peacock, Director

APPROVED:
By: _____ Date: _____
Carey Gustanski, Assistant Attorney General

Board Enforcement Case Pre-Review
Background Summary
November 13, 2026

Subject:

Insight Pest Solutions
60 Gray Rd
Bldg 3 Unit 13
Falmouth, ME 04105

Summary of Complaints/Incidents:
BPC's 2024 Enforcement Protocol, Section 6(b) requires that "patterns of repeat offenses by the same entity shall be presented to the Board prior to negotiating an administrative consent agreement."

On February 9, 2024, the Board approved a consent agreement between BPC and Insight Pest Solutions for 1,000 unlicensed applications between April and December 2022. As part of the agreement, Insight Pest Solutions agreed to pay a penalty of $81,800.00, with $40,940.00 paid in 2024, and the remaining $40,940.00 suspended, provided that they do not commit any violations of Federal or State of Maine pesticide law over a five-year period.

On December 11, 2025, BPC received a complaint from a former employee of the company alleging various violations, such as falsifying use rate records. The follow-up inspection by a BPC inspector found no evidence of false records. However, the inspector found many recordkeeping violations in the records for nine applicators employed with the company. Additionally, one of the applicators did not possess the proper subcategory for the applications he was making. While the applicator was certified for subcategory 7A (structural) applications, he was not certified to make 7E (mosquito & tick) applications.

Between May and July 2025, nine applicators made a total of 201 applications (108 crawling insect and 93 tick and mosquito), all of them missing (1) Size of Treated Area, (2) Method of Application, (3) REI, and (4) complete Rate Information as required by *Ch. 50: Record Keeping and Reporting Requirements*. Because of the missing information, it was not possible for BPC staff to determine if the applicators treated each site with an allowable amount of product. Furthermore, almost all the application records within this period reported using exactly two gallons of product at every address, which is concerning since each address may have a different application area, suggesting the possibility of applications made in excess of the allowable use rate on the product label.

Also, the inspector found that none of the nine applicators were compliant with state requirements for equipment calibration.

Additionally, wind speed label requirements were violated on May 21, 2025, when Cross Check Plus Multi-insecticide, EPA Reg. No. 279-3206-10404 was used to treat mosquitoes.

Please note that we are in the process of checking annual records to determine if the annual maximum usage requirement on the Taurus label was adhered to. We are not alleging that this is a label violation at the moment.

Summary of Relevant Rules and/or Laws:

- Recordkeeping requirements from CMR 01-026, Ch. 50 Record Keeping and Reporting Requirements
- Calibration requirements from CMR 01-026, Ch. 22 Standards for Outdoor Application of Pesticides by Powered Equipment in Order to Minimize Off-Target Deposition
- Category licensing requirements from 22 M.R.S. § 1471-D (1).
- 7 U.S.C. § 136j(a)(2)(G) and 7 M.R.S. § 606(2)(B) prohibit the use or supervision of such use of a pesticide inconsistent with its label.

Attachments: Inspection reports

1. Screenshot of complaint entered into PEGA/MEPERLS system
2. January 26, 2026 Non-Ag Follow Up inspection report (crawling insect records)
3. January 26, 2026 Records and Operations Check inspection report (crawling insect records)
4. January 26, 2026 Non-Ag Follow Up inspection report (mosquito/tick records)
5. January 26, 2026 Records and Operations Check inspection report (mosquito/tick records)
6. Application records for Vladimir Stirling's mosquito/tick applications made without proper subcategory
7. License record for Vladimir Stirling showing only 7A (structural)
8. Application record for Roger Getchell mosquito/tick application on May 21, 2025 with wind speed exceeding 10mph label limit
9. Cross Check Plus Multi-insecticide, EPA Reg. No. 279-3206-10404 label excerpt of wind speed requirement
10. Taurus SC Termiticide/Insecticide, EPA Reg. No. 53883-279 label excerpt of crawling insect use rates

Complaint (COMPLAINT-6061)

Complaint | Overview | Caller | Inspections | Enforcements | Audit

Action Taken
Inspection Required

Finalized / Resolved ☐

Comments
—

Resolution Details
—

Complaint Details

COMPLAINT-6061

Company / Agency Name
INSIGHT PEST SOLUTIONS MAINE LLC

Complaint Details
On December 11, 2025, BPC received an email from a person alleging various violations committed by a pest control company. They alleged that a fipronil product was used above the max annual rate. And that fogging applications were regularly recorded as 2 gallons regardless of how much was actually used. They also alleged that the company put stickers on rodent bait stations that included a different type of rodenticide than was actually used. Actual date of any incidents is unknown. NOTE: This complaint (COMPLAINT 6061) replaces EC-111881 because of the January 2026 code migration for enforcement workflow enhancements. The same is true of any inspections (RCs) associated with EC-111881, which are replaced by RCs associated w/ COMPLAINT-6061.

Call Date/Time
Dec 11, 2025

Estimated Date of Incident
Dec 11, 2025

Urgency Level
Medium

Topic
Use Inconsistent with the Label

Site
Structural

Application Method
Fogger

Complaint Physical Location

Address Line
60 Grey Rd.

Address Line 2
—

City
Falmouth

Directions
—

Pesticide Use Inspection Report

Inspected Company/Agency: sample text

sample text

Company/Agency Name
INSIGHT PEST SOLUTIONS MAINE LLC

Company/Agency Type
FH

Category

Address Line
31 Marion Ave

City
MILBURY

Primary Phone

Email

Contact First Name
Kenneth

Contact Last Name
Hidenfelter

Type and size of operation:
Medium SCF providing structure, mosquito and tick services in Southern Maine

Do you have obsolete pesticides?
No

APPLICATOR, SUPERVISOR, LICENSING

no value

Licensing is:

- (●) Correct
- ( ) Violation
- ( ) Not Required

Applicator

Name
Mike Cantara

License (If any)
COA-9050 (7A, 7E)

Firm License (If any)
SCF-2606

Supervisor (When required)

Name
Kenneth Hidenfelter

License (If any)
CMA-6081 (7A, 7E)

Location
Milbury, Ma.

APPLICATION SITE

Latitude

Longitude

Field Name, Address or Description of Application Site (If different than on Notice of Inspection)

Field Name	Description	Address Line 1	City	State	Postal Code
	Residence	63 Witchtrot Road	South Berwick	ME	03908

Owner Name & Address (If different than on Notice of Inspection)

Owner Name	Address Line 1	City	State	Postal Code
Kimberly Smirles	122 River Way - Unit 20	Boston	MA	02215

Type of establishment treated (Farm, home, etc)	Site treated (Crop, structure, vegetation, etc.)	Size of area treated	Target pest(s)	Cropping stage (If applicable)	Application Date Time	Wind Speed	Direction	Temperature	Sky Conditions
Residence	Structure	Unknown	Ants	N/A	June 3, 2025 12:00:00 PM EDT	4 mph	N	74	Sunny

PESTICIDES APPLIED

Formatted Text
no value

Add item
Delete

	Brand Name	EPA Reg #	Site as specified on label	Violation?	Formulation	RUP
1	Taurus SC	53883-279	Perimeter / Home	No	SC	False

APPLICATION RATE

Application Method (Equipment): Not Indicated (interview = 2 gallon Solo)
Pressure: N/A
Nozzle(s): Not Indicated (interview = flat fan)
Calibration Adequate: N/A
Calibration Documented: N/A

Total Mix in Tank: 2 Gallons
*Amount used if Part Tank Used: 2 Gallons
Area Covered per Tank/Use: Not Indicated

Quantity of Pesticide Formulation In Tank

Add item
Delete

	Quantity
1	Not Indicated

Formulation Applied Per Unit Area Or Volume

Add item
Delete

1	Not Indicated

Maximum Labeled Rate Per Unit Area or Per Volume

Add item
Delete

		Violation?
1	1.2 Ounces / 1.5 Gallons / K	Yes

PERSONAL PROTECTIVE EQUIPMENT

R=Required W=Worn

	Apply		Mix	
Long sleeve shirt	☑ R	☑ W	☑ R	☑ W
Long pants	☑ R	☑ W	☑ R	☑ W
Shoes/socks	☑ R	☑ W	☑ R	☑ W
Chemical resistant boots	☐ R	☐ W	☐ R	☐ W
Coveralls	☐ R	☐ W	☐ R	☐ W
Chemical resistant suit	☐ R	☐ W	☐ R	☐ W
Gloves, regular	☐ R	☐ W	☐ R	☐ W
Gloves, waterproof	☐ R	☐ W	☐ R	☐ W
Gloves, chemical resistant	☑ R	☑ W	☑ R	☑ W
Chemical resistant hat	☐ R	☐ W	☐ R	☐ W
Chemical resistant apron	☐ R	☐ W	☐ R	☐ W
Protective eyewear	☐ R	☐ W	☐ R	☐ W
Respirator	☐ R	☐ W	☐ R	☐ W
Enclosed cab	☐ Y	☐ N		
PPE in cab	☐ R	☐ W		

Other Items
no value

OTHER COMPLIANCE ITEMS

no value

Storage Area
- ○ Violation
- ◉ No Violation Observed

no value

Posting
- ○ Violation
- ◉ No Violation Observed

no value

Application Method
- ○ Violation
- ◉ No Violation Observed

no value

Mixing/Loading Area
- ○ Violation
- ◉ No Violation Observed

no value

Spray Interval
- ○ Violation
- ○ No Violation Observed

no value

Rinsing/Disposal
- ○ Violation
- ◉ No Violation Observed

no value

Preharvest Interval
- ○ Violation
- ○ No Violation Observed

no value

Off target drift
- ○ Violation
- ◉ No Violation Observed

no value

Other
- ○ Violation
- ○ No Violation Observed

Comments
no value

RECORD DETAILS

no value

Are records maintained for two years?
- (●) Yes
- ( ) No

no value

Reviewed by Inspector? If no, explain in comments.
- (●) Yes
- ( ) No

Comments
no value

no value

Application Method
- ( ) Yes
- (●) No

no value

Brand name of pesticide
- (●) Yes
- ( ) No

no value

Active ingredient(s)
- (●) Yes
- ( ) No

no value

EPA registration #
- (●) Yes
- ( ) No

no value

REI or Ventilation
- ( ) Yes
- (●) No

no value

Applicator name
- (●) Yes
- ( ) No

no value

Applicator license #
- (●) Yes
- ( ) No
- ( ) N/A

no value

no value

Size of treated area
- ( ) Yes
- (●) No

no value

Target pest
- (●) Yes
- ( ) No

no value

Site or crop treated
- (●) Yes
- ( ) No

no value

Sensitive areas noted
- ( ) Yes
- ( ) No
- (●) N/A

no value

Wind speed & direction
- (●) Yes
- ( ) No
- ( ) N/A

no value

Temperature
- (●) Yes
- ( ) No
- ( ) N/A

no value

Sky conditions
- (●) Yes
- ( ) No

Date of application
- (●) Yes
- ( ) No

no value

Time of application
- (●) Yes
- ( ) No

no value

Town of application
- (●) Yes
- ( ) No

no value

Site name or description
- (●) Yes
- ( ) No

- ( ) N/A

no value

Total amount of RUP
- ( ) Yes
- ( ) No
- (●) N/A

no value

Application rate GUP
- ( ) Yes
- (●) No

no value

Sprayer calibration
- ( ) Yes
- ( ) No
- (●) N/A

Comments

no value

Did inspector take copy of records
- (●) Yes
- ( ) No

no value

Hazard Communication Standard
- (●) Yes
- ( ) No

Comments
Please refer to narrative

Worker Protection Standard?
No

Worker Protection Standard

no value

Provide supporting details and documents.

Physical Samples Taken

Sample Number	Sample Description	Sample Type	Date of Submission	Result	Lab Location	Analysis Completion Date
No items						

Add Physical Sample

Documentary Samples

Sample Number	Sample Description	
260126LRS02A	Photo; Application Record – Dated Jun 3, 2025	Delete
260126LRS02B	Specimen Label; Brtand Name_Taurus SC	Delete

Add Documentary Sample

Reportable Data

Number of Documentary Samples Collected
1

Supporting Documents

(5)

Loading...

Brief Summary of Inspection
NAFU (interview of Subject) - EC-6061

Pursuant to RC-152808, on January 26, 2026, a Non-Agricultural Follow-up Inspection was conducted with FLAHERTY, Thomas, Owner, and HIDENFELTER, Kenneth, CMA-6081, both of Insight Pest Solutions.

The inspection was conducted at 60 Gray Road – Suite 13, Falmouth_04105 and pertained to the pesticide applications conducted for crawling insects.

Board of Pesticides Control (BPC) credentials were presented and Notice of Pesticide Use Related Inspection & Receipt for Samples (NOI) No. 260126LRS02 was signed by FLAHERTY.

FLAHERTY declined the opportunity to render a written statement.

Photocopy – Application Record; Dated June 3, 2025, was collected as Documentary Sample No. 260126LRS02A on NOI No. 260126LRS02.

Specimen Label; Brand Name_Taurus SC; EPA Reg No. 53883-279 was collected as Documentary Sample No. 260126LRS02B on NOI No. 260126LRS02.

The audited applications to the target site (perimeter / structure) and the target pest (ants) were compliant with the pesticide label (perimeter / home & ants).

The sub-category associated with COA-9050 (7A) complimented the type of pesticide applications conducted.

The Commercial Master Applicator assigned to Insight Pest Solutions, HIDENFELTER, Kenneth, CMA-6081 (7A), complimented the scope of the pesticide application conducted by CANTARA, Mike.

Size of Treated Area, Method of Application, REI and complete Rate Information were identified to have not been entered into Documentary Sample No. 260126LRS02A, which is a violation of BPC Chapter 50 : Record Keeping and Reporting Requirements.

The equipment used to make the pesticide application was identified as not requiring calibration on the date of pesticide application, which is compliant with BPC Chapter 22 : Standards for Outdoor Application of Pesticides by Powered Equipment in Order to Minimize Off-Target Deposition.

The pesticide applied was verified as being registered in the State of Maine, as per the National Pesticide Information Retrieval System (NPIRS).

The Formulation Applied per Unit Area Sprayed was difficult to determine, due to the violations of BPC Ch. 50 that have been identified, and so the application conducted was in violation of the pesticide label.

The pesticide applied was were purchased in Maine.

The Environmental Hazards associated with the pesticide labels did not disclose an Endangered Species advisory. The historical data, regarding EPA Endangered Species, did not indicate that a Pesticide Usage Limitation Areas (PULA) was in effect for the pesticides applied on the date of the application.

The associated Endangered Species Bulletin for the date of application has been uploaded into PEGA as, “RC-153807 - PULA_Jun 2025” for reference.

Pesticide Storage and the management of empty pesticide containers, to include the associated rinseate, was compliant.

PPE directives of the associated pesticide labels were strictly adhered to.

The process in which pesticides are mixed, prior to the application process, was audited as being compliant.

The valid requirements associated with the pre-requisites associated to the Work Protection Standards, both Worker and Handler, were not applicable at the time of audit.

Please refer to RC-152809 for the compliance assistance provided.

Recommendations
For the violations of BPC Ch. 50 and the pesticide label presented for consideration, as the Manager of Compliance and the Director of the Board of Pesticides Control would deem appropriate.

Acknowledgement

Acknowledgement:

The physical and/or documentary samples listed above were collected by a Maine Board of Pesticides Control Representative in connection with administration of FIFRA and/or State of Maine Pesticide Statutes and Regulations.

Accept Clear

no value

PESTICIDE APPLICATOR RECORDS & OPERATIONS CHECK

Inspected Company/Agency
sample text

sample text

Company/Agency Name
INSIGHT PEST SOLUTIONS MAINE LLC

Company/Agency Type
FH

Category

Address Line
31 Marion Ave

City
MILBURY

Primary Phone

Email

Contact First Name
Kenneth

Contact Last Name
Hidenfelter

Type and size of operation:
7-person SCF providing structural, mosquito and tick services in Southern Maine.

Branch Offices in Maine
1

LICENSING

Formatted Text
no value

☐ None required ☐ Private required ☐ Commercial required

Firm Address(If different than notice)

Address Line 1
60 Gray Road

City
Falmouth

State
ME

Postal Code
04105

Master Name
Kenneth Hidenfelter

Category/Commodity
7A,7E

Master License

Firm License
SCF-2606

Master License

Applicator Details

Add item
Delete

	Applicator Name	License	Categories
1	Michael Cantara	COA-9614	7A & 7E
2	Aiden Cristoforo	COA-9625	7A & 7E
3	Roger Getchell	COA-9705	7A & 7E
4	Vladimir Stirling	COA-9452	7A
5	Timothy Vielleux	COA-9286	7A & 7E
6	Charles Wilson	COA-8906	7A & 7E

ALL APPLICATORS

no value

Do you have obsolete pesticides?

- ◯ Yes
- ◯ No

no value

Aware of Hazard Communication Standard?

- ◯ Yes
- ◯ No

Worker Protection Standard

Formatted Text
no value

True NA

no value

CID

- ◯ Yes
- ◯ No
- ◯ NA

no value

Training

- ◯ Yes
- ◯ No
- ◯ NA

no value

Emergency assistance

- ◯ Yes
- ◯ No
- ◯ NA

no value

Handler PPE

- ◯ Yes
- ◯ No
- ◯ NA

no value

Decontamination Sites

- ◯ Yes
- ◯ No
- ◯ NA

no value

Worker/Handler Notification

- ◯ Yes
- ◯ No
- ◯ NA

no value

Employer Information Exchange

- ◯ Yes
- ◯ No
- ◯ NA

Pesticide Storage & Disposal

no value

Recommended signs?

- ◯ Yes
- ◯ No

no value

Does pesticide storage meet label requirements?

- ◯ Yes
- ◯ No

no value

State Regulations?

- ◯ Yes
- ◯ No

Unused pesticides, whether in sealed or open containers, must be kept in a secure enclosure and otherwise maintained so as to prevent unauthorized use, mishandling or loss; and so as to prevent contamination of the environment and risk to the public health. CMR 01-026 Chapter 20 Sec. 3(A)
no value

GUP purchased in Maine? If no, name & address of dealer.

- ◯ Yes
- ◯ No
- ◯ NA

Comments
no value

no value

RUP/LUP purchased in Maine? If no, name & address of dealer.

- ◯ Yes
- ◯ No
- ◯ NA

Comments
no value

no value

Are empty containers triple rinsed?

- ◯ Yes
- ◯ No
- ◯ NA

no value

What do you do with rinseate and with unused pesticide solutions?

Comments

no value

Application Equipment

no value

- ☐ Fixed Wing

no value

- ☐ Rotary Wing

no value

- ☐ Airblast

no value

- ☐ Boom

no value

- ☐ Hose

no value

- ☐ Mist Blower

no value

- ☐ Granular Spreader

no value

- ☐ Fogger

no value

- ☐ Other Powered

no value

- ☐ Hand Can

no value

- ☐ Spreader

no value

- ☐ Bait

no value

- ☐ Non-powered Back Pack

no value

- ☐ Other non-powered

no value

☐ Powered Back Pack

no value

☐ Radiarc

no value

☐ Injection

no value

☐ Fumigation

no value

☐ Chemigation

no value

☐ Direct to Water Body

no value

Where do you mix and load pesticides?

Comments

no value

no value

How do you fill your tank with water?

Comments

no value

no value

Are shutoff/backflow prevention valves adequate?

- ○ Yes
- ○ No
- ◉ NA

PERSONAL PROTECTIVE EQUIPMENT R = Required A=Available (For reviewed pesticides)

Long sleeve shirt	☐ R	☐ A
Long pants	☐ R	☐ A
Shoes/socks	☐ R	☐ A
Chemical resistant boots	☐ R	☐ A
Coveralls	☐ R	☐ A
Chemical resistant suit	☐ R	☐ A
Gloves	☐ R	☐ A
Waterproof gloves	☐ R	☐ A
Chemical Resistant gloves	☐ R	☐ A
Chemical Resistant Headwear	☐ R	☐ A
Chemical Resistant Apron	☐ R	☐ A
Protective Eyewear	☐ R	☐ A
Respirator	☐ R	☐ A
Closed system	☐ R	☐ A
PPE available in enclosed cab	☐ R	☐ A

no value

Is PPE stored away from pesticides?

- ◉ Yes
- ○ No

no value

Is PPE maintained and cleaned as required?

- ◉ Yes
- ○ No

no value

Does employer review labels for required PPE?

- ○ Yes
- ○ No
- ◉ NA

no value

Does employer supply required PPE?

- ◯ Yes
- ◯ No
- ◉ NA

Private Applicators

Formatted Text
no value

True None

no value

Describe any pesticide applications you do for others, or that you hire done, and the system of payment.

Comments
no value

GreenHouses

Formatted Text
no value

True NA

no value

Are pesticides applied through a hose or irrigation system? If yes, check label requirements.

- ◯ Yes
- ◯ No

no value

Are total release aerosols used? If yes, check volumetric rate requirements on label.

- ◯ Yes
- ◯ No

no value

Are pesticides labeled for specific sites/crops? If no, use is inconsistent with labeling.

- ○ Yes
- ○ No

COMMERCIAL APPLICATORS

Formatted Text

no value

False NA

no value

Appropriate signs for turf, ornamental, outdoor structural and forestry applications ?

- ◉ Yes
- ○ No
- ○ NA

no value

Unlicensed applicator under direct voice and visual supervision by licensed commercial applicator?

- ○ Yes
- ○ No
- ◉ NA

no value

Insurance certificate?

- ◉ Yes
- ○ No
- ○ NA

Record Details

no value

Are records maintained for two years?

- ◉ Yes
- ○ No

no value

Reviewed by Inspector? If no, explain in comments.

- (●) Yes
- ( ) No

Comments

no value

no value

no value

- [ ] Application Method

no value

- [ ] Brand name of pesticide

no value

- [ ] Active ingredient(s)

no value

- [ ] EPA registration #

no value

- [ ] REI or Ventilation

no value

- [ ] Applicator name

no value

- [ ] Applicator license #

no value

- [ ] Date of application

no value

no value

- [ ] Size of treated area

no value

- [ ] Target pest

no value

- [ ] Site or crop treated

no value

- [ ] Sensitive areas noted

no value

- [ ] Wind speed & direction

no value

- [ ] Temperature

no value

- [ ] Sky conditions

no value

- [ ] Total amount of RUP

no value

☐ Time of application

no value

☐ Town of application

no value

☐ Site name or description

☐ Application rate GUP

no value

☐ Sprayer calibration

Year surveyed below: 2025

Crop/Site Surveyed: no value

Target Pest : Ants

Crop acreage:

◯ <10
◯ 10-50
◯ >50

Add item
Delete

*Bearing/Nonbearing, Preemergent, Prebloom,Third leaf stage etc. **Broadcast, Directed, , Spot, Chemigation

	Brand name of pesticides used	EPA Reg.#	RUP	Rate	Date applied	Pest	Crop Stage*	Apps/ crop	Application Type
1	Please	refer	False	to the	no value	Application Worksheet	that has	been	uploaded

Comments. Suggestions for the Board of Pesticides Control.

Many licensed applicators conducting pesticide applications for one target pest, so it's better to present the end result in a manner that's unlike the agrarian format provided.

Provide supporting details and documents.

Physical Samples Taken

Sample Number	Sample Description	Sample Type	Date of Submission	Result	Lab Location	Analysis Completion Date
No items						

Add Physical Sample

Documentary Samples

Sample Number	Sample Description	
260126LRS01A	Application Records - CANTARA Mike	Delete
260126LRS01B	Application Records - GETCHELL Roger	Delete
260126LRS01C	Application Records - PADDLEFORD Seth	Delete
260126LRS01D	Application Records - VIELLEUX Tim	Delete
260126LRS01E	Application Records - LUCARELLI Zachary	Delete
260126LRS01F	Application Records - CRISTOFORO Aiden	Delete
260126LRS01G	Application Records - WILSON Charlie	Delete

Sample Number	Sample Description	
260126LRS01H	Application Records - BLEDSOE Cory	Delete
260126LRS01I	Application Records - STIRLING Vladimir	Delete
260126LRS01J	Photocopy; Text Exchange; BLEDSOE and FLAHERTY	Delete

Add Documentary Sample

Reportable Data

Number of Documentary Samples Collected
0

Supporting Documents

(12)

Loading...

Brief Summary of Inspection
CAR (Interview of Subject) - EC-6061

Pursuant to RC-152808, on January 26, 2026, a Non-Agricultural Follow-up Inspection was conducted with FLAHERTY, Thomas, Owner, and HIDENFELTER, Kenneth, CMA-6081, both of Insight Pest Solutions.

The inspection was conducted at 60 Gray Road – Suite 13, Falmouth_04105 and pertained to the pesticide applications conducted for crawling insects.

Board of Pesticides Control (BPC) credentials were presented and Notice of Pesticide Use Related Inspection & Receipt for Samples (NOI) No. 260126LRS01 was signed by FLAHERTY.

FLAHERTY declined the opportunity to render a written statement.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; CANTARA, Mike were collected as Documentary Sample No. 260126LRS01A on NOI No. 260126LRS01.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; GETCHELL, Roger were collected as Documentary Sample No. 260126LRS01B on NOI No. 260126LRS01.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; PADDLEFORD, Seth were collected as Documentary Sample No. 260126LRS01C on NOI No. 260126LRS01.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; VIELLEUX, Tim were collected as Documentary Sample No. 260126LRS01D on NOI No. 260126LRS01.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; LUCARELLI, Zachary were collected as Documentary Sample No. 260126LRS01E on NOI No. 260126LRS01.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; CRISTOFORO, Aidan were collected as Documentary Sample No. 260126LRS01F on NOI No. 260126LRS01.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; WILSON, Charlie were collected as Documentary Sample No. 260126LRS01G on NOI No. 260126LRS01.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; BLEDSOE, Cory were collected as Documentary Sample No. 260126LRS01H on NOI No. 260126LRS01.

Photocopy; Application Records – Crawling Insect; May, Jun and Jul of 2025; STERLING, Vladmir were collected as Documentary Sample No. 260126LRS01I on NOI No. 260126LRS01.

Photocopy – Textual Exchange; BLEDSOE and FLAHERTY; Depicts BLEDSOE suggesting recording the application of pesticides in a manner that violates BPC Chapters of Regulation was collected as Documentary Sample No. 260126LRS01J on NOI No. 260126LRS01.

Of the documentary samples collected, of note would be Documentary Sample No. 260126LRS01J, which is indicative of BLEDSOE suggesting that recording a lower rate of pesticide, while applying that pesticide at a higher mix rate, would be a best practice to incorporate into the pesticide application process.

RC-152808 indicates that BLEDSOE advised that the commercial applicators were directed by FLAHERTY to record pesticides at a lower rate than what had been applied, which Documentary Sample No. 260126LRS01J indicates as an inaccuracy.

The subcategory associated with CMA-6081 (7A) complimented the type of pesticide applications indicated on the documentary samples collected.

The Size of Treated Area, Method of Application, Size of Treated Area and the associated Rate Information were noted to have been absent from the application records collected, which are violations of BPC Chapter 50 : Record Keeping and Reporting Requirements (BPC Ch. 50)

The equipment used to make the pesticide application was identified as not requiring calibration on the date of pesticide application, which is compliant with BPC Chapter 22 : Standards for Outdoor Application of Pesticides by Powered Equipment in Order to Minimize Off-Target Deposition.

The worksheet of the applications conducted for the time frame audited has been uploaded into PEGA as, “RC-153806 - Worksheet” for reference.

The pesticides applied, during the calendar year audited, were verified as being registered in the State of Maine, as per the National Pesticide Information Retrieval System (NPIRS).

The pesticides applied by were purchased in Maine.

Pesticide Storage and the management of empty pesticide containers, to include the associated rinseate, was compliant.

PPE directives of the associated pesticide labels were strictly adhered to.

The process in which pesticides are mixed, prior to the application process, was audited as being compliant.

Please refer to RC-152809 for the compliance assistance provided.

Recommendations
For the violations of BPC Ch. 50 presented for consideration, as the Manager of Compliance and the Director of the Board of Pesticides Control would deem appropriate.

Acknowledgement

Acknowledgement:

The physical and/or documentary samples listed above were collected by a Maine Board of Pesticides Control Representative in connection with administration of FIFRA and/or State of Maine Pesticide Statutes and Regulations.

Accept Clear

no value

Pesticide Use Inspection Report

Inspected Company/Agency: sample text

sample text

Company/Agency Name: INSIGHT PEST SOLUTIONS MAINE LLC

Company/Agency Type: FH

Category:

Address Line: 31 Marion Ave

City: MILBURY

Primary Phone:

Email:

Contact First Name: Kenneth

Contact Last Name: Hidenfelter

Type and size of operation: meduinm SCF providing structural, mosquito and tick services in Southern Maine.

Do you have obsolete pesticides? No

APPLICATOR, SUPERVISOR, LICENSING

no value

Licensing is:

- (●) Correct
- ( ) Violation
- ( ) Not Required

Applicator

Name: Aidan Cristoforo

License (If any): COA-9625 (7A, 7E)

Firm License (If any): SCF-2606

Supervisor (When required)

Name: Kenneth Hidenfelter

License (If any): CMA-6081

Location: Milbury, Ma.

APPLICATION SITE

Latitude

Longitude

Field Name, Address or Description of Application Site (If different than on Notice of Inspection)

Field Name	Description	Address Line 1	City	State	Postal Code
	no value	no value	no value	ME	no value

Owner Name & Address (If different than on Notice of Inspection)

Owner Name	Address Line 1	City	State	Postal Code
Thomas Kitchin	127 Birchwood Terrace	Pittsfield	ME	04922

Type of establishment treated (Farm, home, etc)	Site treated (Crop, structure, vegetation, etc.)	Size of area treated	Target pest(s)	Cropping stage (If applicable)	Application Date Time	Wind Speed	Direction	Temperature	Sky Conditions
Home	Vegetation	Unknown	Mosquito & Tick	N/A	May 9, 2025 11:00:00 AM EDT	1 mph	E	52	Overcast

PESTICIDES APPLIED

Formatted Text

no value

Add item
Delete

	Brand Name	EPA Reg #	Site as specified on label	Violation?	Formulation	RUP
1	Lesco Cross Check Plus	279-3206-10404	Yard / Perimeter	No	SC	False

APPLICATION RATE

Application Method (Equipment)	Pressure	Nozzle(s)	Calibration Adequate	Calibration Documented
Not Indicated (interview = Stihl SR 450 Backpack Mister)	N/A	Not Indicated (interview = misting)	N	N

Total Mix in Tank
1.5 Gallons

*Amount used if Part Tank Used
1.5 Gallons

Area Covered per Tank/Use
Not Indicated

Quantity of Pesticide Formulation In Tank

Add item
Delete

	Quantity
1	

Formulation Applied Per Unit Area Or Volume

Add item
Delete

1	1.5 Gallons

Maximum Labeled Rate Per Unit Area or Per Volume

Add item
Delete

		Violation?
1		
		Yes

PERSONAL PROTECTIVE EQUIPMENT

R=Required W=Worn

	Apply		Mix	
Long sleeve shirt	☑ R	☑ W	☑ R	☑ W
Long pants	☑ R	☑ W	☑ R	☑ W
Shoes/socks	☑ R	☑ W	☑ R	☑ W
Chemical resistant boots	☐ R	☐ W	☐ R	☐ W
Coveralls	☐ R	☐ W	☐ R	☐ W
Chemical resistant suit	☐ R	☐ W	☐ R	☐ W
Gloves, regular	☐ R	☐ W	☐ R	☐ W
Gloves, waterproof	☐ R	☐ W	☐ R	☐ W
Gloves, chemical resistant	☑ R	☑ W	☑ R	☐ W
Chemical resistant hat	☐ R	☐ W	☐ R	☐ W
Chemical resistant apron	☐ R	☐ W	☐ R	☐ W
Protective eyewear	☐ R	☐ W	☐ R	☐ W
Respirator	☐ R	☐ W	☐ R	☐ W
Enclosed cab	☐ Y	☐ N		
PPE in cab	☐ R	☐ W		

Other Items
no value

OTHER COMPLIANCE ITEMS

no value

Storage Area
○ Violation
◉ No Violation Observed

no value

Posting
○ Violation
◉ No Violation Observed

no value

Application Method
○ Violation
◉ No Violation Observed

no value

Mixing/Loading Area
○ Violation
◉ No Violation Observed

no value

Spray Interval
○ Violation
◉ No Violation Observed

no value

Rinsing/Disposal
○ Violation
◉ No Violation Observed

no value

Preharvest Interval
○ Violation
○ No Violation Observed

no value

Off target drift
○ Violation
◉ No Violation Observed

no value

Other
○ Violation
○ No Violation Observed

Comments
no value

RECORD DETAILS

no value

Are records maintained for two years?
- (●) Yes
- ( ) No

no value

Reviewed by Inspector? If no, explain in comments.
- (●) Yes
- ( ) No

Comments
no value

no value

Application Method
- ( ) Yes
- (●) No

no value

Brand name of pesticide
- (●) Yes
- ( ) No

no value

Active ingredient(s)
- (●) Yes
- ( ) No

no value

EPA registration #
- (●) Yes
- ( ) No

no value

REI or Ventilation
- ( ) Yes
- (●) No

no value

Applicator name
- (●) Yes
- ( ) No

no value

Applicator license #
- (●) Yes
- ( ) No
- ( ) N/A

no value

no value

Size of treated area
- ( ) Yes
- (●) No

no value

Target pest
- (●) Yes
- ( ) No

no value

Site or crop treated
- (●) Yes
- ( ) No

no value

Sensitive areas noted
- ( ) Yes
- ( ) No
- (●) N/A

no value

Wind speed & direction
- (●) Yes
- ( ) No
- ( ) N/A

no value

Temperature
- (●) Yes
- ( ) No
- ( ) N/A

no value

Sky conditions
- (●) Yes
- ( ) No

Date of application
- (●) Yes
- ( ) No

no value

Time of application
- ( ) Yes
- ( ) No

no value

Town of application
- (●) Yes
- ( ) No

no value

Site name or description
- (●) Yes
- ( ) No

- ( ) N/A

no value

Total amount of RUP
- ( ) Yes
- ( ) No
- (●) N/A

no value

Application rate GUP
- ( ) Yes
- (●) No

no value

Sprayer calibration
- ( ) Yes
- (●) No
- ( ) N/A

Comments

no value

Did inspector take copy of records
- (●) Yes
- ( ) No

no value

Hazard Communication Standard
- (●) Yes
- ( ) No

Comments
Please refer to narrative

Worker Protection Standard?
No

Worker Protection Standard

no value

Provide supporting details and documents.

Physical Samples Taken

Sample Number	Sample Description	Sample Type	Date of Submission	Result	Lab Location	Analysis Completion Date
No items						

Add Physical Sample

Documentary Samples

Sample Number	Sample Description	
260126LRS04A	Photo; Pesticide Application Record – Dated May 9,2025	Delete
260126LRS04B	Specimen Label; Brand Name_Lesco Cross Check Plus; EPA Reg No. 279-3206-10404	Delete

Add Documentary Sample

Reportable Data

Number of Documentary Samples Collected
1

Supporting Documents

(5)

Loading...

Brief Summary of Inspection
NAFU (interview of Subject) - EC-6061

Pursuant to RC-152808, on January 26, 2026, a Non-Agricultural Follow-up Inspection was conducted with FLAHERTY, Thomas, Owner, and HIDENFELTER, Kenneth, CMA-6081, both of Insight Pest Solutions.

The inspection was conducted at 60 Gray Road – Suite 13, Falmouth_04105 and pertained to the pesticide applications conducted for crawling insects.

Board of Pesticides Control (BPC) credentials were presented and Notice of Pesticide Use Related Inspection & Receipt for Samples (NOI) No. 260126LRS04 was signed by FLAHERTY.

FLAHERTY declined the opportunity to render a written statement.

Photocopy – Application Record; Dated May 9, 2025, was collected as Documentary Sample No. 260126LRS04A on NOI No. 260126LRS04.

Specimen Label; Brand Name_Lesco Cross Check Plus; EPA Reg No. 279-3206 was collected as Documentary Sample No. 260126LRS04B on NOI No. 260126LRS04.

The audited applications to the target site (lawns / perimeter / yard) and the target pest (mosquito / tick) were compliant with the pesticide label (yard / perimeter & mosquito / tick).

The sub-category associated with COA-9625 (7E) complimented the type of pesticide applications conducted.

The Commercial Master Applicator assigned to Insight Pest Solutions, HIDENFELTER, Kenneth, CMA-6081 (7E), complimented the scope of the pesticide application conducted by CRISTOFORO, Aidan.

Size of Treated Area, Method of Application, REI and complete Rate Information were identified to have not been entered into Documentary Sample No. 260126LRS02A, which is a violation of BPC Chapter 50 : Record Keeping and Reporting Requirements.

The pesticide application equipment was identified as not having been calibrated, which is a violation of BPC Chapter 22 : Standards for Outdoor Application of Pesticides by Powered Equipment in Order to Minimize Off-Target Deposition.

The pesticide applied was verified as being registered in the State of Maine, as per the National Pesticide Information Retrieval System (NPIRS).

The Formulation Applied per Unit Area Sprayed was difficult to determine, due to the previously identified violations of BPC Ch. 50, and so the application conducted was in violation of the pesticide label.

The pesticide applied was purchased in Maine.

The Environmental Hazards associated with the pesticide labels did not disclose an Endangered Species advisory. The historical data, regarding EPA Endangered Species, did not indicate that a Pesticide Usage Limitation Areas (PULA) was in effect for the pesticides applied on the date of the application.

The associated Endangered Species Bulletin for the date of application has been uploaded into PEGA as, “RC-153809 - PULA_May 2025” for reference.

Pesticide Storage and the management of empty pesticide containers, to include the associated rinseate, was compliant.

PPE directives of the associated pesticide labels were strictly adhered to.

The process in which pesticides are mixed, prior to the application process, was audited as being compliant.

The valid requirements associated with the pre-requisites associated to the Work Protection Standards, both Worker and Handler, were not applicable at the time of audit.

Please refer to RC-152809 for the compliance assistance provided.

Recommendations
For the violations of BPC Ch. 50, BPC Ch. 22 and the pesticide label presented for consideration, as the Manager of Compliance and the Director of the Board of Pesticides Control would deem appropriate.

Acknowledgement

Acknowledgement:

The physical and/or documentary samples listed above were collected by a Maine Board of Pesticides Control Representative in connection with administration of FIFRA and/or State of Maine Pesticide Statutes and Regulations.

Accept Clear

no value

PESTICIDE APPLICATOR RECORDS & OPERATIONS CHECK

Inspected Company/Agency
sample text

sample text

Company/Agency Name
INSIGHT PEST SOLUTIONS MAINE LLC

Company/Agency Type
FH

Category

Address Line
31 Marion Ave

City
MILBURY

Primary Phone

Email

Contact First Name
Kenneth

Contact Last Name
Hidenfelter

Type and size of operation:
Small Spray Contracting Firm providing Structural, Mosquito & Tick services in southern Maine.

Branch Offices in Maine

LICENSING

Formatted Text
no value

☐ None required ☐ Private required ☐ Commercial required

Firm Address(If different than notice)

Address Line 1
60 Gray Road

City
Falmouth

State
ME

Postal Code
04105

Master Name
Kenneth Hidenfelter

Category/Commodity
7A, 7E

Master License

Firm License
SCF-2606

Master License

Applicator Details

Add item
Delete

	Applicator Name	License	Categories
1	Michael Cantara	COA-9614	7A, 7E
2	Aiden Cristoforo	COA-9625	7A, 7E
3	Roger Getchell	COA-9705	7A, 7E
4	Vladimir Stirling	COA452	7A
5	Timothy Vielleux	COA-9286	7A, 7E
6	Charles Wilson	COA-8906	7A, 7E

ALL APPLICATORS

no value

Do you have obsolete pesticides?

- ◯ Yes
- ◯ No

no value

Aware of Hazard Communication Standard?

- ◯ Yes
- ◯ No

Worker Protection Standard

Formatted Text
no value

True NA

no value

CID

- ◯ Yes
- ◯ No
- ◯ NA

no value

Training

- ◯ Yes
- ◯ No
- ◯ NA

no value

Emergency assistance

- ◯ Yes
- ◯ No
- ◯ NA

no value

Handler PPE

- ◯ Yes
- ◯ No
- ◯ NA

no value

Decontamination Sites

- ◯ Yes
- ◯ No
- ◯ NA

no value

Worker/Handler Notification

- ◯ Yes
- ◯ No
- ◯ NA

no value

Employer Information Exchange

- ◯ Yes
- ◯ No
- ◯ NA

Pesticide Storage & Disposal

no value

Recommended signs?

- ◯ Yes
- ◯ No

no value

Does pesticide storage meet label requirements?

- ◯ Yes
- ◯ No

no value

State Regulations?

- ◯ Yes
- ◯ No

Unused pesticides, whether in sealed or open containers, must be kept in a secure enclosure and otherwise maintained so as to prevent unauthorized use, mishandling or loss; and so as to prevent contamination of the environment and risk to the public health. CMR 01-026 Chapter 20 Sec. 3(A)
no value

GUP purchased in Maine? If no, name & address of dealer.

- ◯ Yes
- ◯ No
- ◯ NA

Comments
no value

no value

RUP/LUP purchased in Maine? If no, name & address of dealer.

- ◯ Yes
- ◯ No
- ◯ NA

Comments
no value

no value

Are empty containers triple rinsed?

- ◯ Yes
- ◯ No
- ◯ NA

no value

What do you do with rinseate and with unused pesticide solutions?

Comments

no value

Application Equipment

no value

- ☐ Fixed Wing

no value

- ☐ Rotary Wing

no value

- ☐ Airblast

no value

- ☐ Boom

no value

- ☐ Hose

no value

- ☐ Mist Blower

no value

- ☐ Granular Spreader

no value

- ☐ Fogger

no value

- ☐ Other Powered

no value

- ☐ Hand Can

no value

- ☐ Spreader

no value

- ☐ Bait

no value

- ☐ Non-powered Back Pack

no value

- ☐ Other non-powered

no value

☐ Powered Back Pack

no value

☐ Radiarc

no value

☐ Injection

no value

☐ Fumigation

no value

☐ Chemigation

no value

☐ Direct to Water Body

no value

Where do you mix and load pesticides?

Comments

no value

no value

How do you fill your tank with water?

Comments

no value

no value

Are shutoff/backflow prevention valves adequate?

- ○ Yes
- ○ No
- ◉ NA

PERSONAL PROTECTIVE EQUIPMENT R = Required A=Available (For reviewed pesticides)

Long sleeve shirt	☐ R	☐ A
Long pants	☐ R	☐ A
Shoes/socks	☐ R	☐ A
Chemical resistant boots	☐ R	☐ A
Coveralls	☐ R	☐ A
Chemical resistant suit	☐ R	☐ A
Gloves	☐ R	☐ A
Waterproof gloves	☐ R	☐ A
Chemical Resistant gloves	☐ R	☐ A
Chemical Resistant Headwear	☐ R	☐ A
Chemical Resistant Apron	☐ R	☐ A
Protective Eyewear	☐ R	☐ A
Respirator	☐ R	☐ A
Closed system	☐ R	☐ A
PPE available in enclosed cab	☐ R	☐ A

no value

Is PPE stored away from pesticides?

- ◉ Yes
- ○ No

no value

Is PPE maintained and cleaned as required?

- ◉ Yes
- ○ No

no value

Does employer review labels for required PPE?

- ○ Yes
- ○ No
- ◉ NA

no value

Does employer supply required PPE?

- ◯ Yes
- ◯ No
- ◉ NA

Private Applicators

Formatted Text
no value

True None

no value

Describe any pesticide applications you do for others, or that you hire done, and the system of payment.

Comments
no value

GreenHouses

Formatted Text
no value

True NA

no value

Are pesticides applied through a hose or irrigation system? If yes, check label requirements.

- ◯ Yes
- ◯ No

no value

Are total release aerosols used? If yes, check volumetric rate requirements on label.

- ◯ Yes
- ◯ No

no value

Are pesticides labeled for specific sites/crops? If no, use is inconsistent with labeling.

- ○ Yes
- ○ No

COMMERCIAL APPLICATORS

Formatted Text

no value

False NA

no value

Appropriate signs for turf, ornamental, outdoor structural and forestry applications ?

- ◉ Yes
- ○ No
- ○ NA

no value

Unlicensed applicator under direct voice and visual supervision by licensed commercial applicator?

- ○ Yes
- ○ No
- ◉ NA

no value

Insurance certificate?

- ◉ Yes
- ○ No
- ○ NA

Record Details

no value

Are records maintained for two years?

- ◉ Yes
- ○ No

no value

Reviewed by Inspector? If no, explain in comments.

- (●) Yes
- ( ) No

Comments

no value

no value

no value

- [ ] Application Method

no value

- [ ] Brand name of pesticide

no value

- [ ] Active ingredient(s)

no value

- [ ] EPA registration #

no value

- [ ] REI or Ventilation

no value

- [ ] Applicator name

no value

- [ ] Applicator license #

no value

- [ ] Date of application

no value

no value

- [ ] Size of treated area

no value

- [ ] Target pest

no value

- [ ] Site or crop treated

no value

- [ ] Sensitive areas noted

no value

- [ ] Wind speed & direction

no value

- [ ] Temperature

no value

- [ ] Sky conditions

no value

- [ ] Total amount of RUP

no value

☐ Time of application

no value

☐ Town of application

no value

☐ Site name or description

☐ Application rate GUP

no value

☐ Sprayer calibration

Year surveyed below:
2025

Crop/Site Surveyed:
Target Pest : Mosquito & Tick

no value

Crop acreage:

- ◯ <10
- ◯ 10-50
- ◯ >50

Add item
Delete

*Bearing/Nonbearing, Preemergent, Prebloom,Third leaf stage etc. **Broadcast, Directed, , Spot, Chemigation

	Brand name of pesticides used	EPA Reg.#	RUP	Rate	Date applied	Pest	Crop Stage*	Apps/ crop	Application Type
1	Please refer	to the	False	Application Worksheet	no value	that has	been uploaded	into	PEGA

Comments. Suggestions for the Board of Pesticides Control.
Many Commercial Operators making similar applications for the same target pest are better represented on the worksheet that has been uploaded for reference, as opposed to entering everything into a template that's designed for agricultural applications - more work, but it makes better sense.

Provide supporting details and documents.

Physical Samples Taken

Sample Number	Sample Description	Sample Type	Date of Submission	Result	Lab Location	Analysis Completion Date
No items						

Add Physical Sample

Documentary Samples

Sample Number	Sample Description	
260126LRS03A	Application Records - CANTARA Mike	Delete
260126LRS03B	Application Records - GETCHELL Roger	Delete
260126LRS03C	Application Records - PADDLEFORD SETH	Delete
260126LRS03D	Application Records - VEILLUEX Tim	Delete
260126LRS03E	Application Records - LUCARELLI Zachery	Delete
260126LRS03F	Application Records - CRISTOFORO Aidan	Delete
260126LRS03G	Application Records - WILSON Charlie	Delete

Sample Number	Sample Description	
260126LRS03H	Application Records - BLEDSOE Cory	Delete
260126LRS03I	Application Records - STIRLING Vladimir	Delete

Add Documentary Sample

Reportable Data

Number of Documentary Samples Collected
0

Supporting Documents

(12)

Loading...

Brief Summary of Inspection
CAR (interview of Subject) - EC-6061

Pursuant to RC-152808, on January 26, 2026, a Certified Applicator Records Check was conducted with FLAHERTY, Thomas, Owner, and HIDENFELTER, Kenneth, CMA-6081, both of Insight Pest Solutions.

The inspection was conducted at 60 Gray Road – Suite 13, Falmouth_04105 and pertained to the pesticide applications conducted for crawling insects.

Board of Pesticides Control (BPC) credentials were presented and Notice of Pesticide Use Related Inspection & Receipt for Samples (NOI) No. 260126LRS03 was signed by FLAHERTY.

FLAHERTY declined the opportunity to render a written statement.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; CANTARA, Mike were collected as Documentary Sample No. 260126LRS03A on NOI No. 260126LRS03.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; GETCHELL, Roger were collected as Documentary Sample No. 260126LRS03B on NOI No. 260126LRS03.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; PADDLEFORD, Seth were collected as Documentary Sample No. 260126LRS03C on NOI No. 260126LRS03.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; VIELLEUX, Tim were collected as Documentary Sample No. 260126LRS03D on NOI No. 260126LRS03.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; LUCARELLI, Zachary were collected as Documentary Sample No. 260126LRS03E on NOI No. 260126LRS03.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; CRISTOFORO, Aidan were collected as Documentary Sample No. 260126LRS03F on NOI No. 260126LRS03.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; WILSON, Charlie were collected as Documentary Sample No. 260126LRS03G on NOI No. 260126LRS03.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; BLEDSOE, Cory were collected as Documentary Sample No. 260126LRS03H on NOI No. 260126LRS03.

Photocopy; Application Records – Mosquito & Tick; May, Jun and Jul of 2025; STERLING, Vladmir were collected as Documentary Sample No. 260126LRS03I on NOI No. 260126LRS03.

The subcategory associated with CMA-6081 (7E) complimented all but one of the Commercial Applicators conducting pesticide applications for the period audited, as indicated on the documentary samples collected.

The eight (8) mosquito & tick applications conducted STIRLING, Vladimir, as indicated by Documentary Sample No. 260126LRS03I, were conducted in violation of BPC Ch. 31 – Licensing Provisions, Commercial Applicators (BPC Ch. 31). The Commercial Applicator License associated with STIRLING (COA-9452) was exclusive to 7A (structural) and did not indicate a subcategory of classification of 7E (mosquito & tick).

A copy of the Commercial Operators License has been uploaded into PEGA as “RC-153808 - COA-9452 – STIRLING” for reference.

As an essential aside, the exam data for STIRLING indicated that one attempt to take the 7E exam on May 16, 2023 resulted in a failure; as such, all the mosquito & tick applications conducted by STIRLING, while employed at Insight Pest Solutions, were in violation of BPC Ch. 31.

The Size of Treated Area, Method of Application, Size of Treated Area and the associated Rate Information were noted to have been absent from the application records collected, which are violations of BPC Chapter 50 : Record Keeping and Reporting Requirements (BPC Ch. 50)

The pesticide application equipment used by each Commercial Applicator (9 each) was identified as not having been calibrated for calendar year 2025, which is a violation of BPC Chapter 22 : Standards for Outdoor Application of Pesticides by Powered Equipment in Order to Minimize Off-Target Deposition (BPC Ch. 22).

The worksheet of the applications conducted for the time frame audited has been uploaded into PEGA as, “RC-153806 - Worksheet” for reference.

The pesticides applied, during the calendar year audited, were verified as being registered in the State of Maine, as per the National Pesticide Information Retrieval System (NPIRS).

The pesticides applied by were purchased in Maine.

Pesticide Storage and the management of empty pesticide containers, to include the associated rinseate, was compliant.

PPE directives of the associated pesticide labels were strictly adhered to.

The process in which pesticides are mixed, prior to the application process, was audited as being compliant.

Please refer to RC-152809 for the compliance assistance provided.

Recommendations
For the violations of BPC Ch's 22, 31 and 50 presented for consideration, as the Manager of Compliance and the Director of the Board of Pesticides Control would deem appropriate.

Acknowledgement

Acknowledgement:

The physical and/or documentary samples listed above were collected by a Maine Board of Pesticides Control Representative in connection with administration of FIFRA and/or State of Maine Pesticide Statutes and Regulations.

Accept Clear

no value

insight pest solutions

60 Gray Road Suite 13 Falmouth, ME 04105
(207) 747-5404

Account #	Invoice #	Status
000004046	031903103	Paid

Invoice Bal.	Outstanding Bal.
$0.00	**$0.00**

Welcome to Insight Pest Solutions Maine! Please contact us should we be able to help in any way.
207-747-5404

Peter Rogers
41 Leighton Road
Yarmouth, ME 04096
(207) 441-7422

Service Details

Service Address	Service Date	Technician	Time In	Time Out	Due On	Tech. License	Bus. License
41 Leighton Road, Yarmouth, ME 04096	Wed, 05/28/2025 - 01:30PM	Vladimir Stirling	01:20PM	01:46PM	05/28/25	AL-0058329	SCF-2606

Targeted Pests	Other Info
Mosquito & Tick	Few clouds, Temperature: 79.7 F, Humidity: 32%, Wind speed: 1.99m/h, Wind direction: South, 265 Deg.

Products Applied

Product used	Areas applied	Application type	Amount	Price
Cross Check Plus (EPA Code: 279-3206-10404)	Perimeter	Exterior Liquid	2 gal	

Services/Fees

	Price
Initial Mosquito and Tick Service	49.00

Technician Note

Today I performed your Mosquito & Tick Reduction treatment. We treated the perimeter of your property and wood line, along with any NONE flowering trees and shrubs around the home. Keep in mind this is a reduction program and we need your help with reducing the female population as they are the only ones that bite and draw blood. Mosquito Control is intended to reduce the amount of mosquitoes in an outdoor space so that you can enjoy your yard. In order to achieve the best results, we need your help. Please read some of the recommendations below.

Please note- 1 Bottle cap of stagnant water can produce 100 mosquitoes in 5 days!

HELPFUL RECOMMENDATIONS:
1-Remove any and all standing water on your property
2- Clean your gutters at least once per year- clogged gutters are a major breeding site
3- Empty any pots, buckets, tires, bird baths, toys, grills etc.

Thank you for your business and allowing us to protect your home!

Account Credit	0.00
Subtotal	49.00
Sales Tax - 0	0.00
Paid	49.00
TOTAL	0.00

AutoPay - Do Not Pay

Insight Pest Solutions Portland Maine
60 Gray Road Suite 13
Falmouth, Maine, 04105
Account Number: 000004046

insight pest solutions

60 Gray Road Suite 13 Falmouth, ME 04105
(207) 747-5404

Account #	Invoice #	Status
000001010	028235447	Paid

Invoice Bal.	Outstanding Bal.
$0.00	$0.00

Welcome to Insight Pest Solutions Maine! Please contact us should we be able to help in any way.
207-747-5404

Robert Trottier
52 Boulder Ridge
Hollis, ME 04042
(207) 929-8878

Service Details

Service Address	Service Date	Technician	Time In	Time Out	Due On	Tech. License	Bus. License
52 Boulder Ridge, Hollis, ME 04042	Wed, 05/28/2025 - 11:00AM	Vladimir Stirling	10:00AM	11:16AM	05/28/25	AL-0058329	SCF-2606

Targeted Pests	Other Info
Mosquito & Tick	Few clouds, Temperature: 78.51 F, Humidity: 32%, Wind speed: 1.5m/h, Wind direction: East, 167 Deg.

Products Applied

Product used	Areas applied	Application type	Amount	Price
Cross Check Plus (EPA Code: 279-3206-10404)	Perimeter	Exterior Liquid	3 gal	

Services/Fees

	Price
Initial Mosquito and Tick Service	49.00

Technician Note

Today I performed your Mosquito & Tick Reduction treatment. We treated the perimeter of your property and wood line, along with any NONE flowering trees and shrubs around the home. Keep in mind this is a reduction program and we need your help with reducing the female population as they are the only ones that bite and draw blood. Mosquito Control is intended to reduce the amount of mosquitoes in an outdoor space so that you can enjoy your yard. In order to achieve the best results, we need your help. Please read some of the recommendations below.

Please note- 1 Bottle cap of stagnant water can produce 100 mosquitoes in 5 days!

HELPFUL RECOMMENDATIONS:
1-Remove any and all standing water on your property
2- Clean your gutters at least once per year- clogged gutters are a major breeding site
3- Empty any pots, buckets, tires, bird baths, toys, grills etc.

Thank you for your business and allowing us to protect your home!

Account Credit	0.00
Subtotal	49.00
Sales Tax - 0	0.00
Paid	49.00
TOTAL	0.00

AutoPay - Do Not Pay

Insight Pest Solutions Portland Maine
60 Gray Road Suite 13
Falmouth, Maine, 04105
Account Number: 000001010

Insight pest solutions
60 Gray Road Suite 13 Falmouth, ME 04105
(207) 747-5404

Account #	Invoice #	Status
000000899	031909799	Paid

Invoice Bal.	Outstanding Bal.
$0.00	$0.00

Welcome to Insight Pest Solutions Maine! Please contact us should we be able to help in any way. 207-747-5404

Jess Ray
5 Ambiana Avenue
Raymond, ME 04071

Service Details

Service Address	Service Date	Technician	Time In	Time Out	Due On	Tech. License	Bus. License
5 Ambiana Avenue, Gray, ME 04071	Wed, 05/28/2025 - 08:00AM	Vladimir Stirling	08:04AM	08:34AM	05/28/25	AL-0058329	SCF-2606

Targeted Pests	Other Info
Mosquito & Tick	Clear sky, Temperature: 68.52 F, Humidity: 54%, Wind speed: 1.99m/h, Wind direction: West, 316 Deg.

Products Applied

Product used	Areas applied	Application type	Amount	Price
Cross Check Plus (EPA Code: 279-3206-10404)	Perimeter	Exterior Liquid	4 gal	

Services/Fees

	Price
Initial Mosquito and Tick Service	65.00

Technician Note

Today I performed your Mosquito & Tick Reduction treatment. We treated the perimeter of your property and wood line, along with any NONE flowering trees and shrubs around the home. Keep in mind this is a reduction program and we need your help with reducing the female population as they are the only ones that bite and draw blood. Mosquito Control is intended to reduce the amount of mosquitoes in an outdoor space so that you can enjoy your yard. In order to achieve the best results, we need your help. Please read some of the recommendations below.

Please note- 1 Bottle cap of stagnant water can produce 100 mosquitoes in 5 days!

HELPFUL RECOMMENDATIONS:
1-Remove any and all standing water on your property
2- Clean your gutters at least once per year- clogged gutters are a major breeding site
3- Empty any pots, buckets, tires, bird baths, toys, grills etc.

Thank you for your business and allowing us to protect your home!

Account Credit	0.00
Subtotal	65.00
Sales Tax - 0	0.00
Paid	65.00
TOTAL	0.00

AutoPay - Do Not Pay

Insight Pest Solutions Portland Maine
60 Gray Road Suite 13
Falmouth, Maine, 04105
Account Number: 000000899

insight pest solutions

60 Gray Road Suite 13 Falmouth, ME 04105
(207) 747-5404

Account #	Invoice #	Status
000000775	031127687	Paid

Invoice Bal.	Outstanding Bal.
$0.00	**$0.00**

Welcome to Insight Pest Solutions Maine! Please contact us should we be able to help in any way. 207-747-5404

Scott Perry
4 Tamarack Drive
South Berwick, ME 03908
(207) 409-0484

Service Details

Service Address	Service Date	Technician	Time In	Time Out	Due On	Tech. License	Bus. License
4 Tamarack Drive, South Berwick, ME 03908	Thu, 05/29/2025 - 09:00AM	Vladimir Stirling	09:10AM	09:29AM	05/29/25	AL-0058329	SCF-2606

Targeted Pests

Mosquito & Tick

Other Info

Broken clouds, Temperature: 66.24 F, Humidity: 71%, Wind speed: 6.91m/h, Wind direction: South, 220 Deg.

Products Applied

Product used	Areas applied	Application type	Amount	Price
Cross Check Plus (EPA Code: 279-3206-10404)	Perimeter	Exterior Liquid	2 gal	

Services/Fees

	Price
Initial Mosquito and Tick Service	100.00

Technician Note

Today I performed your Mosquito & Tick Reduction treatment. We treated the perimeter of your property and wood line, along with any NONE flowering trees and shrubs around the home. Keep in mind this is a reduction program and we need your help with reducing the female population as they are the only ones that bite and draw blood. Mosquito Control is intended to reduce the amount of mosquitoes in an outdoor space so that you can enjoy your yard. In order to achieve the best results, we need your help. Please read some of the recommendations below.

Please note- 1 Bottle cap of stagnant water can produce 100 mosquitoes in 5 days!

HELPFUL RECOMMENDATIONS:
1-Remove any and all standing water on your property
2- Clean your gutters at least once per year- clogged gutters are a major breeding site
3- Empty any pots, buckets, tires, bird baths, toys, grills etc.

Thank you for your business and allowing us to protect your home!

Account Credit	0.00
Subtotal	100.00
Sales Tax - 0	0.00
Paid	100.00
TOTAL	0.00

AutoPay - Do Not Pay

Insight Pest Solutions Portland Maine
60 Gray Road Suite 13
Falmouth, Maine, 04105
Account Number: 000000775

insight pest solutions

60 Gray Road Suite 13 Falmouth, ME 04105
(207) 747-5404

Account #	Invoice #	Status
000004085	031922294	Paid

Invoice Bal.	Outstanding Bal.
$0.00	$0.00

Welcome to Insight Pest Solutions Maine! Please contact us should we be able to help in any way.
207-747-5404

Maurice Dulac
37 Ridgewood Road
Eliot, ME 03903
(207) 752-1070

Service Details

Service Address	Service Date	Technician	Time In	Time Out	Due On	Tech. License	Bus. License
37 Ridgewood Road, Eliot, ME 03903	Thu, 05/29/2025 - 08:30AM	Vladimir Stirling	08:40AM	08:54AM	05/29/25	AL-0058329	SCF-2606

Targeted Pests	Other Info
Mosquito & Tick	Overcast clouds, Temperature: 63.61 F, Humidity: 74%, Wind speed: 4.61m/h, Wind direction: West, 270 Deg.

Products Applied

Product used	Areas applied	Application type	Amount	Price
Cross Check Plus (EPA Code: 279-3206-10404)	Perimeter	Exterior Liquid	2 gal	

Services/Fees

	Price
Initial Mosquito and Tick Service	75.00

Technician Note

Today I performed your Mosquito & Tick Reduction treatment. We treated the perimeter of your property and wood line, along with any NONE flowering trees and shrubs around the home. Keep in mind this is a reduction program and we need your help with reducing the female population as they are the only ones that bite and draw blood. Mosquito Control is intended to reduce the amount of mosquitoes in an outdoor space so that you can enjoy your yard. In order to achieve the best results, we need your help. Please read some of the recommendations below.

Please note- 1 Bottle cap of stagnant water can produce 100 mosquitoes in 5 days!

HELPFUL RECOMMENDATIONS:
1-Remove any and all standing water on your property
2- Clean your gutters at least once per year- clogged gutters are a major breeding site
3- Empty any pots, buckets, tires, bird baths, toys, grills etc.

Thank you for your business and allowing us to protect your home!

Account Credit	0.00
Subtotal	75.00
Sales Tax - 0	0.00
Paid	75.00
TOTAL	0.00

AutoPay - Do Not Pay

Insight Pest Solutions Portland Maine
60 Gray Road Suite 13
Falmouth, Maine, 04105
Account Number: 000004085

insight pest solutions

60 Gray Road Suite 13 Falmouth, ME 04105
(207) 747-5404

Account #	Invoice #	Status
000003022	032073086	Paid

Invoice Bal.	Outstanding Bal.
$0.00	**$0.00**

Welcome to Insight Pest Solutions Maine! Please contact us should we be able to help in any way.
207-747-5404

Jarrod Burch
25 Locust Lane
South Berwick, ME 03908
(978) 424-3677

Service Details

Service Address	Service Date	Technician	Time In	Time Out	Due On	Tech. License	Bus. License
25 Locust Lane, South Berwick, ME 03908	Wed, 07/02/2025 - 05:00PM	Vladimir Stirling	04:45PM	05:03PM	07/02/25	AL-0058329	SCF-2606

Targeted Pests	Other Info
Mosquito & Tick	Scattered clouds, Temperature: 85.23 F, Humidity: 63%, Wind speed: 5.75m/h, Wind direction: North, 0 Deg.

Products Applied

Product used	Areas applied	Application type	Amount	Price
Cross Check Plus (EPA Code: 279-3206-10404)	Perimeter	Exterior Liquid	2 gal	

Services/Fees

	Price
Initial Mosquito and Tick Service	49.00

Technician Note

Today I performed your Mosquito & Tick Reduction treatment. We treated the perimeter of your property and wood line, along with any NONE flowering trees and shrubs around the home. Keep in mind this is a reduction program and we need your help with reducing the female population as they are the only ones that bite and draw blood. Mosquito Control is intended to reduce the amount of mosquitoes in an outdoor space so that you can enjoy your yard. In order to achieve the best results, we need your help. Please read some of the recommendations below.

Please note- 1 Bottle cap of stagnant water can produce 100 mosquitoes in 5 days!

HELPFUL RECOMMENDATIONS:
1-Remove any and all standing water on your property
2- Clean your gutters at least once per year- clogged gutters are a major breeding site
3- Empty any pots, buckets, tires, bird baths, toys, grills etc.

Thank you for your business and allowing us to protect your home!

Account Credit	0.00
Subtotal	49.00
Sales Tax - 0	0.00
Paid	49.00
TOTAL	0.00

AutoPay - Do Not Pay

Insight Pest Solutions Portland Maine
60 Gray Road Suite 13
Falmouth, Maine, 04105
Account Number: 000003022

insight pest solutions

60 Gray Road Suite 13 Falmouth, ME 04105
(207) 747-5404

Account #	Invoice #	Status
000004460	032086420	Paid

Invoice Bal.	Outstanding Bal.
$0.00	$0.00

Welcome to Insight Pest Solutions Maine! Please contact us should we be able to help in any way.
207-747-5404

Nicholas Jandreau
108 Beaver Dam Road
North Waterboro, ME 04061
(207) 423-8494

Service Details

Service Address	Service Date	Technician	Time In	Time Out	Due On	Tech. License	Bus. License
108 Beaver Dam Road, North Waterboro, ME 04061	Wed, 07/02/2025 - 08:30AM	Vladimir Stirling	08:43AM	08:50AM	07/02/25	AL-0058329	SCF-2606

Targeted Pests	Other Info
Mosquito & Tick	Overcast clouds, Temperature: 76.46 F, Humidity: 70%, Wind speed: 3m/h, Wind direction: South, 200 Deg.

Products Applied

Product used	Areas applied	Application type	Amount	Price
Cross Check Plus (EPA Code: 279-3206-10404)	Perimeter	Exterior Liquid	1.5 gal	

Services/Fees

	Price
Initial Mosquito and Tick Service	40.00

Technician Note

Today I performed your Mosquito & Tick Reduction treatment. We treated the perimeter of your property and wood line, along with any NONE flowering trees and shrubs around the home. Keep in mind this is a reduction program and we need your help with reducing the female population as they are the only ones that bite and draw blood. Mosquito Control is intended to reduce the amount of mosquitoes in an outdoor space so that you can enjoy your yard. In order to achieve the best results, we need your help. Please read some of the recommendations below.

Please note- 1 Bottle cap of stagnant water can produce 100 mosquitoes in 5 days!

HELPFUL RECOMMENDATIONS:
1-Remove any and all standing water on your property
2- Clean your gutters at least once per year- clogged gutters are a major breeding site
3- Empty any pots, buckets, tires, bird baths, toys, grills etc.

Thank you for your business and allowing us to protect your home!

Account Credit	0.00
Subtotal	40.00
Sales Tax - 0	0.00
Paid	40.00
TOTAL	0.00

AutoPay - Do Not Pay

Insight Pest Solutions Portland Maine
60 Gray Road Suite 13
Falmouth, Maine, 04105
Account Number: 000004460

State of Maine

Maine Department of Agriculture, Conservation and Forestry

BOARD OF PESTICIDES CONTROL

License Number: COA-9452

VLADIMIR STIRLING

INSIGHT PEST SOLUTIONS MAINE LLC

Has qualified as required by 22 MRSA Chapter 258-A as:

Commercial Operator

Categories: 7A

ISSUE DATE: 7/12/2024

EXPIRATION DATE: 12/31/2026

State of Maine
Maine Department of Agriculture,Conservation and Forestry
BOARD OF PESTICIDES CONTROL

License Number: COA-9452 - (BPC_IND-60031)
VLADIMIR STIRLING
31 MARION AVE
MILLBURY , Massachusetts 01527
INSIGHT PEST SOLUTIONS MAINE LLC
Commercial Operator
Categories: 7A
EXPIRATION DATE: 12/31/2026

BOARD OF PESTICIDES CONTROL
28 State House Station
Augusta, Maine 04333-0028
www.thinkfirstspraylast.org
207-287-2731

EMERGENCY PHONE NUMBERS:

Poison Center	1-800-222-1222
National Pesticides Info Center	1-800-858-7378
Board of Pesticides Control	1-207-287-2731
DEP Spill Response Number	1-800-482-0777

insight
pest solutions

60 Gray Road Suite 13 Falmouth, ME 04105
(207) 747-5404

Account #	Invoice #	Status
000002943	031887607	Paid

Invoice Bal.	Outstanding Bal.
$0.00	**$0.00**

Welcome to Insight Pest Solutions Maine! Please contact us should we be able to help in any way.
207-747-5404

Julie Largay
P.O. Box 461
Raymond, ME 04071

Service Details

Service Address	Service Date	Technician	Time In	Time Out	Due On	Tech. License	Bus. License
8 Rolling Brook Road, Raymond, ME 04071	Wed, 05/21/2025 - 09:00AM	Roger Getchell	12:06PM	12:32PM	05/21/25	COA-9705	SCF-2606

Targeted Pests	Other Info
Mosquito & Tick	Overcast clouds, Temperature: 53.71 F, Humidity: 65%, Wind speed: 11.07m/h, Wind direction: East, 126 Deg,

Products Applied

Product used	Areas applied	Application type	Amount	Price
Cross Check Plus (EPA Code: 279-3206-10404)	Perimeter	Exterior Liquid	3 gal	

Services/Fees

	Price
Initial Mosquito and Tick Service	65.00

Technician Note

Today I performed your Mosquito & Tick Reduction treatment. We treated the perimeter of your property and wood line, along with any NONE flowering trees and shrubs around the home. Keep in mind this is a reduction program and we need your help with reducing the female population as they are the only ones that bite and draw blood. Mosquito Control is intended to reduce the amount of mosquitoes in an outdoor space so that you can enjoy your yard. In order to achieve the best results, we need your help. Please read some of the recommendations below.

Please note- 1 Bottle cap of stagnant water can produce 100 mosquitoes in 5 days!

HELPFUL RECOMMENDATIONS:
1-Remove any and all standing water on your property
2- Clean your gutters at least once per year- clogged gutters are a major breeding site
3- Empty any pots, buckets, tires, bird baths, toys, grills etc.

Thank you for your business and allowing us to protect your home!

Account Credit	0.00
Subtotal	65.00
Sales Tax - 0	0.00
Paid	65.00
TOTAL	0.00

Make checks payable to:
Insight Pest Solutions Portland Maine
60 Gray Road Suite 13
Falmouth, Maine, 04105
Account Number: 000002943

10056564

LESCO®

CrossCheck® plus

MULTI-INSECTICIDE

Net Contents:
96 Fluid Ounces

#089363

To control pests indoors and outdoors on residential, institutional, public, commercial, and industrial buildings, greenhouses, food handling establishments, and lawns, ornamentals, parks, recreational areas and athletic fields.

When used as a termiticide, individuals/firms must be licensed by the state to apply termiticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the pest control regulatory agency of your state prior to use of this product.

Provides up to 1 month residual control of house flies. Kills fleas for up to 3 months.

EPA Reg. No. 279-3206-10404
EPA Est. 279-NY-1

Active Ingredient:	**By Wt.**
Bifenthrin*	7.9%
Other Ingredients:	92.1%
	100.0%

LESCO CrossCheck® Plus Multi-Insecticide contains $^{2}/_{3}$ pound active ingredient per gallon.

*Cis isomers 97% minimum, trans isomers 3% maximum.

™

KEEP OUT OF REACH OF CHILDREN

CAUTION

See other panels for additional precautionary information.

Distributed By:
LESCO, Inc.
1385 East 36th Street
Cleveland, Ohio 44114-4114

1508xxxx

Job xxxx

Perimeter Treatment: Apply to a band of soil and vegetation 6 to 10 feet wide around and adjacent to the structure. Also, treat the foundation of the structure to a height of 2 to 3 feet. Apply 0.33 to 1.0 fluid oz. of LESCO CrossCheck Plus Multi-Insecticide per 1,000 square feet in sufficient water to provide adequate coverage (refer to LESCO CrossCheck Plus Multi-Insecticide Dilution Chart). For sections of foundation that abut non-porous horizontal surfaces, the treated areas must be protected from rainfall and spray from sprinklers or they do not drain into a sewer, storm drain, or curbside gutter (e.g., not to sections that abut driveways or sidewalks that drain into streets).

Broadcast Treatment of Wood for the Control of Wood-Infesting Insects and Nuisance Pests Outside of Structures

Apply a 0.06% dilution with a fan spray using a maximum pressure of 25 psi. Treatment should be made to thoroughly and uniformly cover the surface but limit excess runoff.

To control wood-infesting insects active inside trees, utility poles and/or fence posts, drill to find the interior infested cavity and inject a 0.06% dilution. To control Bees, Wasps, Hornets, and Yellow-Jackets, apply in late evening when insects are at rest. Aim spray at nest openings in ground, bushes and in cracks and crevices which may harbor nests, saturating nest openings and contacting as many insects as possible.

Pests Under Slabs

Infestations of Arthropods, such as Ants, Cockroaches and Scorpions inhabiting under slab areas may be controlled by drilling and injecting or horizontal rodding and then injecting 1 gallon of a 0.06% or 1/2 gallon of a 0.12% dilution per 10 square feet (or, 2 gallons of a 0.06% dilution or 1 gallon of a 0.12% dilution per 10 linear feet).

MOSQUITO CONTROL

To control adult Mosquitoes outdoors on residential, institutional, public, commercial and industrial buildings, and lawns, ornamentals, parks, recreational areas and athletic fields.

Apply LESCO CrossCheck Plus Multi-Insecticide for Mosquito control at an application rate of 0.33 to 1.0 fluid oz. LESCO CrossCheck Plus Multi-Insecticide per gallon of water (0.07 to 0.22 lb. bifenthrin/acre), and apply at the rate of one gallon of dilution per 1,000 square feet as a general spray (refer to the LESCO CrossCheck Plus Multi-Insecticide Dilution Chart). Use the high rate for residual control of Mosquitoes. Use this product for control of Mosquitoes that may potentially transmit malaria, and arboviruses (West Nile fever, dengue fever, Eastern equine encephalitis, and St. Louis encephalitis).

Apply as a residual spray to outside surfaces of buildings including but not limited to, exterior siding, foundations, porches, window frames, eaves, patios, garages, refuse dumps, lawns such as grass areas adjacent to or around private homes, duplexes, townhouses, condominiums, house trailers, apartment complexes, carports, fence lines, storage sheds, barns, and other commercial, residential and non-commercial structures, soil, trunks of woody ornamentals, trees, shrubs, ground cover, bedding plants, foliage plants, flowers, non-bearing fruit and nut trees, urban areas, parks, campsites, athletic fields, playgrounds, recreational and overgrown waste areas, roadsides and other areas where Mosquitoes are found. May also be applied to non-bearing crops or perennial crops that will not produce harvestable raw agricultural commodities during the season of application.

Use the high rate for heavy pest infestation, quicker knockdown, or longer residual control. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure, or if there are signs of renewed insect activity. For the lower use rates, repeat application should be limited to no more than once per seven days. For the high use rate of 1.0 fluid oz. LESCO CrossCheck Plus Multi-Insecticide per gallon of water, do not apply more than once per four weeks.

Apply with hand-held and back pack sprayers or mist blowers, ground sprayers, power sprayers, truck-mounted hydraulic sprayers or mist blowers. Do not apply by air or with hand-held or truck-mounted cold aerosol ULV sprayers and thermal fogging devices. For best results, apply when the mosquitoes are most active. Application during the cooler hours of the night or early mornings is recommended.

Do not apply more than 1.0 fluid oz. of LESCO CrossCheck Plus Multi-Insecticide per 1,000 square feet (equivalent to 0.22 lb. bifenthrin/acre) per application.

Do not apply when wind speed exceeds 10 MPH.

INDOOR USE

For control of Ants, Carpenter Ants, Bedbugs, Bees, Beetles, Biting Flies, Boxelder Bugs, Centipedes, Cicadas, Cockroaches, Crickets, Earwigs, Firebrats, Fleas, Flies, Gnats, Millipedes, Mosquitoes, Moths, Scorpions, Silverfish, Sowbugs (Pillbugs), Spider Mites, Spiders (including Black Widow, Brown Recluse and Hobo Spiders), Springtails, Stink Bugs, Ticks (including Brown Dog Ticks), Vinegar (Fruit) Flies, and Wasps.

In the home, all food processing surfaces and utensils should be covered during treatment or thoroughly washed before use. Exposed food should be covered or removed.

TAURUS® SC

Termiticide / Insecticide

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

- **For sale to, use and storage only by individuals/firms licensed or registered by the state to apply termiticide and/or general pest control products.**
- **DO NOT** use this product for termite or other pest control indoors, except for label-specified applications for termite control and foam applications to wall voids for control of other listed pests.
- **DO NOT** use on golf course turf. May be used for control of termites and other listed pests found on/near structures associated with golf courses, but only as specified on this label.
- **DO NOT** use on animal trophies or animal skins.
- **DO NOT** use on/in commercial bee hives.

See inside booklet for additional **Restrictions, First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty,** and state-specific use sites and/or restrictions.

ACTIVE INGREDIENT:

*Fipronil	9.1%
OTHER INGREDIENTS:	90.9%
TOTAL:	100.0%

* (5-amino-1-(2,6-dichloro-4-(trifluoromethyl) phenyl)-4-((1,R,S)-(trifluoromethyl)sulfinyl)-1-H-pyrazole-3-carbonitrile)

TAURUS® SC termiticide/insecticide contains 0.8 pounds active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)
See attached label for additional precautionary information and complete Directions for Use.

EPA Reg. No. 53883-279
EPA Est. No. 53883-TX-002

NET CONTENTS:
2.5 GALLONS

0 72693 03200 2

Manufactured by:

ADAMA

Control Solutions Inc.
5903 Genoa-Red Bluff, Pasadena, TX 77507
A member of Adama
Consumer and Professional Solutions

EPA 112619

Termite Carton Nests in Trees

Do not treat fruit-bearing or nut-bearing trees.

For control of termite carton nests in trees, inject Taurus SC finished dilution (or foam). Application to multiple injection points to varying depths may be necessary. Carton nest material may be removed from tree(s).

In all states **except California,** an application of the Taurus SC finished dilution may be applied to soil as a drench or by rodding around the root flare of the tree to prevent reinfestation by termites from the soil. For small trees (i.e., less than or equal to 6 inches in diameter), apply 1 gallon of Taurus SC finished dilution. For larger trees, apply 4 gallons of Taurus SC finished dilution per 10 linear feet measured as the circumference at the root flare.

Drywood Termites and Wood-infesting Beetles or Borers

Wood-infesting beetle or borer uses not registered in California.

NOTE: Before treatment, turn off any air circulation system that moves air from area(s) to be treated to an untreated interior space of the structure until application has been completed and sprays have dried.

Treat galleries in structural and/or nonstructural elements and structural voids with Taurus SC finished dilution using a foam, low-pressure spray (25 PSI or less at the nozzle), or mist.

- Locate galleries using visual signs (e.g., blistered wood, emergence or clean out holes, frass, or pellets), the presence of live insects, mechanical sounding techniques, or listening devices (e.g., acoustic emission detectors, stethoscopes).
- Drill holes to penetrate the gallery system for treatment; distribute drill holes to adequately cover the gallery system.
- **DO NOT** apply where electrical shock hazards exist.
- Drill holes must be sealed after treatment.

Carpenter Bees in Localized Areas

Carpenter bee use in localized areas not registered in California.

For control of carpenter bees in localized areas, apply 0.06% Taurus SC finished dilution (as a spray, mist or foam) directly into gallery entrance holes. After application, gallery entrance holes should be plugged.

DIRECTIONS FOR USE TO CONTROL LISTED PESTS ON OUTSIDE SURFACES AND ALONG FOUNDATION PERIMETER OF LISTED STRUCTURES

Listed structures are residential, institutional, commercial and industrial buildings and utility enclosures.

USE RESTRICTIONS:

- Only applicators wearing the personal protective equipment required by this product label may be in the area during application.
- Do not treat within a distance of 1 foot out from the drip line of edible plants.
- Do not contaminate water, food, or feed. Cover or remove all exposed food, feed and drinking water.
- Do not contaminate public or private water supplies.
- Do not apply to wasp or hornet nests if they are not attached to or within the structure.
- Do not make treatments during times of precipitation.
- Do not allow residents, children, other people or pets into the treatment area until sprays have dried. After treatment, the applicator is required to check for leaks resulting in the deposition of treatment dilution in locations other than those prescribed in this label. When found, this material must be cleaned prior to leaving the application site. Do not allow people or pets to contact contaminated areas or to reoccupy contaminated areas of the structure until clean-up is completed.
- Do not spray air conditioning units or intake vents.
- Do not use indoors except for application into structural voids.
- Do not apply to playground equipment and pet quarters.
- Do not apply to applications to runoff or drip from treated surfaces.
- Do not apply to boat houses, including their piers or pilings.
- Do not use in a spray tank with borate contaminates.
- Doors and windows adjacent to application site must be closed during surface application.
- Do not apply within 15 feet of bodies of fresh water; lakes, reservoirs, rivers, permanent streams, marshes, natural ponds and commercial fish ponds. A 15-foot buffer of uniform groundcover must exist between application zone and bodies of fresh water (uniform ground cover is defined as land which supports vegetation of greater than 2 inches in height throughout).
- Do not apply within 60 feet of estuarine bodies of water. Estuarine water bodies are brackish, tidal water bodies such as bays, mouths of rivers, salt marshes and lagoons.

CALIFORNIA USE RESTRICTIONS: In addition to use restrictions stated above, applications made in California are subject to the following additional restrictions.

- Do not apply Taurus SC to the garage door, driveway, vertical surfaces above the driveway and garage door, or to cracks and crevices leading or adjacent to the driveway such as the expansion joint between the garage and driveway.
- Do not apply bandwidth at greater than 6 inches out and 6 inches up from where the ground meets the foundation.
- Only use 0.03% dilution mixing rate.
- Do not apply when rain is predicted within 48 hours post-application or during active precipitation.
- Do not re-apply at intervals less than 60 days.
- Do not apply more than 4 times per year.
- Do not make applications on any date between November 1 and February 28.

Use Taurus SC to kill and to provide residual control of the following pests:

Ants (acrobat, Argentine, big-headed, carpenter, crazy, odorous, pavement, pharaoh, and thief)

Use Taurus SC to kill the following pests:
Asian lady beetles, darkling beetles
Australian, Oriental, and smoky brown cockroaches
Black widow, brown recluse, cellar, and hobo spiders
Box-elder bugs, pill bugs
Brown and dog ticks
Centipedes
Cluster flies
European earwigs
House crickets
Millipedes
Paper wasps*
Silverfish
Eastern Sub-terranean Termite Swarmers (Alates)** (Not for use in California)
Yellow jackets
* Taurus SC is not a knockdown agent.
**Application to termite swarmers does not provide structural protection.

MIXING INSTRUCTIONS*: For perimeter pest treatments, mix a 0.06% (or 0.03%) spray dilution of Taurus SC by filling the treatment tank 1/4 to 1/3 full with water, then add 0.8 fluid ounces (or 0.4 fluid ounces) of Taurus SC. The filling hose must be equipped with an anti-backflow device or the water flow must include an air gap to protect against back siphoning. Add more water to the tank while agitating to 1 gallon of finished dilution.

Permitted Taurus SC Frequency and Dilution Rate Application Scenarios†		
% Taurus SC finished dilution		
0.03% 4 times/calendar year	0.06% 2 times/calendar year	0.03% 2 times/calendar year and 0.06% 1 time/calendar year
†In California, only the 0.03% 4 times/calendar year at 1 quart/160 ft application scenario is approved.		

***CALIFORNIA MIXING INSTRUCTIONS:** For perimeter pest treatments, mix a 0.03% spray dilution of Taurus SC by filling the treatment tank 1/4 to 1/3 full with water, then add 0.4 fluid ounces of Taurus SC. The filling hose must be equipped with an anti-backflow device or the water flow must include an air gap to protect against back siphoning. Add more water to the tank while agitating to 1 gallon of finished dilution.

APPLICATIONS TO EXTERIOR SURFACES OF LISTED STRUCTURES AND INTO WALL VOIDS:

Apply Taurus SC finished dilution (or foam) as a low-pressure spray to the exterior of the structure where listed pests enter, trail around the structure or where they crawl and hide or their nests are found. Treat using a low-pressure coarse banded surface spray up to 18 inches in width around doors, windows, vents, pipes, foundation cracks, drilled holes or around any exterior openings where listed pests could enter the structure. Make sure to treat the joint where exterior siding (wood, vinyl, aluminum or other similar materials) meets the cement, brick or block foundation. Treat anywhere electrical, cable or telephone wires enter the house. This treatment should be made as a general surface spray, crack and crevice spray, or a wall void application. Taurus SC may be applied as a foam treatment into wall voids to kill and / or control the above listed pests.

Refer to the **Foam Application** section of this label for specific foam mixing and application instructions.

In California: Use only 0.03% finished dilution no more than 4 times per year. Do not apply to garage doors, driveway, vertical surfaces above the driveway and garage door, or to crack and crevices leading or adjacent to the driveway such as the expansion joint between the garage and driveway. Do not apply a bandwidth greater than 6 inches up and out from where the ground meets the foundation.

APPLICATIONS TO PERIMETER OF LISTED STRUCTURES*:

Apply Taurus SC finished dilution as a low pressure coarse general surface spray along the foundation exterior perimeter to an area one foot up and one foot out from where the ground meets the foundation.

Apply 2 quarts of Taurus SC finished dilution per 160 linear feet (approximately 1.5 gallons finished spray per 1000 square feet). Nests that are found on the ground within 1 foot of the foundation may be treated. Vegetation touching the structure may offer a route for the entry of ants into the structure without coming into contact with the treatment, therefore, remove or prune away any shrubbery, bushes and tree branches touching the structures.

***CALIFORNIA APPLICATIONS TO PERIMETER OF LISTED STRUCTURES:**

Apply 0.03% Taurus SC finished dilution as a low pressure coarse general surface spray along the foundation exterior perimeter to an area 6 inches up and 6 inches out from where the ground meets the foundation. Do not apply Taurus SC to the garage door, driveway, vertical surfaces above the driveway and garage door, or to cracks and crevices leading or adjacent to the driveway such as the expansion joint between the garage and driveway.

In California, apply 1 quart of Taurus SC finished dilution per 160 linear feet (approximately 1.5 gallons finished spray per 1000 square feet). Vegetation touching the structure may offer a route for the entry of ants into the structure without coming into contact with the treatment, therefore, remove or prune away any shrubbery, bushes and tree branches touching the structures.

Board Enforcement Case Pre-Review
Background Summary
November 13, 2026

Subject:

Butler Farms
650 Van Buren Rd.
Limestone, ME 04750

Summary of Complaints/Incidents:
BPC's 2024 Enforcement Protocol, Section 6(b) requires that "patterns of repeat offenses by the same entity shall be presented to the Board prior to negotiating an administrative consent agreement."

On October 8, 2025, BPC received a complaint regarding a burn pile in Caswell, which appeared to include pesticide containers. They also observed fumigant canisters lying in a grassy field, improperly stored. On October 10, 2025, the BPC District 5 (Aroostook County) pesticide inspector met with the landowner, Clayton Roy, since the farmer/applicator, Bret Butler, was busy harvesting. Mr. Roy showed the inspector the burn pit. Some pesticide containers had been removed from the burn pit since the date of the complaint. The inspector looked through the burn pit and made note of pesticides still found within. Mr. Roy also showed the inspector the location of the fumigant canisters (aka "pigs"), which were identified as Strike 85CP, EPA Reg #87994-6, active ingredient chloropicrin, which is a hazardous, skull and crossbones Restricted Use Pesticide fumigant, which, according to the label, can be fatal if inhaled and has the potential to cause adverse acute health effects over a wide area. The inspector took photos of the partially burned photos as well as the chloropicrin pigs that appeared to have been in the field for some time; a wasp nest was observed on one of them.

It should be noted that burning of pesticide containers is considered a violation of pesticide labels that only allow burning if allowed by the state. In Maine, open burning of plastics is prohibited; therefore, burning of pesticide containers in open burn pits violates the label requirements. Labels often allow for incineration, but that must occur within an incinerator.

After much difficulty getting in touch with Mr. Butler, the pesticide inspector was able to schedule an inspection, which was conducted on October 24, 2025. Mr. Butler provided written statements addressing the inspector's observations of burned pesticide containers and improperly stored chloropicrin pigs. Mr. Butler's statement states that the small number of burned containers was due to an employee mistake and that they typically do not burn pesticide containers. Mr. Butler also stated to the inspector that he believed there was an agricultural exemption that allowed farmers to ignore certain pesticide label requirements. Regarding the chloropicrin pigs, Mr. Butler's stated that he believed the storage in the field was compliant with the label and that their storage in the field was only temporary.

Please see the attached inspector's report for more details on the 2025 incident.

In October 2026, the BPC Compliance Manager asked the District 5 pesticide inspector to conduct a follow-up inspection on Bret Butler at the site of the 2025 complaint. Because Mr. Butler's applicator's license expired in October 2025 and was never renewed, the Compliance Manager wanted to find out if pesticides had been used in 2026, as well as to make sure they were no longer burning pesticide containers or improperly storing fumigants.

The pesticide inspector did not find pesticides in the burn pit or any fumigant canisters, but did find other items of concern, such as some potatoes stored next to pesticide containers, including paraquat. Additionally, there was plenty of evidence suggesting that pesticides, including RUPs, had been applied in 2026 despite Mr. Butler not having renewed his applicator's license or having obtained enough credits for the renewal. The inspector also found numerous unrinsed pesticide containers, as well as a large pesticide tote that was cut open and used to dispose of waste, which is a violation of label directions prohibiting reuse of the container.

The inspector made multiple attempts to reach Mr. Butler but was only able to speak with an employee of Mr. Butler. As of November 3, 2026, BPC staff have attempted to reach Mr. Butler through word of mouth, by phone, and by email, with no success. BPC has attempted to make Mr. Butler aware that BPC has the right to issue a subpoena to review his pesticide records if he continues to ignore BPC's attempts to reach him. On November 5, 2026, Mr. Butler reached out to the District 5 inspector via text.

Summary of Relevant Rules and/or Laws:

- 7 U.S.C. § 136j(a)(2)(G) and 7 M.R.S. § 606(2)(B) prohibit the use or supervision of such use of a pesticide inconsistent with its label, including improper storage and disposal
- 22 M.R.S. § 1471-D(2) "No private applicator shall use or supervise the use of any limited or restricted use pesticide without prior certification from the board"
- 22 M.R.S. § 1471-D(2-D) "A private applicator of general use pesticides may not use or supervise the use of general use pesticides for food production without prior certification from the board, except that a competent person who is not certified may use such a pesticide under the direct supervision of a certified applicator."

Attachments:

1. Screenshot of 2025 complaint in PEGA/MEPERLS system
2. Abridged Inspector's Report 2025
3. Applicator Records & Operations Check 10/24/2025
4. Bret Butler's Statements 2025
5. Selection of Photos from 2025
6. Strike CP Fumigant EPA Reg #87994-6 label Storage and Disposal section
7. Linex 4L EPA Reg #61842-21 label Storage and Disposal section
8. Screenshot of 2026 complaint in PEGA/MEPERLS system
9. State Activity Inspection Report 10/20/2026
10. State Activity Inspection Report 10/30/2026
11. Selection of Photos from 2026

Dashboard
My Work
Reports
Configuration
Renewal Emails

Recent

Inquiry / Complaint EC-113857
Inspection RC-218806
Inspection RC-150875
Complaint COMPLAINT-4
Search Entity

Following

No cases are

Inquiry / Complaint (EC-113857)

Complaint | Overview | Caller | Inspections | Enforcements | Audit

Action Taken
Inspection Required

Finalized / Resolved ☐

Comments
—

Resolution Details
—

Complaint Details

EC-113857

First name
Clayton

Last name
Roy

Complaint Details
On October 8, 2025, BPC received an email from [redacted] regarding a burn pile in Caswell, which appeared to include pesticide containers. There were also containers of chloropicrin in a field, improperly stored. [redacted] did not wish to file a formal complaint but wanted to inform BPC in case there were any pesticide related "red flags."

Call Date/Time
—

Estimated Date of Incident
Oct 8, 2025

Urgency Level
Medium

Topic
Storage / Disposal

Site
Unknown

Application Method
Unknown

Complaint Physical Location

Address Line
—

Address Line 2
—

City
Caswell

Directions
western end of Pleasant Ridge Road in Caswell. Here is a pin of the site in Google Maps: https://maps.app.goo.gl/Hu6eoUqi86vG6q4D8

EC-113857 Inspector's Report – Butler Farms Complaint

Background Information: On October 8, 2025, the Maine Board of Pesticides Control received a complaint regarding a burn pit located in Caswell. Photos of the burn pit showed it to contain a large amount of pesticide containers, and the cardboard boxes the containers are stored in. Also included in the email were photos and concerns of improperly stored Chloropicrin containers. The photos showed that the green tanks were stored outside in some grass and were believed to be empty. The complainant was concerned about the improperly stored and disposed products and wanted the BPC to investigate it. The site was described as being on private property behind a gate on Pleasant Ridge Road in Caswell, on property owned by Clayton Roy. While Clayton still owns the land, it is now farmed by his grandson, Bret Butler. Bret's license (PPA-2865) was due to expire on October 31, 2025, at the time of inspection.

Complaint: Improper storage and disposal of pesticides, including the fumigant, Chloropicrin.

Investigation: Inspection #251010JLR01

I met with Clayton Roy at the gate on Pleasant Ridge Road in Caswell on October 10, 2025, at 9:00am. Clayton informed me of how he no longer farms, but still owns the land that his grandson, Bret Butler, grows potatoes on. When asked if Bret was available to meet with, Clayton stated that he was busy on a harvester. Clayton then took me down to the burn pit. The pit was still full of cardboard boxes with pesticide labels on them, but the plastic containers that were in the complainant's photos were gone. When I asked Clayton what happened to the containers, he informed me that Bret removed them from the burn pile the evening before, due to my arrival being scheduled for the next morning.

I took numerous sample photographs of the burn pit before putting on PPE and starting to dig through the burn pile. Numerous cardboard boxes of numerous different products were found, including herbicides, fungicides, insecticides, adjuvants, and defoamers. The burn pit also contained materials such as wood, metal, fabric, and garbage. While digging deeper, I was able to find burnt and melted plastic pesticide containers, some of which still had the label attached. Some of the plastic jugs still contained pesticide residues, which leaked onto the ground through burnt holes in the jugs. Clear evidence of several pesticides and adjuvants were located in the burn.

Four physical samples were collected from the burn site. These included two shipping receipts that I found with Bret Butler's name on them, showing products purchased from Nutrien Ag Solutions in Mapleton and Helena Agri Enterprises in Presque Isle. The other two physical samples were burned pesticide containers, with labels clearly

showing Linex 4L Herbicide (EPA Reg #61842-21) and a fungicide container where the product's name is illegible.

Once finished with the burn pit, Clayton took me to where the Chloropicrin tanks were. Just like in the photos from the complainant, 7 green Strike 85CP tanks (EPA Reg #87994-6) were laying horizontally in the grass near some old vehicles. Sample photographs were taken of the tanks. The grass around the tanks was long and untouched, making it appear that they had been sitting there for quite some time. One of the tanks even had a hornet's nest on it. Container labels of Stike 85CP were still attached to a majority of the tanks. I informed Clayton of the requirement that these tanks needed to be stored inside under lock and key, and how the tanks needed to be stored upright and secured to a wall. I showed the requirements to Clayton on the labels that were still attached to the tanks of the restricted use pesticide. I told Clayton that the tanks needed to be moved inside a secure building as soon as possible. I stressed the importance of moving these containers carefully and making sure they would be properly stored as the label requires.

I asked Clayton to take me to where the empty pesticide containers that were removed from the burn pit now being stored. Clayton wasn't sure where this was but brought me into a couple of garages to look. In these garages were pallets of stored, unused pesticides. While these products were at least stored in a building, there was a large amount of pigeon feces on the boxes. Clayton also informed me that the building's door does not lock, and there were no signs designating the building as a pesticide storage area. A majority of the products stored in this garage were for use with seed potatoes. Many pesticide products were observed in this garage, and photographs were taken of them in storage.

After looking through the garage, Clayton called Bret to ask where the empty containers from the burn pit had been moved too. Bret told him in a big metal container, which Clayton would then bring me too. Sample photographs were taken of the empty containers laying in the bottom of the metal container. Among the pesticide containers were lots of burnt and melted plastic.

Before leaving, I again reminded Clayton of how the Chloropicrin needed to be stored properly as soon as possible. I also informed Clayton that I would like to sit down with Bret and conduct a for-cause records check once he was done harvesting his potatoes.

Inspection #251021JLR02

After trying to contact Bret for 11 days without success, I called Clayton again to see if Bret was available. Clayton informed me that the Chloropicrin had been moved inside a

building, and the farm was done harvesting potatoes for the year. Clayton said he would show me the stored Chloropicrin.

I showed up to Clayton's gate on Pleasant Ridge Road in Caswell at 11:30am on October 21, 2025. I didn't see Clayton around yet, so I waited outside of my vehicle for him to show up. A man walked up to me and asked if I was looking for Clayton. He introduced himself as Bret Butler. I told Bret that I was meeting Clayton, but that I'd like to speak with him as well. Clayton would arrive a few moments later.

Bret and Clayton took us into a garage where the Chloropicrin was stored. Sample photographs were taken of the building and the stored chemicals. Borosol 10 Fertilizer and LI 700 Adjuvant were also observed in this garage along with the Strike 85CP Fumigant. While inside, the Chloropicrin was still stored horizontally, and the building did not lock or have signs indicating a pesticide storage area. I informed Bret that the Chloropicrin was still improperly stored according to the label. Bret said that everybody stores the tanks this way, and that nothing he has done is wrong. He tried explaining how there were "agricultural exemptions" with certain aspects of pesticide labels, and not everything that a label says needs to be followed by the farmer. I informed Bret that I had never heard of that and didn't believe that was true. Bret strongly objected to that and continued to defend his case. Post inspection phone calls with BPC Director Alex Peacock, BPC Compliance Manager Jose Gayoso, and former District 5 inspector Keith Brown would confirm to me that "agricultural exemptions" do not exist.

Bret had an important matter to deal with, so he left after looking over the stored Chloropicrin. Before leaving, however, we agreed to meet again later that week to conduct a for cause records check with the farm.

Inspection #251024JLR01

I met with Bret Butler (PPA-2865) and Dann Cyr (ABA-4762) at the farm's office located at 25 Pleasant Ridge Road in Caswell at 12:00pm on October 24th. Bret's applicator's license was due to expire on October 31, 2025, and he didn't have enough credits to renew. Compliance assistance was given to Bret on how to find online courses on the BPC's website. Bret informed me that he and Dann are the only ones on the farm who handle pesticides. Applications are made with a leased John Deere 4023R, which is calibrated by the Maine Potato Board.

Bret's application records showed that he applied 11 different pesticides to his potatoes in 2025, making applications to his 450 acres of Limestone fields on 10 different days. All recorded products were properly registered and applied at rates within the maximum labeled rates. Bret's records were adequate, only missing the rate per acre of

products applied. Bret knew the rates of the top of his head, and compliance assistance was given to ensure he records them in the future. Several pesticide products and pests controlled were listed in Bret's application records.

Bret did not have labels available for the Luna or Mirvais Prime. Information about these products would be taken from the product labels available on NPIRS. Bret also did not include adjuvants in his records. When asked what he uses, he stated he applied Aqua-Mate II with every application. This would later bring up other issues, as it was determined post inspection that this adjuvant is not registered in Maine. The company that sells the adjuvant was also not licensed as a General Use Dealer.

Bret wrote two statements during this inspection, one for the burn pit and the other for the Chloropicrin. He claimed that the chemical jugs located in the pile were placed there by mistake by an employee. Bret wrote, and explained to me, that the farm triple rinses their containers and disposes of them through the sanitation vendor who brings them to the landfill. He also discussed how the number of containers that was found in the burn pit is a very small percentage of the total amount of jugs they use in a season and even said "if I was to burn some pesticide containers, I would burn them all." Bret was adamant that no pesticide containers had been burned, and that the jugs found in the burn pit were placed there accidentally, with no intent to burn.

As for the Chloropicrin tanks, Bret admitted that he misunderstood the label. However, he did still defend that nothing was wrong with the way the "pigs" were stored. Bret used certain language in the label and factors of where they were stored to defend that the tanks were stored properly for Northern Maine climates. He also explained how the tanks were only recently moved to the area of grass. Bret said they were stored inside, until the farm needed to move a piece of equipment in the garage, in which the Chloropicrin tanks were in the way. However, the grass around the tanks did not appear to be disturbed when I took the sample photographs.

Back in the office, I looked at the pesticides Bret informed me he used on his potatoes versus the products I located in the burn pit. 13 products were found in the burn pit that Bret made no mention of using in 2025.

Inspection #251107JLR03

On November 4th, Bret texted me saying that he realized he forgot to show me the application records made to his seed potatoes. He said he keeps a separate logbook for the seed potatoes to keep the books clean and it's easier for his seed customers. We agreed to meet on the 7th to conduct another records check inspection. I met with Bret Butler at his office located at 25 Pleasant Ridge Road in Caswell at 1:00pm on November 7,

2025. A records check was conducted for products he applied to his 60 acres of seed potatoes in 2025. Only foliar applications were recorded in the logbook, and compliance assistance was given to Bret informing him that in-furrow applications need to be recorded as well. Like with the table stock potato application records, adjuvants were not included in the logbook. When asked, Bret said he applied the unregistered Aqua-mate II, along with LI 700 and Dyne-Amic as adjuvants throughout the year. Several pesticides were recorded in the logbook and applied on 11 different days for control of certain pests to Bret's seed potatoes.

Now that I had information on all products that Bret applied in 2025, I asked him about a few of the remaining products that I could remember finding in the burn pit that weren't in any records. When asked about the Averland FC Insecticide (EPA Reg #89118-10, RUP) Bret said that he had used it for control of Colorado Potato Beetles but evidently forgot to include it in both of his application logbooks. Another product that Bret forgot to include in his records was Organic JMS Stylet Oil (EPA Reg #65564-1). Compliance assistance was given to Bret about the importance of including every application of every product in his logbook.

While reviewing the labels that were part of this inspection, it was discovered that Lamcap II Insecticide (EPA Reg #100-1295) had a maximum labeled rate of 1.92floz/acre for use on potatoes. Bret's application records show that he applied the Restricted Use Pesticide at 2floz/acre.

Conclusion

Multiple violations arose out of this complaint, with the major issues being the Chloropicrin storage and the empty pesticide container disposal.

The Strike 85 CP Fumigant label clearly states in the Storage and Disposal section that the pesticide needs to be stored in a dry, cool, and well-ventilated area under lock and key. The area also needs to be posted as a pesticide storage area. The label goes on to say that the cylinders need to be stored upright and secured to prevent tipping. These requirements were not followed by Butler Farms, as the tanks were stored laying horizontally outside in the elements. It is unknown how long the "pigs" were stored in this condition. While Bret Butler states the tanks were recently moved to their position in the grass, the undisturbed tall grass says otherwise. When the tanks were moved inside after the first inspection, it is unclear how they were moved. The label states certain ways of transporting the cylinders, as it is very important that they are not damaged or roughly handled. Storage violations still occurred once the tanks were moved inside of the building.

Evidence found at the burn site shows that empty pesticide containers were in fact burned, and they appear to have not been properly triple rinsed. Burnt and melted pesticide containers were pulled out from the bottom of the burn, and even more were removed from the burn by Bret Butler prior to my arrival. Many of these containers still had labels attached, and most still had pesticide residue inside. Maine law probits the burning of pesticide containers and enforces that containers are triple rinsed before being properly disposed of.

The total amount of pesticide containers burned is unknown. Sales records from Nutrien and Helena do show that the number of whole containers discovered in the burn pit was just a fraction of the total amount of pesticides purchased by the farm in 2025, and the sanitation company did say that they picked up empty containers from Butler's dumpster. However, there is clear evidence that some containers were burned. With the amount of debris located on the burn pile, it's impossible to determine if more containers or melted plastic would have been located by digging down into the pile. Containers could have been burned throughout the summer, leaving just the most recently emptied containers on top of the burn pile.

Issues arose with Butler Farms' pesticide storage as well, and not just with the Chloropicrin. The one garage that Clayton took me into during the first inspection did not lock and was not posted as a pesticide storage area, even though many pesticides were stored there. The garage was not clean, and sample photographs show this, including the pigeon feces on top of the stored pesticides. Some of the labels of products stored there state that the building must be heated and well ventilated during the seasons, which this garage did not appear to be. Some of the labels also list the requirement that some products cannot be stored next to other products.

Butler Farms' application records were not in compliance with BPC regulations. Numerous applications were not recorded in the applicator's logbook, including in-furrow applications to seed pieces and foliar applications of Restricted Use Pesticides. In Butler's situation, it would have gone completely unnoticed that these pesticides were used in certain applications if it wasn't for finding the product's containers in the burn pit and questioning Bret about their usage. Adjuvants applied were not included in the logbook. Product use rates were also not included in the records, as Bret claimed to remember the use rates off the top of his head.

An overapplication of at least one pesticide occurred on Butler Farm's in 2025. Lamcap II (EPA Reg #100-1295), which is a Restricted Use Insecticide, was applied at 2floz/acre, when the label lists the maximum rate at 1.92floz/acre.

PESTICIDE APPLICATOR RECORDS & OPERATIONS CHECK

Inspected Company/Agency
sample text

sample text

Company/Agency Name
Butler Farms

Company/Agency Type
NFH

Category
Farm

Address Line
650 Van Buren Rd

City
Limestone

Primary Phone

Email

Contact First Name
Bret

Contact Last Name
Butler

Type and size of operation:
800 acres of Potatoes in Limestone and Caswell

Branch Offices in Maine
N/A

LICENSING

Formatted Text
no value

☐ None required ☑ Private required ☐ Commercial required

Firm Address(If different than notice)

Address Line 1
25 Pleasant Ridge Road

City
Caswell

State
ME

Postal Code
04750

Master Name

Category/Commodity

Master License

Firm License
SCF

Master License

Applicator Details

Add item
Delete

	Applicator Name	License	Categories
1	Bret Butler	PPA-2865	Potato & Grain
2	Dann Cyr	ABA-4762	Potato & Grain

ALL APPLICATORS

no value

Do you have obsolete pesticides?

- ○ Yes
- ◉ No

no value

Aware of Hazard Communication Standard?

- ◉ Yes
- ○ No

Worker Protection Standard

Formatted Text
no value

False NA

no value

CID

- ◉ Yes
- ○ No
- ○ NA

no value

Training

- ◉ Yes
- ○ No
- ○ NA

no value

Emergency assistance

- ◉ Yes
- ○ No

- ○ NA

no value

Handler PPE

- ◉ Yes
- ○ No
- ○ NA

no value

Decontamination Sites

- ◉ Yes
- ○ No
- ○ NA

no value

Worker/Handler Notification

- ◉ Yes
- ○ No
- ○ NA

no value

Employer Information Exchange

- ◉ Yes
- ○ No
- ○ NA

Pesticide Storage & Disposal

no value

Recommended signs?

- ○ Yes
- ◉ No

no value

Does pesticide storage meet label requirements?

- ○ Yes
- ◉ No

no value

State Regulations?

- ○ Yes
- ◉ No

Unused pesticides, whether in sealed or open containers, must be kept in a secure enclosure and otherwise maintained so as to prevent unauthorized use, mishandling or loss; and so as to prevent contamination of the environment and risk to the public health. CMR 01-026 Chapter 20 Sec. 3(A)
no value

GUP purchased in Maine? If no, name & address of dealer.

- ◉ Yes
- ○ No
- ○ NA

Comments
no value

no value

RUP/LUP purchased in Maine? If no, name & address of dealer.

- ◉ Yes
- ○ No
- ○ NA

Comments
no value

no value

Are empty containers triple rinsed?

- ◉ Yes
- ○ No
- ○ NA

no value

What do you do with rinseate and with unused pesticide solutions?

Comments
Back into Spray Tank

Application Equipment

no value

☐ Fixed Wing

no value

☐ Rotary Wing

no value

☐ Airblast

no value

☑ Boom

no value

☐ Hose

no value

☐ Mist Blower

no value

☐ Granular Spreader

no value

☐ Powered Back Pack

no value

☐ Radiarc

no value

no value

☐ Fogger

no value

☐ Other Powered

no value

☐ Hand Can

no value

☐ Spreader

no value

☐ Bait

no value

☐ Non-powered Back Pack

no value

☐ Other non-powered

no value

☐ Fumigation

no value

☐ Chemigation

no value

☐ Injection

☐ Direct to Water Body

no value

Where do you mix and load pesticides?

Comments
At Site

no value

How do you fill your tank with water?

Comments
Water Pump from Well Water

no value

Are shutoff/backflow prevention valves adequate?

◉ Yes
○ No
○ NA

PERSONAL PROTECTIVE EQUIPMENT R = Required A=Available (For reviewed pesticides)

Long sleeve shirt	☑ R	☑ A
Long pants	☑ R	☑ A
Shoes/socks	☑ R	☑ A
Chemical resistant boots	☑ R	☐ A
Coveralls	☑ R	☐ A
Chemical resistant suit	☐ R	☐ A
Gloves	☐ R	☐ A
Waterproof gloves	☐ R	☐ A
Chemical Resistant gloves	☑ R	☑ A
Chemical Resistant Headwear	☐ R	☐ A
Chemical Resistant Apron	☐ R	☐ A
Protective Eyewear	☐ R	☑ A
Respirator	☐ R	☐ A
Closed system	☐ R	☐ A
PPE available in enclosed cab	☐ R	☐ A

no value

Is PPE stored away from pesticides?

- ◉ Yes
- ○ No

no value

Is PPE maintained and cleaned as required?

- ◉ Yes
- ○ No

no value

Does employer review labels for required PPE?

- ◉ Yes
- ○ No
- ○ NA

no value

Does employer supply required PPE?

- (●) Yes
- ( ) No
- ( ) NA

Private Applicators

Formatted Text
no value

True None

no value

Describe any pesticide applications you do for others, or that you hire done, and the system of payment.

Comments
no value

GreenHouses

Formatted Text
no value

True NA

no value

Are pesticides applied through a hose or irrigation system? If yes, check label requirements.

- ( ) Yes
- ( ) No

no value

Are total release aerosols used? If yes, check volumetric rate requirements on label.

- ( ) Yes
- ( ) No

no value

Are pesticides labeled for specific sites/crops? If no, use is inconsistent with labeling.

- ◯ Yes
- ◯ No

COMMERCIAL APPLICATORS

Formatted Text

no value

True NA

no value

Appropriate signs for turf, ornamental, outdoor structural and forestry applications ?

- ◯ Yes
- ◯ No
- ◯ NA

no value

Unlicensed applicator under direct voice and visual supervision by licensed commercial applicator?

- ◯ Yes
- ◯ No
- ◯ NA

no value

Insurance certificate?

- ◯ Yes
- ◯ No
- ◯ NA

Record Details

no value

Are records maintained for two years?

- ◉ Yes
- ◯ No

no value

Reviewed by Inspector? If no, explain in comments.

- (●) Yes
- ( ) No

Comments

no value

no value

- [x] Application Method

no value

- [x] Brand name of pesticide

no value

- [x] Active ingredient(s)

no value

- [x] EPA registration #

no value

- [x] REI or Ventilation

no value

- [x] Applicator name

no value

- [x] Applicator license #

no value

- [x] Date of application

no value

no value

- [x] Size of treated area

no value

- [x] Target pest

no value

- [x] Site or crop treated

no value

- [x] Sensitive areas noted

no value

- [x] Wind speed & direction

no value

- [x] Temperature

no value

- [x] Sky conditions

no value

- [ ] Total amount of RUP

no value

- [x] Time of application

no value

- [x] Town of application

no value

- [x] Site name or description

- [ ] Application rate GUP

no value

- [x] Sprayer calibration

Year surveyed below:
2025

Crop/Site Surveyed:
Potatoes

no value

Crop acreage:

- ( ) <10
- ( ) 10-50
- (•) >50

Add item
Delete

*Bearing/Nonbearing, Preemergent, Prebloom,Third leaf stage etc. **Broadcast, Directed, , Spot, Chemigation

	Brand name of pesticides used	EPA Reg.#	RUP	Rate	Date applied	Pest	Crop Stage*	Apps/ crop	Application Type
1	Linex 4L Herbicide	61842-21	False	1pt/acre	Jun 6, 2025	Weeds	Preemerge	1	Boom
2	Me-Try-Buzin 75DF Herbicide	19713-705	False	.66lbs/acre	Jun 6, 2025	Weeds	Preemerge	1	Boom
3	Bravo Weather Stik Fungicide	66222-276	False	1.3pts/acre	Jun 27, 2025	Late Blight	Prebloom	1	Boom
4	Bravo Weather Stik Fungicide	66222-276	False	1.5pts/acre	Jul 7, 2025	Blight	Prebloom	1	Boom
5	Luna Tranquility Fungicide	264-1085	False	11.2floz/acre	Jul 7, 2025	Blight	Prebloom	1	Boom
6	Bravo Weather Stik Fungicide	66222-276	False	1.5pts/acre	Jul 17, 2025	Blight	Prebloom	1	Boom
7	Previcure Flex Fungicide	264-678	False	1pt/acre	Jul 17, 2025	Blight	Prebloom	1	Boom
8	Minecto Pro Insecticide	100-1592	True	10floz/acre	Jul 17, 2025	Colorado Potato Beetle	Prebloom	1	Boom
9	Bravo Weather Stik Fungicide	66222-276	False	1.5pts/acre	Jul 31, 2025	Blight	Prebloom	1	Boom
10	Miravis Prime Fungicide	100-1603	False	10oz/acre	Jul 31, 2025	Blight	Prebloom	1	Boom
11	Bravo Weather Stik Fungicide	66222-276	False	1.5pts/acre	Aug 11, 2025	Blight	Postbloom	1	Boom
12	Revus Top Fungicide	100-1278	False	6.5floz/acre	Aug 11, 2025	Blight	Postbloom	1	Boom
13	Bravo Weather Stik Fungicide	66222-276	False	1.5pts/acre	Aug 20, 2025	Blight	Postbloom	1	Boom
14	Sefina Inscalis Insecticide	7969-391	False	3oz/acre	Aug 20, 2025	Aphids	Postbloom	1	Boom
15	Revus Top Fungicide	100-1278	False	7floz/acre	Sep 1, 2025	Blight	Postbloom	1	Boom
16	Bravo Weather Stik Fungicide	66222-276	False	1.5pts/acre	Sep 12, 2025	Blight	Postbloom	1	Boom
17	Sprout Stop Liquid Growth Retardent	19713-2	False	1.15gallon/acre	Sep 12, 2025	Growth Inhibitor	Preharvest	1	Boom
18	Reglone Herbicide	100-1061	False	.75pts/acre	Sep 29, 2025	Top Kill	Preharvest	1	Boom

Comments. Suggestions for the Board of Pesticides Control.
Records for Limestone Fields-450 acres
Applications made with a John Deere 4023R
Records did not include adjuvants; Aqua-Mate II applied at 1.5pts/100 gallons of water with every application

Provide supporting details and documents.

Physical Samples Taken

Sample Number	Sample Description	Sample Type	Date of Submission	Result	Lab Location	Analysis Completion Date
No items						

Add Physical Sample

Documentary Samples

Sample Number	Sample Description	
251024JLR01A	Calibration Log and Pesticide Key	Delete
251024JLR01B	Application Records	Delete
251024JLR01C	Minecto Pro Label and Labeling	Delete
251024JLR01D	Sprout Stop Label and Labeling	Delete
251024JLR01E	Previcure Flex Label and Labeling	Delete
251024JLR01F	Revus Top Label and Labeling	Delete

Sample Number	Sample Description	
251024JLR01G	Sefina Label and Labeling	Delete
251024JLR01H	Bravo Weather Stik Label and Labeling	Delete
251024JLR01I	Me-Try-Buzin 75DF Label and Labeling	Delete
251024JLR01J	Linex 4L Label and Labeling	Delete
251024JLR01K	Reglone Label and Labeling	Delete

Add Documentary Sample

Reportable Data

Number of Documentary Samples Collected
9

Supporting Documents

(17)

Loading...

Brief Summary of Inspection
This inspection was conducted using paper forms (converted to pdf and attached). Data from paper forms was transferred to PEGA format post-inspection in the office. Required signatures can be seen on the attached pdf forms.

Conducted a for cause records check with Bret Butler, owner of Butler Farms, at the farm's office located at 25 Pleasant Ridge Road in Caswell. The inspection took place at 12:00pm on October 24, 2025. The reason for the inspection was to conduct a follow up due to the improperly stored Chloropicrin tanks and improperly disposed pesticide containers found on the farm.

A more detailed report of the inspection can be seen in the Inspector's Report.

Recommendations
no value

Acknowledgement

Acknowledgement:

The physical and/or documentary samples listed above were collected by a Maine Board of Pesticides Control Representative in connection with administration of FIFRA and/or State of Maine Pesticide Statutes and Regulations.

Accept Clear

no value

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY STATEMENT FORM	Address: BOARD OF PESTICIDES CONTROL Deering Bldg, AMHI 28 State House Station Augusta ME 04333 Tel: 207/287-2731 Case No. EC-113857

~~Elect~~ Bret Butler - Butler Farms

In this case the chemical jugs that ended up on a "burn pile" were purely put there by mistake. 99.9% of the time our jugs / chemical totes are tripled rinsed and disposed of through our sanitation vendor who then brings them to the landfill. Everyweek we fill or nearly fill the garbage truck with empty jugs. We have two plastic pallet boxes that sit beside our dumpster that serve the sole purpose of collecting empty chemical jugs. The amount of jugs found on said "burn pile" is ~~a very small~~ a very very very small % of total jugs we use. There were no burnt jugs or boxes at the burn pile and there was not intention on burning them. Just an employee who was unsure of what to do with the waste and instead of asking, took it upon himself to dispose of boxes. In conclusion, this farm always disposes of chemical jugs in the correct manner and these undamaged jugs that were found on a "burn pile" were 100% a mistake. This event has ensured that this will never take place again due to its time consumption and awareness to the environment.

Signature	Date
Bret R. Butler	10/24/2025
Inspector's Signature	Date
[signature]	10/24/2025

MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

STATEMENT FORM

Address: BOARD OF PESTICIDES CONTROL
Deering Bldg, AMHI
28 State House Station
Augusta ME 04333 Tel: 207/287-2731

Case No. EC-113857

Bret Butler - Butler Farms

In this Incident pertaining to the "improper storage" of chloropicrin, I admit, now that I have read the correct lable that there were steps misunderstood and misleading. I head no intentions violating any laws when agreeing to store these chemical containers. The law requires that the "PIGS" be under lock and Key, which they were. ~~because the area~~ The "PIGS" were secured by a barb wire fence that went 360° around. The "PIGS" were also required to be in a "well ventilated area" which they were. The "PIGS" were outside and the lable does not specify ~~use~~ if they are to be in a building or not. The "PIGS" cannot exceed tempatures of 131°F or fall below -83.2°F. This means that the PIGS are fit to be outside in the northern maine climate or nearly any climate for that matter. The PIGS had also been recently moved so that we could access a piece of harvesting equipment. The area of grass in which they were reported was just a temporary resting area before they were to be moved back. I apologize for causing any type of potential harm and wasting state funds on a true misunderstanding of a very vague set of rules.

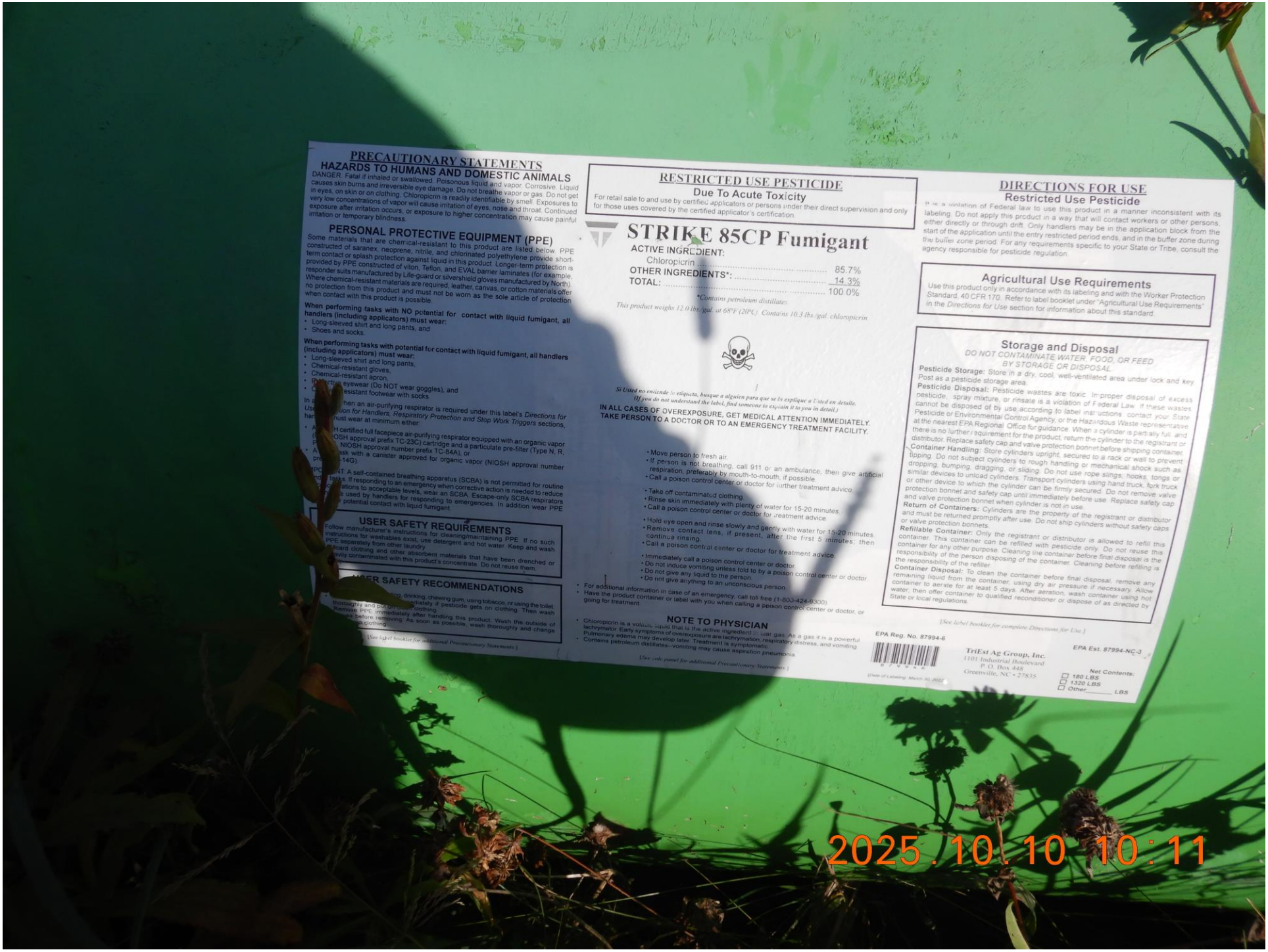
Signature Bret R. Butler	Date 10/24/2025
Inspector's Signature	Date 10/24/2025


FRAM

251010JLR01F- Strike 85 Fumigant Containers



251010JLR01F- Strike 85 Fumigant Containers



251010JLR01F- Strike 85 Fumigant Containers



251010JLR01F- Strike 85 Fumigant Containers



251010JLR01G- Pesticides stored inside old garage



251010JLR01G- Pesticides stored inside old garage



251010JLR01H- Burnt/melted/improperly stored pesticide containers removed from the burn pit prior to my arrival



BT502126333030

Linex® 4L

Agricultural Herbicide

LINURON

HERBICIDE

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

PERSONAL PROTECTIVE

2025.10.10 09:36

Storage and Disposal

DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.

Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. When a cylinder is partially full, and there is no further requirement for the product, return the cylinder to the registrant or distributor. Replace safety cap and valve protection bonnet before shipping container.

Container Handling: Store cylinders upright, secured to a rack or wall to prevent tipping. Do not subject cylinders to rough handling or mechanical shock such as dropping, bumping, dragging, or sliding. Do not use rope slings, hooks, tongs or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured. Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use.

Return of Containers: Cylinders are the property of the registrant or distributor and must be returned promptly after use. Do not ship cylinders without safety caps or valve protection bonnets.

Refillable Container: Only the registrant or distributor is allowed to refill this container. This container can be refilled with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Container Disposal: To clean the container before final disposal, remove any remaining liquid from the container, using dry air pressure if necessary. Allow container to aerate for at least 5 days. After aeration, wash container using hot water; then offer container to qualified reconditioner or dispose of as directed by State or local regulations.

WARRANTY

Seller warrants that this product conforms to the chemical description on its label and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. To the extent consistent with applicable law, neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product in a manner contrary to its label.

STRIKE 85CP Fumigant

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TriEst Ag Group, Inc.
1101 Industrial Boulevard • P. O. Box 448
Greenville, NC • 27835

EPA Reg. No. 87994-6
EPA Est. 87994-NC-3

RESTRICTED USE PESTICIDE
Due To Acute Toxicity

For retail sale to and use by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

STRIKE 85CP Fumigant

ACTIVE INGREDIENT:	
Chloropicrin	85.7%
OTHER INGREDIENTS*:	14.3%
TOTAL:	100.0%

**Contains petroleum distillates.*

This product weighs 12.0 lbs./gal. at 68°F (20°C). Contains 10.3 lbs./gal. chloropicrin.

KEEP OUT OF REACH OF CHILDREN

DANGER  PELIGRO

POISON

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

IN ALL CASES OF OVEREXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY. TAKE PERSON TO A DOCTOR OR TO AN EMERGENCY TREATMENT FACILITY.

FIRST AID

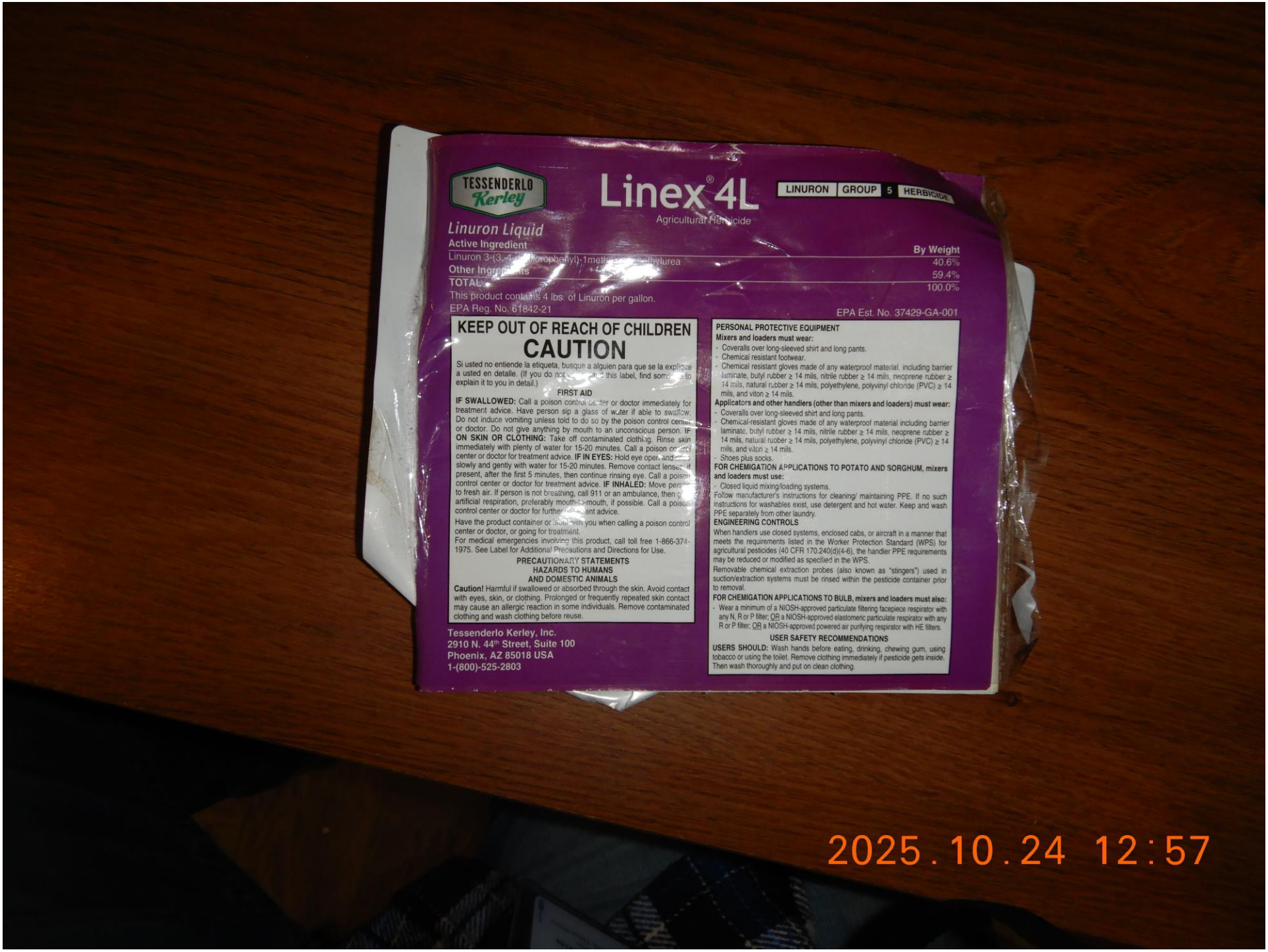
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lens, if present, after the first 5 minutes; then continue rinsing. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything to an unconscious person.

- For additional information in case of an emergency, call toll free (1-800-424-9300).
- Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

NOTE TO PHYSICIAN

- Chloropicrin is a volatile liquid that is the active ingredient in tear gas. As a gas it is a powerful lachrymator. Early symptoms of overexposure are lachrymation, respiratory distress, and vomiting. Pulmonary edema may develop later. Treatment is symptomatic.
- Contains petroleum distillates--vomiting may cause aspiration pneumonia.

251024JLR01J



251024JLR01J

due to poor emergence, insect damage, disease, high alkalinity, or other causes.

(DRILL-PLANTED)

IDAHO, OREGON, WASHINGTON

Plant seed at least 1 inch deep; when seed is planted during abnormally dry weather, treat after soil has been settled by rainfall or irrigation.

Apply as a broadcast spray prior to emergence of wheat or to semi-dormant wheat plants. Application to actively growing plants may result in temporary yellowing (chlorosis) of wheat.

Crop injury may result where severe winter stress, disease or insect damage follows application, and also from failure to observe correct planting depth and soil type restrictions.

West of Cascade Range: Make a single application of Linex® 4L Agricultural Herbicide at 2 pts. (1 lb. ai) per acre as soon as possible after planting. If wheat and weeds have emerged, apply before weeds are 3 inches to 4 inches tall.

Where Average Annual Rainfall Exceeds 16 Inches

Fall Treatment: For early fall-planted wheat (seeded before September 10), apply 1 to 1.5 pts. (0.5 – 0.75 lb. ai) Linex® 4L Agricultural Herbicide per acre either before or after wheat has emerged but before weeds are 2 inches tall. Treatment after October 1 generally gives best results. Do not apply after soil freezes in the fall.

Spring Treatment: Apply 1 to 1.25 pts. (0.5 – 0.625 lb. ai) Linex® 4L Agricultural Herbicide per acre as soon as wheat starts to grow in the spring. Application after weeds have reached a height of 2 inches may give poor results.

Where Average Annual Rainfall is 10 to 16 Inches:

Fall or Winter Treatment: After wheat is planted in the fall, apply 1 to 1.25 pts. (0.5 – 0.625 lb. ai) Linex® 4L Agricultural Herbicide per acre when sufficient moisture is available to germinate wheat seed. Apply either before or after wheat has emerged, but before weeds are 2 inches tall and before the soil freezes. Application later than March 1 may give poor results.

Where Average Rainfall is 10 to 20 Inches:

Fall or Spring Treatment: Apply 0.5 pt. (0.25 lb. ai) Linex® 4L Agricultural Herbicide plus 0.25 lb. bromoxynil per acre as a tank mixture, either in the fall after wheat has emerged but before soil freezes or in the spring as soon as soil thaws; apply before weeds are 2 inches tall or across.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

PESTICIDE STORAGE: Store product in original container only. Store in a cool, dry place.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Non-refillable plastic container ≤ 5 gal: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure 2 more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration.

Non-refillable plastic container > 5 gal: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure 2 more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by incineration.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-866-374-1975 day or night.

Complaint **(COMPLAINT-44150)**

Complaint | Overview | Caller | Inspections | Enforcements | Audit

Action Taken
Inspection Required

Finalized / Resolved ☐

Comments
—

Resolution Details
—

Complaint Details

COMPLAINT-44150

Company / Agency Name
Butler Farms

Complaint Details
On October 6, 2026, BPC compliance manager asked the District 5 inspector to follow up on a farm that had various violations in 2025 and a farmer that was not licensed in 2026 but was suspected to have made applications.

Call Date/Time
Oct 6, 2026

Estimated Date of Incident
Oct 6, 2026

Urgency Level
Medium

Topic
License Issue

Site
Not Applicable

Complaint Physical Location

Address Line
—

Address Line 2
—

City
Limestone

Directions
—

MAINE BOARD OF PESTICIDES CONTROL

State Activity Inspection - 10/20/2026
Inspection Conducted By: JACOB RICHARD

Inspected Company/Agency

Company/Agency Name
Butler Farms

Company/Agency Type
NFH

Category
Farm

Address Line
650 Van Buren Rd

City
Limestone

Primary Phone
(207) 540-3416

Email
bret.butler12@gmail.com

Contact First Name
Bret

Contact Last Name
Butler

Person Interviewed

First name	Last name	Title
No	One	Interviewed

Provide supporting details and documents.

Physical Samples Taken

Sample Number	Sample Description	Sample Type	Date of Submission	Result	Lab Location	Analysis Completion Date
No items						

Documentary Samples

Sample Number	Sample Description
261020JLR01A	Photos of unrinsed, empty pesticide containers stored in an outside plastic bin behind the gated area
261020JLR01B	Photos of pesticides stored inside an unlocked garage, along with a trailer load of bagged potatoes along the full containers
261020JLR01C	Photos of full and empty, unrinsed containers stored along the outside of a potato house, including 275-gallon totes and pesticides stored on a batch truck

Reportable Data

Number of Documentary Samples Collected
0

Brief Summary of Inspection
This inspection was conducted using paper forms (converted to pdf and attached). Data from paper forms was transferred to PEGA format post-inspection in the office. Required signatures can be seen on the attached pdf forms.

Conducted a for cause state activity at Butler Farms, located at 25 Pleasant Ridge Road in Caswell, at 11:15am on October 20, 2026. BPC Manager of Compliance, Jose Gayoso, had asked me to conduct an inspection with Butler Farms due

to the violations that were discovered during last year's complaint. The violations and inspections associated with that complaint can be seen in EC-113857. Jose had asked me to ensure that the farm had corrected its mistakes from 2025 before completing the consent agreement. Other concerns included Bret Butler's lack of an active applicator's license, as his had expired in October of 2025 (PPA-2865).

Bret was not answering or returning the numerous phone calls made to him, so on October 20, 2026, I drove over to his farm to try to speak with him. I first arrived at the farm's office, located at 25 Pleasant Ridge Road in Caswell, at 11:15am. Nobody was present at the office, but the gate to the property behind the office was open. After speaking with Jose, we agreed that Statue 1471-H allowed me to enter the private property for the purpose of inspection. The intent was to locate Bret Butler, as well as determine whether similar violations compared to last year were still being made on the property.

Chloropicrin tanks, burn pits, and Bret Butler were not located on the property at this time, however other issues were found. A plastic bin was discovered with roughly a dozen empty 2.5-gallon pesticide containers in it. While the containers were empty, observations found that they were not properly triple rinsed. Photos of these containers can be seen as attached sample 261020JLR01A. While checking on a garage that had a pickup parked near the door, it was determined that behind the unlocked door sat numerous full pesticide containers. This happened to be the same building that stored pesticides during last year's inspection, but the door was still unlocked and not posted as a pesticide storage area. Further observation inside the garage found that a trailer of bagged potatoes was parked inside, alongside the pesticide containers. The closest pesticide containers to the potatoes were Gramozone SL 3.0 Herbicide (EPA Reg #100-1652), a restricted use pesticide due to the active ingredient of Paraquat. Photos of the stored pesticides inside the garage, along with the trailer of potatoes, can be seen as attached sample 261020JLR01B.

Unable to locate Bret, I visited a handful of his potato houses located along Van Buren Road in Caswell and Limestone to look. Apon arriving at the potato house located at 650 Van Buren Road in Limestone, I observed several more issues regarding storage and disposal practices of pesticide containers. First, a batch truck was parked in the yard of the potato house, with numerous full containers sitting on the flatbed. Several of the containers consisted of restricted use pesticides, and several more containers were completely unopened. Along the backside of the potato house, several 275-gallon totes were sitting in an area outside. Roughly half of these totes contained pesticides, while the other half contained fertilizers and plant nutrients. A few 2.5-gallon containers were also observed sitting on top of one of the totes. One empty tote, marked with a Bravo Weather Stik label (EPA Reg #66222-276) had been completely emptied and the top cut off. The container was now filled with cull potatoes and other garbage. On the front side of the potato house, sat two more plastic totes filled with empty, unrinsed 2.5-gallon containers, similar to the ones photographed in 261020JLR01A. Photos of all pesticide related equipment, storage, disposal, and rinsing located at this potato house are attached as sample 261020JLR01C.

While finishing up observations at the potato house, a pickup pulled into the yard to speak with me. It was an employee of Bret Butler's, who told me that Bret asked him to come see who was at the potato house after someone drove by and saw me here. I presented my credentials and informed the employee of my intent to speak with Bret. The employee stated that Bret was digging potatoes, but that this was the farm's last day of harvest. I asked if he could inform Bret of my need to speak with him, in which he called Bret right away and told him. Bret evidently told the employee over the phone that he would call me back later in the day. As of this writing, he has failed to do so. I tried calling him again on October 22 but did not receive a response.

Due to not being able to get in contact with Bret, the NOI associated with this inspection has not been signed by him. Jose Gayoso approved of that, as he asked me to submit this inspection as soon as possible so he could prepare to present it to the Board on November 13th. Further attempts will be made to speak with Bret, and Jose is considering issuing a subpoena if Bret continues to not cooperate.

Recommendations

Enforcement for the actions observed during this state activity are recommended, especially due to the repeated nature of the violations. Further actions are planned to determine the concerns with the lack of an applicator's license.

Acknowledgement

The physical and/or documentary samples listed above were collected by a Maine Board of Pesticides Control Representative in connection with administration of FIFRA and/or State of Maine Pesticide Statutes and Regulations.

MAINE BOARD OF PESTICIDES CONTROL

State Activity Inspection - 10/30/2026
Inspection Conducted By: JACOB RICHARD

Inspected Company/Agency

Company/Agency Name
Butler Farms

Company/Agency Type
NFH

Category
Farm

Address Line
650 Van Buren Rd

City
Limestone

Primary Phone
(207) 540-3416

Email
bret.butler12@gmail.com

Contact First Name
Bret

Contact Last Name
Butler

Person Interviewed

First name	Last name	Title
Dann	Cyr	Applicator

Provide supporting details and documents.

Physical Samples Taken

Sample Number	Sample Description	Sample Type	Date of Submission	Result	Lab Location	Analysis Completion Date
No items						

Documentary Samples

Sample Number	Sample Description
No items	

Reportable Data

Number of Documentary Samples Collected
0

Brief Summary of Inspection
Conducted a for cause state activity at Butler Farms, located a 25 Pleasant Ridge Road in Caswell, on October 30, 2026, around 11:30am. The intent of the visit was to speak with Bret Butler, after continued failed attempts to get in touch with him after the actions of RC-218806.

I arrived at the farm's office, located at 25 Pleasant Ridge Road in Caswell, but again nobody was present at the office. The gate was again opened, and I could see a potato truck backing up at the end of the property. I drove up there and spoke with the employee who had just stepped out of the truck. Upon presenting my credentials and intentions, the employee was unsure of where Bret Butler was. The employee stated, "we don't always have great communication here". I thanked him for his time and went on my way.

I again decided to check the numerous potato houses along the Van Buren Road in hopes of speaking with Bret. The potato house located in Caswell on the corner of Van Buren Road and Old Route 165 had nobody present, however the batch truck that was observed at the potato house at 650 Van Buren Road on October 20th had been moved here. A majority of the full pesticide containers, including numerous RUP's were still stored on the flatbed, but significantly more empty containers were observed than before. These empty containers were tied together and hanging from a rack on the truck. Labels attached to the containers showed some different products than what was originally discovered during the inspection on October 20th. Due to trying to find Bret, along with discussion had with BPC Manager of Compliance Jose Gayoso the day before, photos of the batch truck and the unsecured containers were not photographed.

The potato house located at 650 Van Buren Road in Limestone also had nobody present, but a majority of the 275-gallon totes had been removed. A few totes still remained however, with at least one containing pesticide as in Sprout Stop Liquid Growth Retardent (EPA Reg #19713-2). A plastic bin of empty 2.5-gallon containers was also found, but the rinsed condition of these containers was not observed. Again, photos were not taken at this potato house.

The small potato house located at 554 Van Buren Road in Limestone had numerous pickups and equipment parked there. As I pulled in, I noticed Dann Cyr standing next to a pickup speaking with the driver. Dann has an applicator's license (ABA-4762) with Butler Farms and appears to be Bret's right-hand man. I asked Dann if he knew where Bret was, in which he responded that he hasn't heard from Bret in over 24 hours and had no idea where he was. Dann then told me that he accidently hit Bret's dog with his truck the day before, but the dog was fine with no broken bones. However, Dann believed he was busy tending to the dog, and nowhere around the farm.

I informed Dann of my need to speak with Bret due to my supervisor requesting a follow up inspection from last year's violations. I told Dann about my difficulty in reaching Bret, in which Dann joked that sometimes Bret won't answer his calls either. I told him how Bret's uncooperating with failing to get in contact with us was not helping him, and that the idea of a subpoena has been discussed. Dann appeared to understand this and even said "Bret needs to get his head out of his ass as he is only causing himself more trouble". He also acknowledged the containers at the potato house that I had observed on the 20th.

I stressed to Dann the importance of speaking with Bret, and Dann said he would relay the information to Bret once he contacts him again and have Bret call me. I thanked Dann for his time and cooperation before leaving.

Further attempts to reach Bret will be made if he doesn't call me by the following week. Now, numerous employees have most likely informed Bret of my need to speak with him, so there is no excuse for continued failure to return a phone call. This information was relayed to Jose Gayoso following my conversation with Dann.

Recommendations

Violations observed from the first state activity relevant to this complaint had not been completely resolved at this time, so enforcement is still recommended. Further actions will be taken to try to get in touch with Bret Butler.

261020JLR01A



261020JLR01A



261020JLR01A



261020JLR01A



261020JLR01B



261020JLR01B



261020JLR01B



261020JLR01B



261020JLR01C



261020JLR01C



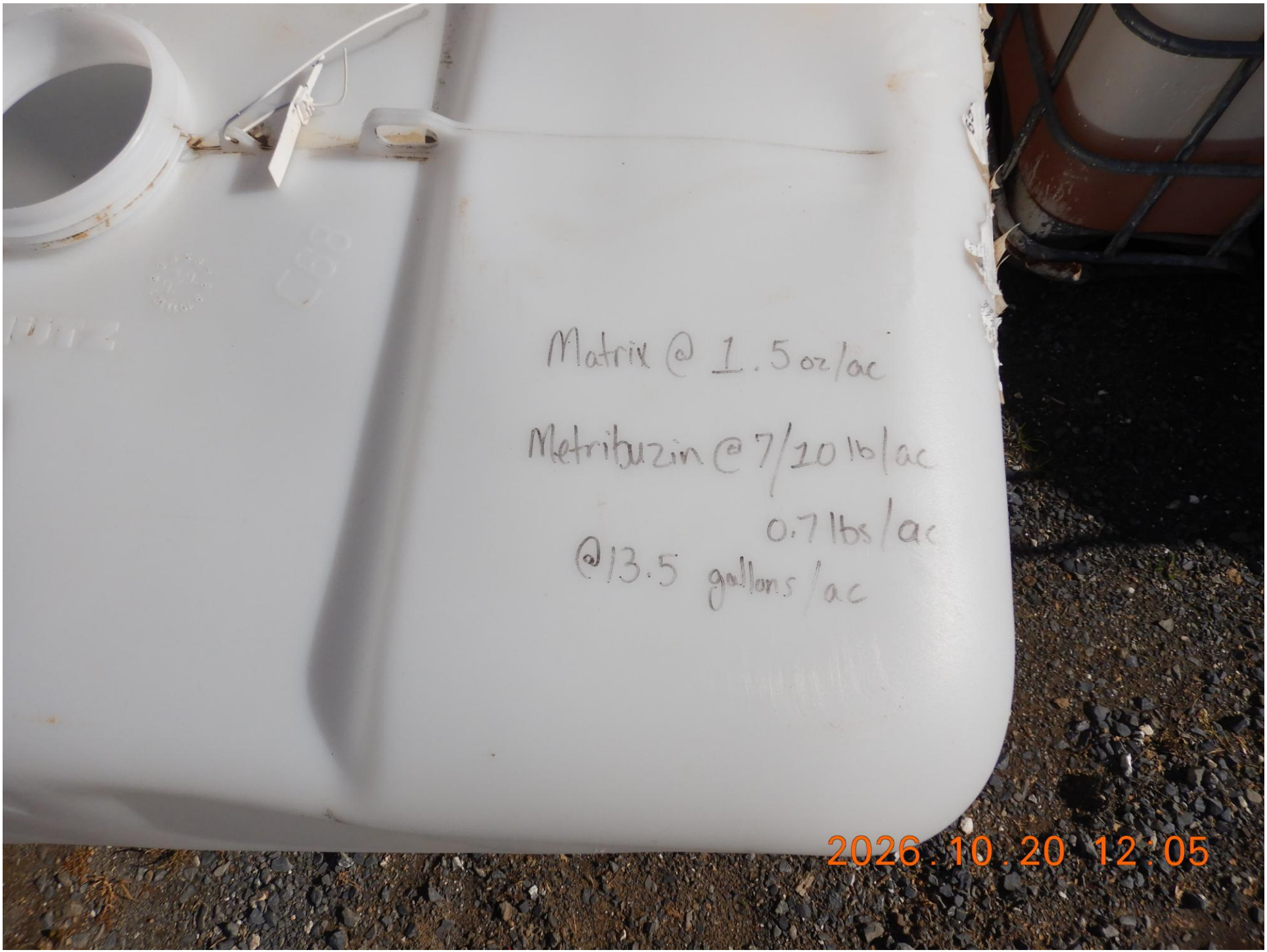
261020JLR01C



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261020JLR01C



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

November 6th, 2026

To: Alex Peacock, Director of the Maine Board of Pesticide Control
Re: Summary Statement for the Neonicotinoid Risk Assessment

Dear Mr. Peacock-

The attached draft assesses the risk of three most common neonicotinoids used in Maine, *e.g.* imidacloprid, clothianidin, and thiamethoxam. Data were collected from water quality studies performed by the Maine Board of Pesticide Control from 2014-2025. This approach makes the exposure analysis and risk assessment specific to Maine. Data from these monitoring studies were used to determine if exposure presents risk to both humans and aquatic species. This report is still a draft that is seeking comments from the Board of Pesticide Control.

All three neonicotinoids were detected in groundwater, but well below acute toxicity benchmarks established for invertebrates. Imidacloprid was the most frequently detected neonicotinoid in groundwater. However, exposure to imidacloprid from the consumption of groundwater is not anticipated to present a chronic health risk to Maine residents. This conclusion is based on a risk assessment that examined dietary intake of well-water under different scenarios (e.g. age, consumption of well-water, and the concentration of neonicotinoids in well water). Inverse hazard quotients- the ratio of a health-protective benchmark to neonicotinoid exposure- ranged from >2500 to 3.5, and point to low risk of chronic health effects under the worst-case scenarios. Consumption of groundwater contaminated with clothianidin also does not present risk. However, human heath is at risk when consuming groundwater contaminated with thiamethoxam *only* at the maximum concentration detected. This conclusion is based on hazard quotients for all age groups; risk is elevated for infants. In contrast, there is low risk if consuming groundwater contaminated with thiamethoxam at concentrations that are the mean and 90th percentile.

Imidacloprid was the only neonicotinoid detected in surface waters, or streams. Concentrations were well below acute toxicity benchmarks for freshwater animals, but often exceeded chronic toxicity benchmarks. There is negligible risk of imidacloprid causing lethality to any freshwater invertebrate in Maine rivers. However, there is a risk that chronic exposure might impair the physiology of a handful of aquatic insects in Maine; this risk does not extend to aquatic crustaceans, worms, mollusks, amphibians, and fish. This assessment is based a rigorous statistical approach; using Maine-specific data, there is an 8% probability that 20% of aquatic insects could be impacted, and a 15% chance that 15% of aquatic insects could be impacted. Importantly, it is undetermined how- or if- exposure to imidacloprid impacts the physiology of aquatic insects at these concentrations, but it is very unlikely to alter ecological processes in riparian environments.

Please let me know if you have any questions on my risk assessment for neonicotinoids in Maine.

Respectfully,
Doug Van Hoewyk, PhD

ALEXANDER PEACOCK, DIRECTOR
90 BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-2731
WWW.THINKFIRSTSPRAYLAST.ORG

draft

Risk assessment for neonicotinoids in Maine: Human-health and aquatic ecotoxicology

I. Human Health Risk Assessment

The human health risk assessment for the neonicotinoids focused on determining if potential exposure exceeded health-protective levels. To accomplish this, detections of neonicotinoids in Maine groundwaters were analyzed (Table 1). Imidacloprid is the most frequently detected neonicotinoid in groundwater, followed by thiamethoxam. To determine the health risk of neonicotinoids in groundwater, the raw values of detected concentrations were log10-transformed and plotted. This allows one to more easily visualize the distribution of detections in relationship to the EPA human health benchmark in drinking water; Figure 1 shows the distribution of three neonicotinoids detected in Maine groundwater: clothianidin, imidacloprid, and thiamethoxam.

		2014 (n=137)	2020 (n=74)	2021 (n=50)
clothianidin	concentration (ug L-1)	0.022	0.02	0.032
	detection frequency	2.20%	1.40%	2%
	# detections	3	1	1
imidacloprid	concentration (ug L-1)	0.005	0.004	0.004
	detection frequency	11.70%	13.50%	14%
	# detections	16	10	7
thiamethoxam	concentration (ug L-1)	0.033	0.052	0.04
	detection frequency	9%	7%	10%
	# detections	12	5	5

Table 1. Mean concentration, detection frequency, and number of detections for tested neonicotinoids in Maine groundwater. Data were extracted from the Maine Board of Pesticide Control Water Quality monitoring studies. The geometric mean was calculated and reported as mean concentration.

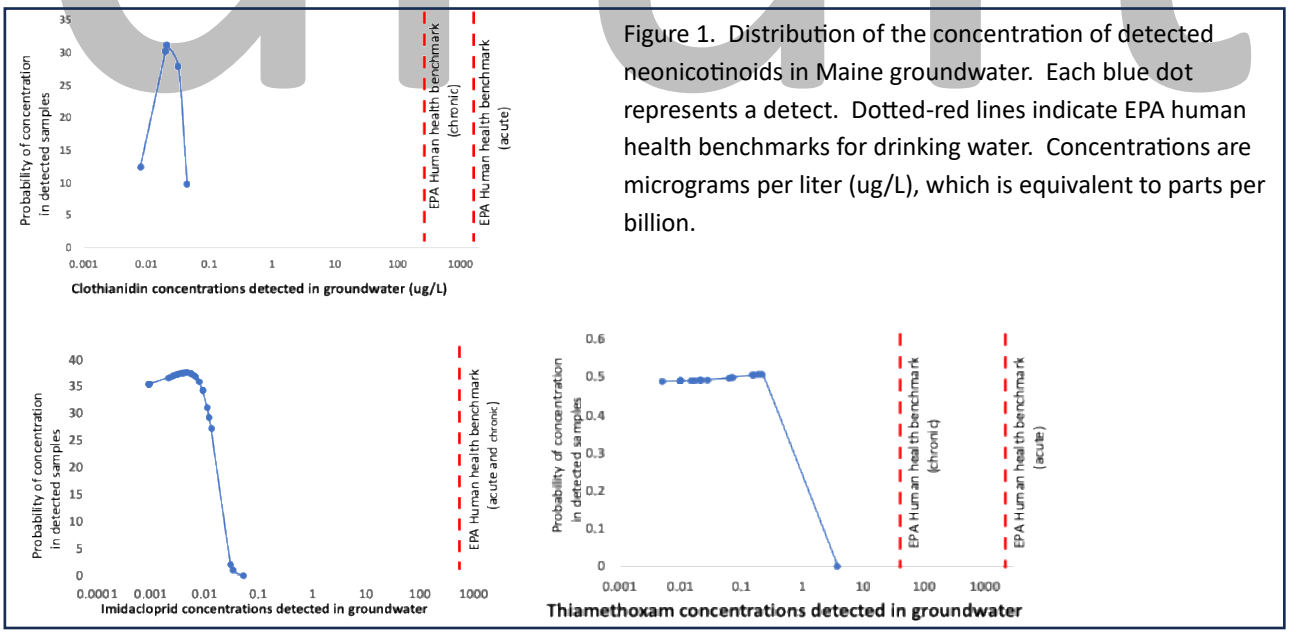


Figure 1. Distribution of the concentration of detected neonicotinoids in Maine groundwater. Each blue dot represents a detect. Dotted-red lines indicate EPA human health benchmarks for drinking water. Concentrations are micrograms per liter (ug/L), which is equivalent to parts per billion.

draft

Next, we focused on evaluating the health risk of imidacloprid. This was motivated by its high detection rate in Maine groundwater and its relatively high usage. Imidacloprid is also among the most frequently detected neonicotinoid in California and other states (source). To estimate the health risks, inverse hazard quotients were calculated. Values represent the ratio between a protective concentration and estimated exposure in drinking water. Any value above 1 is considered health protective, and greater values indicate greater protection. All hazard quotients were above 1, and ranged from 3.5 to greater than 2,000 (Table 2). The lowest hazard quotient of 3.5 was for infants under the most conservative exposure scenario; this value was generated by using the (*i*) more-conservative California chronic Reference dose (cRfD), (*ii*) the maximum imidacloprid concentration out of all groundwater detections in Maine, and (*iii*) an infant who is the 95% percentile of fluid intake. Even in the most conservative scenario and assuming that the infant is only consuming tap water from the well, the consumption of imidacloprid at the highest concentration is considered 3.5-fold more health-protective than the benchmark. Using the EPA cRfD value, the risk quotient increases to 645 for the infant with the mean fluid intake who is consuming the mean concentration of imidacloprid.

$$\text{Risk Quotient} = \frac{\text{protective concentration (chronic exposure)}}{\text{Estimated concentration consumed in water}} = \frac{\text{Chronic reference dose* body weight * 2.2lbs/kg}}{\text{Fluid intake * imidacloprid concentration}}$$

draft

RfD source	Pesticide Conc.	Infant fluid intake percentile Mean	Infant fluid intake percentile 95th %	Child fluid intake percentile Mean	Child fluid intake percentile 95th %	Adult fluid intake percentile Mean	Adult fluid intake percentile 95th %
Clothianidin							
EPA	mean	795.6	399.3	3348.5	1211.1	5462.8	1180.9
	90%	279.7	140.4	1177.2	425.8	1920.5	415.2
	max	68.9	34.6	289.8	104.8	472.7	102.2
Imidacloprid							
EPA	mean	645.8	325.9	2733.0	988.7	2470.6	964.1
	90%	227.0	114.6	961.0	347.6	868.6	338.9
	max	55.9	28.2	236.6	85.6	213.8	83.4
Cali.	mean	81.2	40.7	341.7	123.6	308.8	120.5
	90%	28.5	14.3	120.1	43.4	108.6	42.4
	max	7.0	3.5	29.6	10.7	26.7	10.4
Thiamethoxam							
EPA	mean	13.03	6.54	54.82	22.59	49.55	19.33
	90%	2.34	1.18	9.87	4.07	8.92	3.48
	max	0.12	0.06	0.49	0.20	0.44	0.17

Table 2. Inverse hazard quotients calculated under different scenarios, e.g. age group, pesticide concentration, and fluid consumption. Values >1 are health-protective; values in red present risk, and indicate exposure is greater than a chronic health-protective level. The EPA chronic reference doses (cRfD) established by the EPA were both used to estimated risk quotients. The more health-protective cRfD established by the State of California was also used to estimate risk for imidacloprid.

Values used to calculate risk quotients. Source: ATSDR, 2023. Exposure Dose Guidance of Water Ingestion. US DHHS

mg/kg body weight/day Chronic reference dose (cRfD)	
US EPA	0.08
Californiia	0.01

Body weight by age (kg)		
infant	child (6-10 yr)	adult
9.2	31.8	80.6

Water intake by age (Liters)			
	infant	child (6-10 yr)	adult
mean	0.554	0.455	1.276
95th percentile	1.104	1.258	3.27

Imidacloprid concentration (microgram/liter or parts per billion)	
mean conc.	0.0045
90% percentile	0.0128
max detection	0.052

Inverse hazard quotients also reveal that there are negligible health risks from the consumption of groundwater contaminated with clothianidin; this is due to the very low concentration that was detected in Maine groundwater.

Inverse hazard quotients indicate risk of consuming groundwater contaminated with thiamethoxam **only** when calculations are performed using the maximum concentration that was detected. Under this assumption, inverse hazard quotients are <1 for all age groups. This hazard is elevated for infants, particularly if an infant's consumption of fluids is in the 95th percentile. The maximum concentration detected for thiamethoxam was 3.8 ug/L, and came from a sampling in 2014; while this value is more than 100-fold higher than the next highest detection, this outlier should not be neglected. When calculating risk using thiamethoxam concentrations that represent the mean and 90% detections, inverse hazard quotients are >1.

II. Environmental Risk Assessment: freshwater animals

Detections of neonicotinoids were assessed for their risk to freshwater animals. These species were selected for priority because of the (*i*) availability of monitoring data that detected neonicotinoids in groundwater and surface water and (*ii*) the likelihood of leaching or running-off into surface water. Risks to other organisms (*e.g.* bees or saltwater organisms) were not considered in this report because we did not have environmental monitoring data in pollen or marine environments that were relevant to Maine.

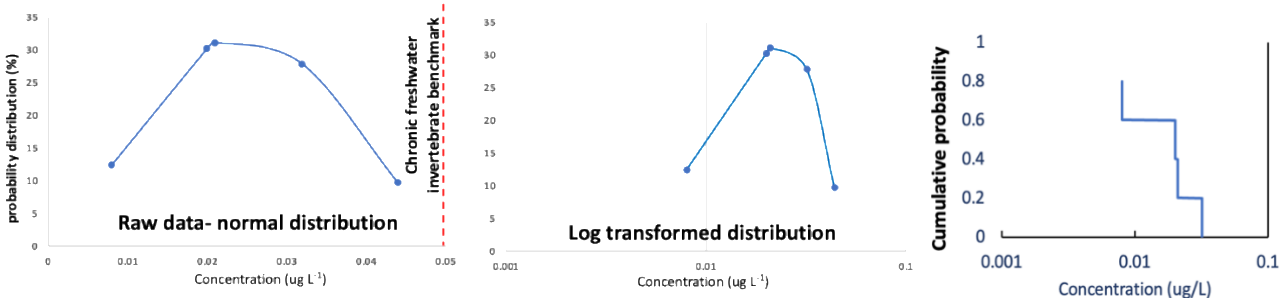
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A. Risks of clothianidin detections in groundwater to aquatic animals

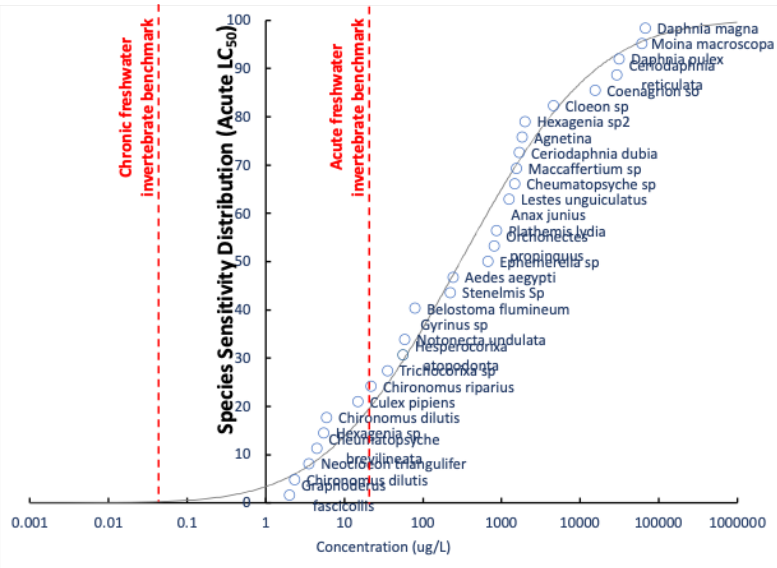
Clothianidin has not been detected in Maine surface water in any monitoring study conducted by the Maine Board of Pesticide Control. Thus, the only the risks of clothianidin in groundwater were considered. To evaluate the risks of neonicotinoids to aquatic animals, a joint distribution curve was generated to visualize both the (*i*) probability of concentrations detected in the environment and (*ii*) the probability of the number of species affected. This allowed the calculation of a risk curve which estimates the probability of adverse effects at each concentration. A description of the methodology is described below.

Methodology

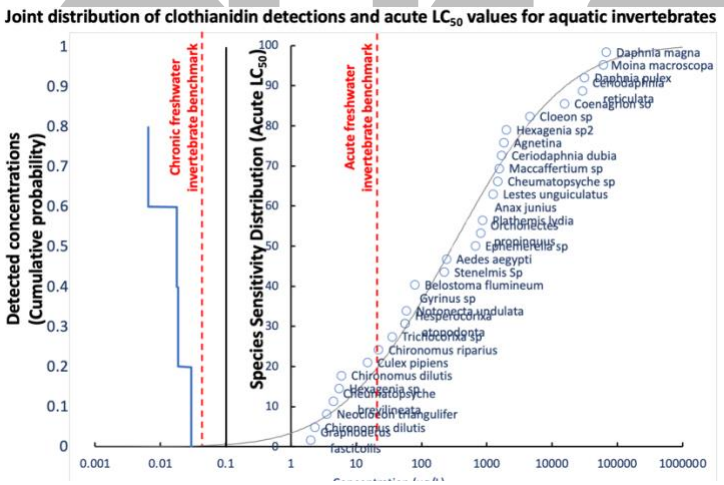
Step 1: The probability for clothianidin detects were log transformed; this allows the distribution of the detections to be visualized. Next, the cumulative probability was calculated.



Step 2: Generate a species sensitivity distribution (SSD). This curve shows the distribution of acute LC_{50} values for aquatic animals, which is the concentration of a clothianidin that is lethal to half of the population. The dotted lines were added to indicate EPA benchmarks for aquatic freshwater invertebrates. Values used to generate the SSD were based on EPA data (get source).

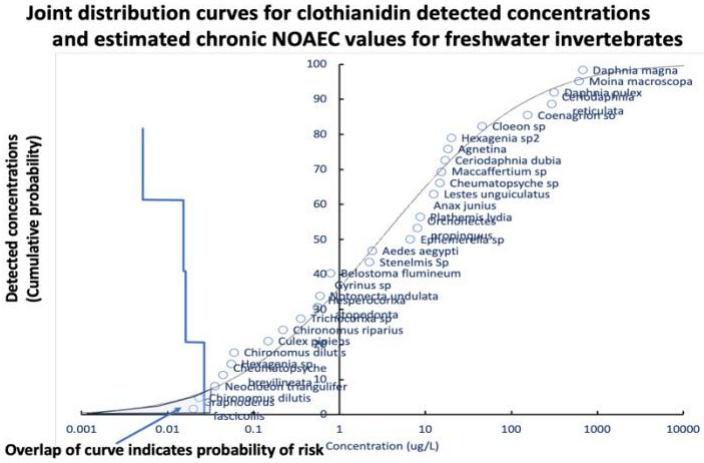


Step 3. Joint Distribution showing potential overlay of clothianidin detections and LC_{50} values.



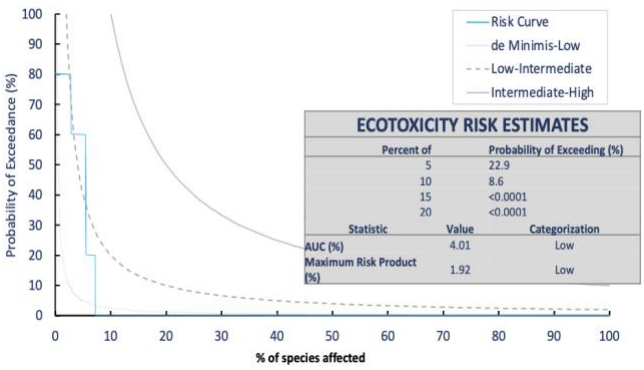
Detections of clothianidin (dark blue line) were at concentrations that do not exceed LC_{50} values for any species. The interpretation is that risk of exceeding LC_{50} values is negligible at the concentrations detected in Maine groundwater.

Step 4: assess probability of detections exceeding chronic NOAEC levels. Create another joint distribution curve showing potential overlay of clothianidin detections and the estimated No Observed Adverse Effect Level (NOAEL). The NOEALs were estimated by decreasing the LC_{50} value by 100-fold, which is a semi-conservative approach.



This curve does show an overlap between the distribution of clothianidin in the groundwater and estimated NOAEC values. This overlap represents risk that can be calculated in a risk curve.

Step 5. Generate a risk curve based on the above joint distribution curve.



The risk curve is depicted in blue. Curves representing different levels of risk are plotted and depicted in the key.

Interpretation: there is a 23% chance that the No Observed Adverse Effect Level (NOAEL) will be exceed for 5% of aquatic animals. This is categorized as low risk based on the area under the curve (AUC). Exceeding the NOAEL may or may not affect the species' physiology and development in the environment, but still signals that risk is present.

B. Risks of thiamethoxam in groundwater to aquatic organisms

B1. Risk of exceeding LC_{50} values. The methodology discussed above for clothianidin was repeated for thiamethoxam. Data used to generate the Species Sensitivity Distribution curve were based on EPA LC_{50} values. Similar to clothianidin, there is negligible risk (<0.001 %) that concentrations of thiamethoxam detected in Maine groundwater will exceed 5% of species' LC_{50} values.

B2. Risk of exceeding NOAEC values. NOAEC values were estimated by decreasing the LC_{50} values 100-fold. A joint distribution curve was generated that depicts the (*i*) distribution of thiamethoxam concentrations in groundwater and (*ii*) the distribution of thiamethoxam predicted NOAEC values (Figure 2). A risk curve was generated to calculate the probability of the risk of thiamethoxam exceeding NOAEC levels for freshwater invertebrates (Figure 3).

draft

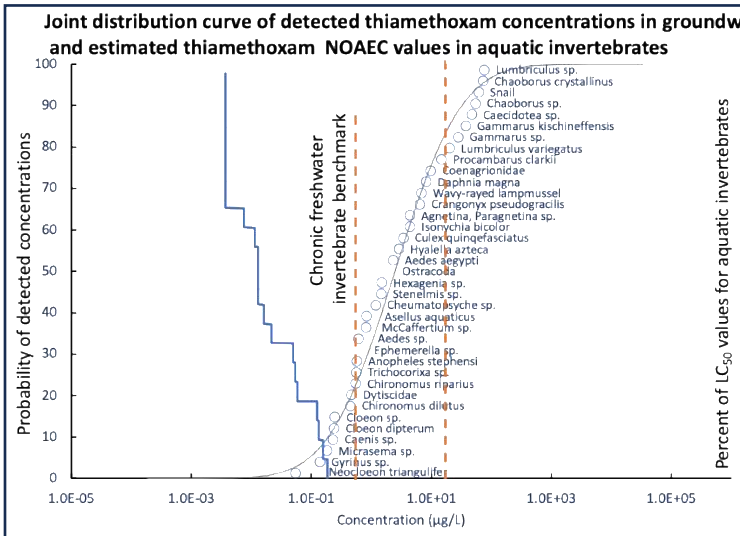


Figure 2. Joint distribution curve that depicts the cumulative probability of thiamethoxam concentrations that were detected in Maine groundwater (dark blue line) and the distribution of estimated NOAEC values for aquatic invertebrates (light blue line). Overlap denotes risk and warrants a risk curve.

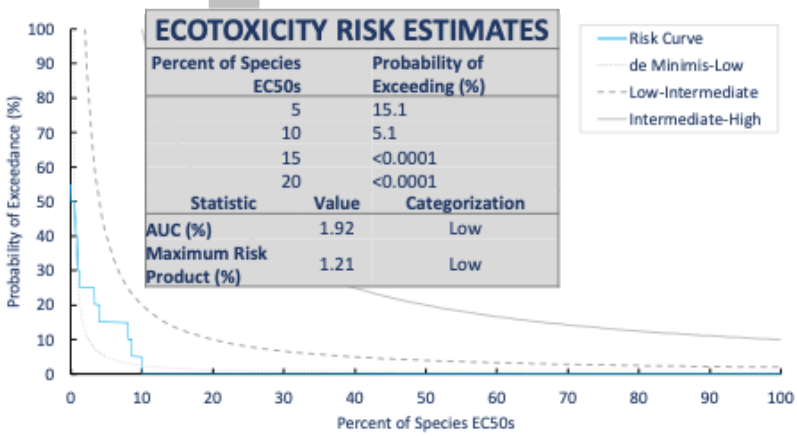


Figure 3. Risk curve in blue indicates that there is a 15% chance that thiamethoxam detections in Maine groundwater will exceed the predicted NOAEC values for 5% of all aquatic species. This risk is categorized as low.

C. Risks of imidacloprid to aquatic organisms

C1. Risk of exceeding acute LC_{50} values for freshwater invertebrates.

Imidacloprid was the only neonicotinoid to be detected in both groundwater and surface water (Table 3; Figure 4). Similar to clothianidin and thiamethoxam, the probability of groundwater or surface water detections exceeding a concentration above any species' LC_{50} value is negligible (<0.001% chance of exceeding LC_{50} for 5% of all species).

	groundwater				surface water				
	2014	2020	2021		2018-19	2019	2021	2023	2025
	(n=137)	(n=74)	(n=50)		(n=18)	(n=51)	(n=12)	(n=54)	(n=38)
detection frequency	11.70%	13.50%	14%	detection frequency	17%	26%	0	3.70%	13%
# detections	16	10	7	# detections	3	14	0	2	5
concentration (ug L-1)	0.005	0.004	0.004	concentration (ug L-1)	0.015	0.002	--	0.005	0.002

Table 3. Detections of imidacloprid in groundwater and surface water in Maine.

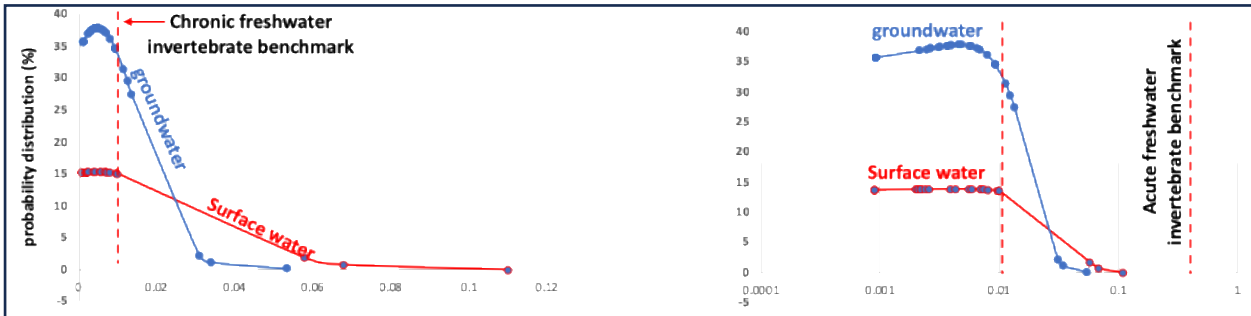


Figure 4. Distributions of imidacloprid detections in Maine groundwater (blue) and surface water (red). Raw data (left) were log-transformed (right) to visualize the relationship between detections and the acute freshwater invertebrate benchmark established by the EPA.

draft

C2. Risk of imidacloprid exceeding chronic NOAEC values for freshwater invertebrates.

A total of 10 detections of imidacloprid exceeded the chronic freshwater invertebrate benchmark (n= 4 surface water, and n= 6 for groundwater). Therefore, the risks to species in these aquatic environments were evaluated separately. The species sensitivity distribution curve was created using estimated NOAEC values for 64 freshwater species (*e.g.* insects, crustaceans, mollusks, worms, amphibians, and fish); these data are from EPA and academic groups, and the methodology is discussed in Appendix I. A joint distribution curve (Figure 5) was created to show the overlay of the species sensitivity distribution and probability of detected concentrations of imidacloprid. This overlay reveals two important trends. First, insects are the class of species most at risk of imidacloprid detections. Secondly, imidacloprid in surface water (*i.e.* streams) is a greater risk to insects compared to groundwater.

These data motivated us to focus on assessing the risks of insects exposed to imidacloprid in streams. To accomplish this objective, species sensitivity curves were generated for each category on species. This approach allowed us to isolate the impact of imidacloprid on insects and compare this risk to other categories of species (Figure 6). Risk curves were generated to estimate the probability that exposure to imidacloprid will exceed NOAEC values; this analysis reveals that the risks of imidacloprid is specific to insects (*i.e.* NOAEC exceedances could occur for more than 5% of insects). Other species are anticipated to be less impacted, as exposure to imidacloprid will not exceed NOAEC levels (Table 4)

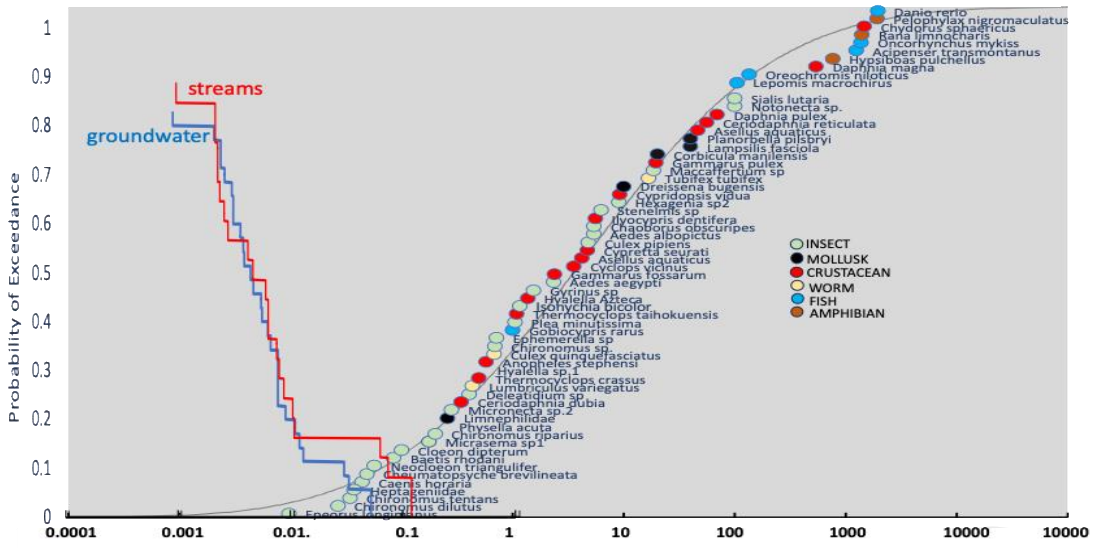


Figure 5. Joint Distribution curve shows the (*i*) probability of environmental exposure of imidacloprid in groundwater and surface water and (*ii*) imidacloprid NOAEC values for aquatic species.

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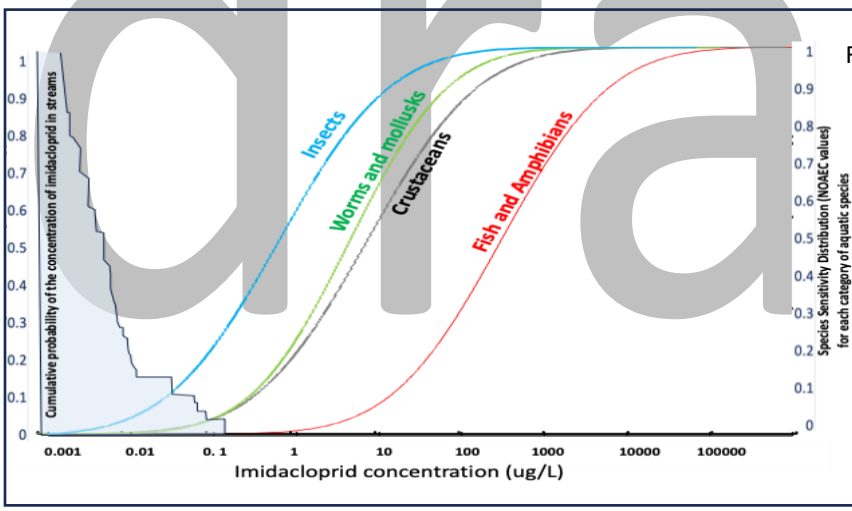


Figure 6. Aquatic species were grouped into categories and separately analyzed by creating species sensitivity curves. This approach reveals that insects are particularly at risk of imidacloprid exposures that exceed NOAEC values.

Probability of imidacloprid exceedance (%)

% species exceeding NOAEC

	all aquatic species		insects		crustaceans		mollusks and worms		fish and amphibeans	
	ground	stream	ground	stream	ground	stream	ground	stream	ground	stream
5%	6.10	8.4	11.5	15.4	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
10%	<0.0001	4.2	5.8	15.4	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
15%	<0.0001	<0.0001	<0.0001	15.4	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
20%	<0.0001	<0.0001	<0.0001	7.7	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
25%	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

	all aquatic species		insects		crustaceans		mollusks and worms		fish and amphibeans	
	ground	stream	ground	stream	ground	stream	ground	stream	ground	stream
AUC	1.77	2	3.44	4.8	0.15	0.52	0.12	0.47	<0.01	<0.01
maximum risk	0.77	0.8	1.24	2.6	0.05	0.29	0.04	0.27	<0.01	<0.01

Table 4. Probabilities of exceedances generated from risk curves for all aquatic species and different categories of species. Values in red represent the probability that exposure to imidacloprid will exceed NOAEC levels

C3. Comparison of imidacloprid stream exposure data to another New England state

There were a total of 24 imidacloprid detections in Maine streams from three water quality monitoring studies. We deemed it worthwhile to compare these data to another New England state that had a more robust dataset, which included 657 detections in streams. Compared to Maine, the other state had a distribution curve that was shifted to the right, which indicates a higher concentration of imidacloprid in streams and increased risk of exposure to aquatic organisms. Nearly half of the imidacloprid detections in the New England state exceeded the chronic freshwater aquatic benchmark (Figure 7).

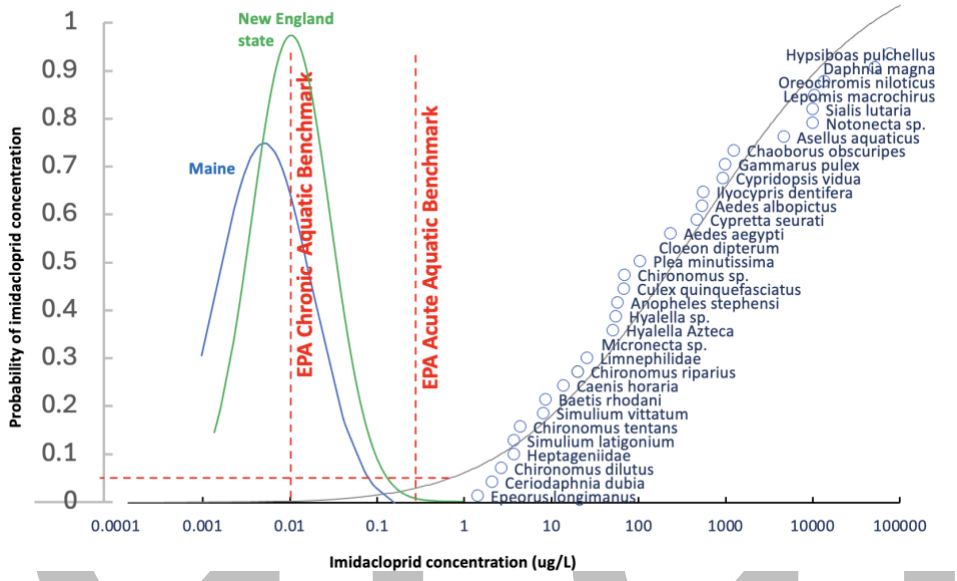


Figure 7. Comparison of imidacloprid concentrations detected in Maine and another New England state streams.

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

October 19, 2026

Acadian Forestry & Plant Management
Alex Cammen
73 Bert Gray Rd.
Sullivan, ME 04664

RE: Variance permit for CMR 01-026 Chapter 29, Acadian Forestry & Plant Management, Ferry Landing Rd. in Sedgewick.

Greetings,

The Board of Pesticides Control considered your application for a variance from Chapter 29. The variance is approved, provided that all products to be used are currently registered in the State of Maine or were registered at the time of purchase and that any application is made above the high-water line.

The Board authorizes the issuance of up to three-year permits for Chapter 29; therefore, this permit is valid until December 31, 2028, provided that the applications are consistent with the information provided in the variance request. Please notify the Board in advance of changes, particularly if you plan to use a different product from those listed.

Please bear in mind that your permit is based upon your company adhering to the precautions listed in Section X of your Chapter 29 variance request.

I will alert the Board at its next meeting that the variance permit has been issued. If you have any questions regarding this matter, please do not hesitate to contact me at (207) 287-2731.

Sincerely,

Alexander Peacock
Director

ALEXANDER PEACOCK, DIRECTOR
90 BLOSSOM LANE, DEERING BUILDING

PHONE: (207) 287-2731
THINKFIRSTSPRAYLAST.ORG

BOARD OF PESTICIDES CONTROL
APPLICATION FOR VARIANCE PERMIT
(Pursuant to Chapter 29, Section 6 of the Board's Regulations)

I. Alex Cammen (301) 281-3211
Name Telephone Number

Acadian Forestry and Plant Management
Company Name

73 Bert Gray Rd	Sullivan	Maine	04664
Address	City	State	Zip

II. Alex Cammen CMA-6259
Master Applicator (if applicable) License Number

73 Bert Gray Rd	Sullivan	Maine	04664
Address	City	State	Zip

III. **As part of your application, please send a revegetation plan and digital photos showing the target site and/or plants and the surrounding area, particularly showing proximity to wetlands and water bodies, to pesticides@maine.gov**

IV. Area(s) where pesticide will be applied:
At the end of Ferry Landing Rd in Sedgewick, Maine there is a patch of Japanese knotweed on both sides of the road that totals approximately 5,000sqft, most of which is within 25 feet of the Eggemoggin Reach beach. The landing is used by the town. Some of the property is owned by the Blue Hill Heritage Trust, some by the town, and some by a private landowner. All three have hired me.

V. Pesticide(s) to be applied: (Including EPA Registration Number)
Monsanto Aquamaster (524-343)

VI. Purpose of pesticide application:
To control the Japanese knotweed patch. I am treating knotweed and other invasive plants along the entire road, but this is the one location that is close to surface waters.

VII. Approximate dates of spray application:
October 2026, September – October 2027, and September – October 2028

VIII. Application Equipment:
Hand-pumped backpack sprayer

IX. Standard(s) to be varied from:
Chapter 29, Section 6 - Buffer Requirement

X. Method to ensure equivalent protection and Revegetation Plan:

- **Initial treatment:** Foliar treatment of the Japanese knotweed using Aquamaster (an aquatic-approved herbicide). During the initial treatment phase, I would not excavate, pull, grade, or otherwise disturb the soil or rhizome system. All sprays will be done with a hand-pumped backpack sprayer and directed away from the water.

- **Leave treated vegetation in place:** Following treatment, the knotweed stems would remain in place rather than being immediately cut or removed. My intent is to retain the existing root mass, stems, litter, and soil structure while the infestation is being controlled, minimizing the potential for erosion.

- **Multi-year follow-up:** I expect the infestation to require repeated treatment over several growing seasons. I will selectively treat any knotweed regrowth as needed. Next year, I will install a sediment control wattle on the downhill side of the knotweed patch to catch sediment, even before removing any dead stems.

- **Removal and restoration:** Once sections of the infestation have been sufficiently suppressed, likely after a couple of years of treatment, I will remove dead knotweed material where appropriate while minimizing disturbance to the soil and remaining rhizomes. The exposed soil will be stabilized with straw and revegetated with a native grass and forb seed mix appropriate to the site conditions.

XI. Revegetation Plan (attach separately if necessary) -Also see attached

Once sections of the infestation have been sufficiently suppressed, likely after a couple of years of treatment, I will remove dead knotweed material where appropriate while minimizing disturbance to the soil and remaining rhizomes. The exposed soil will be stabilized with straw and revegetated with a native grass and forb seed mix appropriate to the site conditions.

Signed: [signature] Date: 10/1/26

Return completed form to: **Board of Pesticides Control, 28 State House Station, Augusta, ME 04333-0028**
OR E-mail to: pesticides@maine.gov

Japanese Knotweed Revegetation Plan

Coastal Shoreland Site • Sedgwick, Maine

Prepared for phased invasive-plant control and shoreline restoration

Site condition	Stable bank immediately inland of a rocky ocean-bay shoreline
Primary invasive	Japanese knotweed (*Reynoutria/Fallopia japonica*)
Management horizon	Multi-year control; repeated treatment expected before full removal/restoration
Restoration strategy	Minimize soil disturbance, retain protective biomass during control, establish native cover as knotweed declines

1. Purpose and Management Approach

Purpose. This plan provides a phased revegetation framework for a Japanese knotweed infestation at the landward edge of a rocky coastal shoreline in Sedgwick, Maine. The goal is to control knotweed without creating unnecessary bare soil, then transition the treatment area to a stable, diverse native plant community that protects the bank and shoreline.

Core approach. Revegetation should proceed in step with knotweed suppression rather than as a one-time action. Because the first herbicide treatment is not expected to fully eliminate the infestation, the site should remain physically intact during the early control years. Dead and declining stems, litter, roots, and undisturbed soil should be retained where practical until enough knotweed has been suppressed to establish replacement vegetation without repeatedly destroying the new planting.

2. Restoration Objectives

- Prevent erosion and sediment movement during and after knotweed suppression.
- Avoid excavation, tilling, grubbing, or other disturbance that could fragment and spread knotweed rhizomes.
- Maintain existing native vegetation, leaf litter, and intact soil wherever possible.
- Establish fast protective ground cover once meaningful openings occur in the knotweed canopy.
- Avoid importing contaminated soil, moving knotweed-infested soil off site, or creating large areas of exposed mineral soil.

3. Phased Implementation Plan

Phase 1 – Initial Control / No Major Vegetation Removal

Timing: Initial treatment year and any subsequent year in which knotweed still dominates the site.

- Treat knotweed using Aquamaster.
- Do not excavate crowns or rhizomes or aggressively rake the treatment area.
- Leave treated stems and existing litter in place.
- Retain all existing native vegetation that can reasonably be preserved.
- Inspect the bank after major rain, storm surge, and spring snowmelt events. If the bank remains stable and soil is not exposed, no wholesale reseeding is necessary during this phase.
- Photograph fixed reference points before treatment and at least once near the end of each growing season.

Phase 2 – Early Revegetation as Knotweed Canopy Opens

Trigger: Begin this phase when treatment has created persistent openings where sunlight reaches the soil surface and knotweed no longer forms a continuous canopy.

- Install a silt control wattle directly below the knotweed patch.
- Cut or hand-remove dead aboveground knotweed material only as needed to create seed-to-soil contact and planting access.
- Do not pull stems in a way that disturbs crowns or attached rhizomes.
- Remove only thick mats of dead litter that physically prevent seed from reaching the soil; leave a light organic layer where it does not interfere with establishment.
- Lightly scratch only the upper surface of the soil with a hand rake where necessary. Avoid deep scarification.
- Broadcast a native seed mixture designed for moist-to-mesic Northeast/coastal conditions. Use a temporary nurse crop only if rapid cover is needed and only at a rate low enough to avoid suppressing the native mix.
- Press seed into the soil by rolling, tamping, or walking the area. Do not bury fine native seed deeply.
- Apply a light layer of clean, weed-free straw where soil is exposed.
- Continue selective knotweed retreatment using Aquamaster.

Phase 3 – Long-Term Maintenance

- Walk the area at least once a growing season for at least 3 to 5 years after major suppression.
- Treat isolated knotweed resprouts promptly before they rebuild a dense canopy.
- Overseed thin areas.

4. Ground Preparation and Seeding Procedure

1. Confirm that the area selected for seeding is an actual opening in the knotweed canopy and not merely temporarily flattened vegetation.
2. Cut dead canes high enough to avoid disturbing the crown. Remove only the material necessary for safe access and seed placement.
3. Leave intact native vegetation and undisturbed organic soil in place.
4. Where a dense mat of dead knotweed leaves/stems prevents soil contact, hand-rake only enough material away to expose patches of the soil surface.
5. Lightly roughen the uppermost soil surface only where needed. Do not till, excavate, or deeply rake the rhizome zone.
6. Broadcast seed in two perpendicular passes for even coverage. A clean inert carrier can be used to improve distribution of small quantities of seed.
7. Press seed firmly against the soil using a roller, tamper, board, or foot traffic. Do not bury small native seed more than very shallowly.
8. Apply clean, weed-free straw lightly enough that some soil remains visible. If runoff velocity is a concern, use a biodegradable erosion-control blanket over the seeded surface.
9. Water only if practical and necessary for establishment. Avoid concentrated flow or hose erosion.
10. Inspect after major rain events and repair displaced mulch or failed seed areas.

5. Knotweed Biomass and Soil Handling

- Assume crowns, rhizomes, and soil from the infestation are capable of spreading knotweed.
- Do not move infested soil to another part of the property for ordinary landscaping.
- Avoid chipping or spreading fresh viable knotweed stems where fragments could reach moist soil.
- If dead canes are removed after repeated treatment, keep the handling method consistent with the selected disposal strategy and any applicable local/state requirements.
- Clean tools, boots, and equipment that contact rhizome-bearing soil before moving to uninfested areas.

6. Regulatory Coordination Notes

Town of Sedgwick. The Town's Shoreland Zoning Ordinance regulates clearing/removal of vegetation and includes erosion- and sediment-control standards within the shoreland zone. The plan therefore emphasizes minimizing clearing, preserving intact cover, and promptly stabilizing exposed soil.

Maine DEP / NRPA. Because the site is immediately adjacent to tidal water/coastal wetland, confirm with Maine DEP whether any later phase involving vegetation removal, soil disturbance, fill, or shoreline alteration requires a permit or Permit-by-Rule. The initial treatment phase is intentionally structured to avoid excavation, grading, fill, and shoreline alteration.

Maine Board of Pesticides requirements. Herbicide selection, application method, licensing, buffer requirements, and any variance requirements should be handled under the applicable Maine Board of Pesticides Control rules and the product label.





