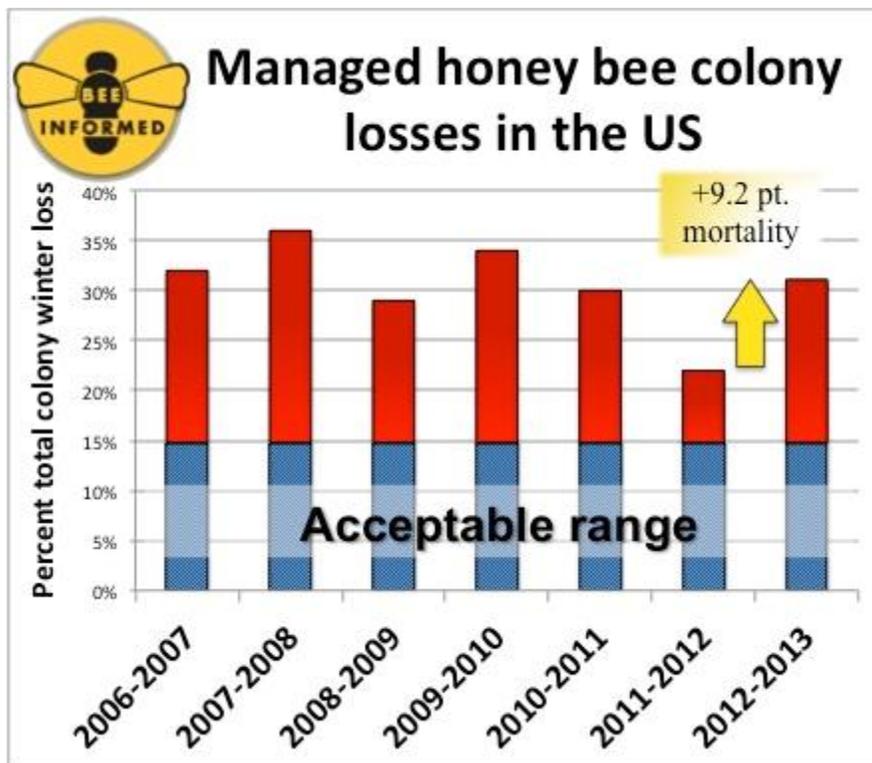


Pollinator Protection – A very important topic for growers, commercial beekeepers and pesticide applicators.

In 2012, David Yarborough, University of Maine Wild Blueberry Specialist, said, “There are usually about 55,000 hives trucked in each spring from places as far away as Florida, Texas and California.” “With anywhere from 20,000 to 40,000 bees per hive, that’s a billion bees. Without these pollinators Maine’s wild blueberry crop yields would suffer. Many other crops also rely on pollinators, especially our fruits and vegetables.

Nationwide, honey bee colonies have been declining in recent years due to several factors, including parasitic mites, viruses, fungal diseases, malnutrition, lack of genetic diversity and improper use of pesticides. The overwintering losses have averaged in the 30% range over the last seven seasons (see graph below). This level of decline is not sustainable.



<http://www.beeinformed.org>

The prevailing theory among scientists in the EPA, USDA and global scientific and regulatory community is that the general declining health of honey bees is related to complex interactions among multiple stressors including:

- pests (e.g., varroa mite), pathogens (e.g., the bacterial disease American foulbrood) and viruses.
- poor nutrition (e.g., due to loss of foraging habitat and increased reliance on supplemental diets);

- pesticide exposure;
- bee management practices (e.g., long migratory routes to support pollination services); and
- lack of genetic diversity.

Growers, commercial beekeepers and pesticide applicators in Maine must work together to help stem this tide of pollinator decline. The Board of Pesticide Control’s website now has a web page to provide growers and applicators with resources to help reduce the risk of pesticide applications affecting pollinators (see link below).

We all need to know which pesticides and adjuvants are toxic to pollinators and how to reduce the potential for pollinator exposure when we use those products. Of course the most risky products are insecticides, but there are some combinations of insecticides and fungicides or certain types of surfactants that appear to be toxic to bees and other pollinators in either their adult or larval stages.

Some products (neonicotinoid and diamide insecticides at first) will have new label warnings



that include this “bee icon” on the label. It is extremely important for growers and applicators to follow the restrictions on those labels very carefully. Other labels will continue to have language that restricts application during bloom or when bees (or other pollinators) are foraging on flowering crops or adjacent weeds. Of course those restrictions are equally binding.

Other important practices that pesticide applicators should follow to protect pollinators include:

- Avoiding unnecessary pesticide applications by following integrated pest management practices
- Choosing pesticides carefully - see [How to Reduce Bee Poisoning from Pesticides](#)
- Application of pollinator toxic pesticides (PTP) at night or when temperatures are under 45 degrees F
- Delaying application of PTP until after full petal fall
- Avoiding tank mixes, especially with insecticide-miticide or insecticide-fungicide combinations
- Avoiding spills or splashes that leave pesticides in puddles or standing water
- Notifying beekeepers within 2 – 3 miles of your application site prior to PTP applications
- Avoiding multiple applications of systemic insecticides on potted nursery plants
- Avoiding use of organo-silicone surfactants around bloom periods – see [Compendium of Herbicide Adjuvants](#)
- Proper planting of treated seed to avoid creation of toxic dusts

The Board’s new Pollinator Protection web resource page provides additional information and can be found at

http://www.maine.gov/dacf/php/pesticides/applicators/pollinator_protection.shtml

More additional resources:

- Preventing or Mitigating Potential Negative Impacts of Pesticides on Pollinators Using Integrated Pest Management and Other Conservation Practices: USDA Agronomy Technical Note
#9 <http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=34828.wba>
- Report on the National Stakeholders Conference on Honey Bee Health:
<http://www.usda.gov/documents/ReportHoneyBeeHealth.pdf>
- Managed Pollinator CAP-Coordinated Agricultural Project:
<http://www.beccdcap.uga.edu>
- Pesticide Environmental Stewardship Program – Pollinator Protection:
<http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>
- EPA Pollinator Protection: <http://www.epa.gov/opp00001/ecosystem/pollinator/>

If you have any questions, please contact us at pesticides@maine.gov .