

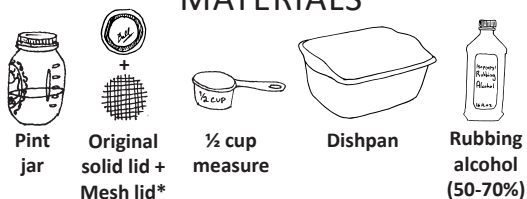
SAMPLE REGULARLY

(AT LEAST ONCE A MONTH)

Alcohol wash

The most accurate way to determine *Varroa* levels in your hives

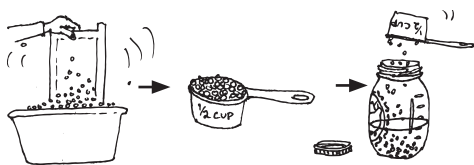
MATERIALS



*1/8 inch hardware cloth, cut to match solid lid

10 STEPS

- 1) Pour alcohol into jar. Set materials in easy reach
- 2) Find a frame of **open brood**
Check that the queen is not on frame!
- 3) **Shake adult bees from frame into dishpan**
Scoop ½ cup (~300) bees and pour into jar



- 4) Shake remaining bees from bin into colony
- 5) Seal solid lid on jar and **shake for 1-2 min**
- 6) Let jar sit for 1-2 minutes
- 7) Replace solid lid with mesh lid
- 8) **Shake jar contents into empty dishpan**
- 9) **Count the total # mites.**
If there are 4+, it is time to apply a chemical treatment (see inside of brochure)



- 10) Discard bees and mites
Wash all materials; can reuse alcohol

→ email bees@mass.gov for a free kit!

KNOW YOUR PEST

Meet the *Varroa* mite...

The Varroa Mite, *Varroa destructor*, is an external parasite that feeds on honey bee adults and brood. **They weaken bees and transmit viruses.**



Unmonitored and unmanaged infestations of Varroa mites will result in colony death.

COMMON SIGNS OF MITE DAMAGE:



- Open or damaged pupal cells
- Chewed-down pupae
- Emerging adult bees with deformed or missing wings

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United States Department of Agriculture National Institute of Food and Agriculture



Integrated Pest Management (IPM) for *Varroa* mites



IPM is a decades-old farm strategy for mitigating pests while minimizing chemical use. Experts now recommend IPM for *Varroa*.

Rather than relying on a “silver bullet”, good IPM incorporates multiple practices throughout the season, based on pest levels and pest biology.

IPM PRINCIPLES:

- **KNOW YOUR PEST**
- **PREVENT** pest build up using non-chemical practices
- **SAMPLE REGULARLY** to track pest population levels
- **INTERVENE** with pesticides when populations reach damaging thresholds (*vary products to prevent pest resistance*)



This pamphlet will help you to use IPM principles to manage Varroa mites.



