

Massachusetts Department of Agricultural Resources

Apiary Program Update

Spring 2022



Do You Have a Dead-Out or Unexpected Hive Death?



Get an Inspection: The Apiary Program Team offers health inspections and sampling if warranted of hives through the Winter months. To schedule an inspection for these hives, please submit the electronic form: <https://www.mass.gov/forms/mdar-apiary-inspection-request-form>.

Submit a Sample: Request FREE kits from MDAR and submit samples from your own hives. These FREE kits are easy to use by following the provided instructions and materials. Samples are analyzed and results provided directly to the beekeeper from the [USDA-ARS Bee Research Laboratory in Beltsville, MD](#) within a few weeks after receipt. There is no fee to process samples so you only need to pay for postage to mail each kit. These kits are great to use on hives that die during winter and throughout the season to aid in troubleshooting health issues.

Note that each kit contains materials to sample 1 hive so request multiple kits if your apiary contains multiple hives. To request simply send your **name**, **mailing address** and **quantity requested** via email to bees@mass.gov with the subject line "**Bee Kits**".

To find out more about the lab and sample processing visit their website: <https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/bee-research-laboratory/docs/how-to-submit-samples/>.

Varroa Mite/Nosema Sample Kits

Kit Includes:

- Pre-labeled envelope
- Wet sample secure bag
- Labeled outer plastic bag

Beekeeper Cost (per kit): \$postage & alcohol

AFB/EFB Sample Kits

Kit Includes:

- Pre-labeled envelope
- 2 packs sterile Q-tips
- Paper bag with label for storing samples

Beekeeper Cost (per kit): \$postage

Submit Your 2022 Inspection Request NOW!

Weather permitting, inspections of live honey bee hives will resume March 1st 2022.

Are YOU interested in having an inspector visit your apiary? If so, don't miss out - submit your [Inspection Request](https://www.mass.gov/forms/mdar-apiary-inspection-request-form) now: <https://www.mass.gov/forms/mdar-apiary-inspection-request-form>.

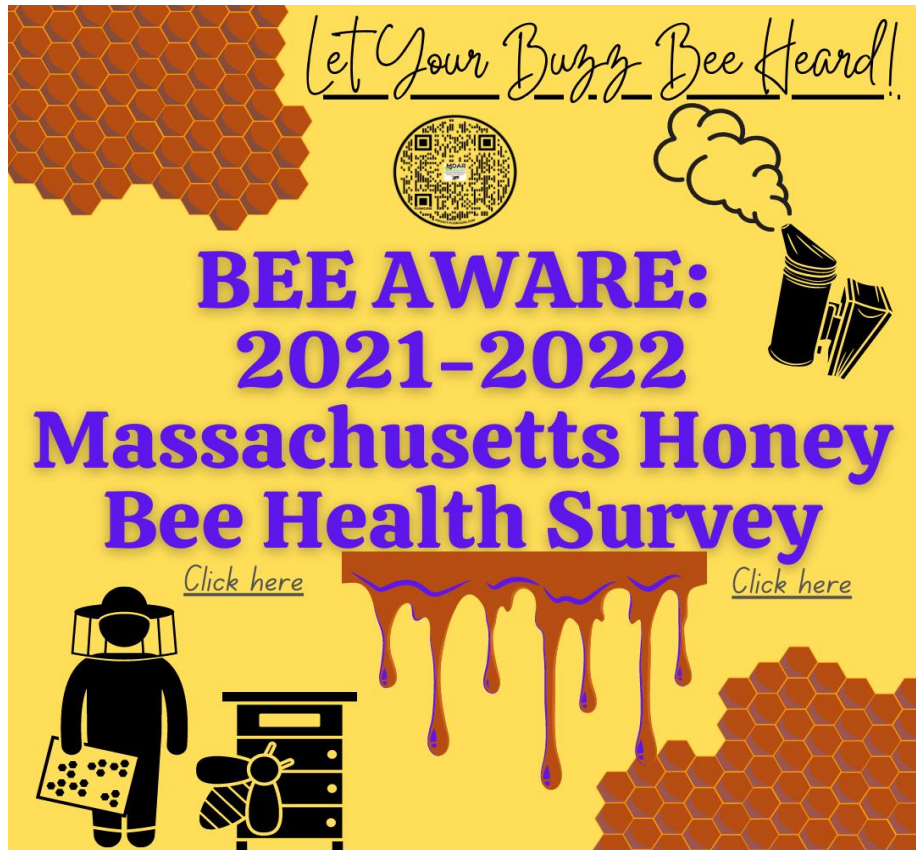
Our mission is to provide the best service and support possible to meet the needs of beekeepers and honey bees in the Commonwealth. We strive to visit every single beekeeper who requests an inspection and will do our best in 2022 to accommodate every request. However, we do appreciate your patience as the Apiary Program Team of "worker bees" tackle the routine "hive tasks" and emergencies throughout the Apiary Program Seasonal Calendar year.



Voluntarily Register Your Apiary Now!

A total of 936 beekeepers have voluntarily registered their apiaries with MDAR since April, 2017 by using this quick online form: <https://www.mass.gov/forms/apiary-and-colony-registration-form>. Please consider taking a minute to register your apiary today so that we can best communicate with beekeepers and investigate honey bee health issues in your area.

Let Your Buzz Bee Heard! Take the BEE AWARE Survey!



Section 1 of 8

BEE AWARE: The 2021-2022 Massachusetts Honey Bee Health Survey

Thank you for participating in the BEE AWARE Health Survey by providing feedback on the health of your honey bee colonies!

This survey has been created by the Massachusetts Department of Agricultural Resources (MDAR) to serve as a tool for Massachusetts honey beekeepers to share data on colony health for the current bee season: May 2021 - May 2022.

Participation in this survey is voluntary. After completion, interested respondents will get a FREE gift.

A summary of survey results will be provided to the beekeeping community and presented at the Massachusetts State Beekeepers Association Annual Meetings.

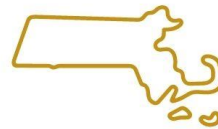
Happy Beekeeping,
-The MDAR Apiary Program Bee Team

<https://forms.gle/ufVEv4DqcyetCGbJ6>

Bee Educated! Join Us to Get the Latest Updates

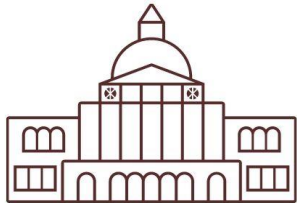
STATE OF THE STATE:

Update on honeybee health in the Commonwealth



TUESDAYS

7:00PM-9:00PM



MDAR
MASSACHUSETTS DEPARTMENT
OF AGRICULTURAL RESOURCES

Division of Crop and Pest Services
Apiary Program



December 7th 2021

Inspection Season Data Summary

December 14th 2021

Honey Bee Viruses
Pesticides

March 15th 2022

MA Beekeeping Laws and Regulations
Spring Into Beekeeping

March 22nd 2022

MA Bee Aware Honey Bee Health Survey
USDA-APHIS Honey Bee Health Survey

March 29th 2022

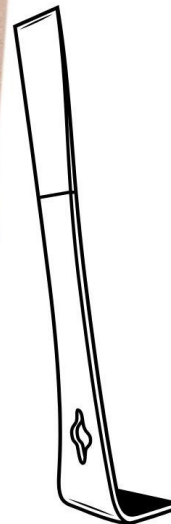
Spotted Lanternfly
Asian Giant Hornet

Zoom Webinar ID: 870 4431 9225; Passcode: 165665

[https://us06web.zoom.us/j/87044319225?](https://us06web.zoom.us/j/87044319225?pwd=OFMrzc1Ulk2S1hIZ3Nkd2tjVVFpQT09)
[pwd=OFMrzc1Ulk2S1hIZ3Nkd2tjVVFpQT09](https://us06web.zoom.us/j/87044319225?pwd=OFMrzc1Ulk2S1hIZ3Nkd2tjVVFpQT09)

One tap mobile: +13017158592,,87044319225#,,,,*165665#

This event may not bee recorded so Bee There or Bee Square!





HONEY BEE EDUCATION DAYS AT STATE APIARIES 2022

ON SATURDAYS 10AM-12PM!



- **April 9th:** Winter Evaluation & Spring Prep
- **May 7th:** Spring Management
- **June 11th:** Summer Management*, *Massachusetts Beekeepers Association Annual Field Day, Amherst location only*
- **July 9th:** Pests, Parasites, Pathogens
- **August 13th:** Fall Management
- **August 27th:** 10am-2pm, Honey Extraction*, *Danvers location only*
- **Sept 10th:** Fall Management & Winter Prep
- **Oct 8th:** Winter Management

WHERE?

University of Massachusetts –
Agricultural Learning Center (ALC)
farm 911 North Pleasant St
Amherst, MA 01002. Drive directly
into field to park adjacent to
apiary/sheds.

Essex North Shore Agricultural and
Technical School (Essex Aggie) 565
Maple St (use 562 Maple Street
address for navigation) Danvers,
MA 01923. GPS: 42°35'20.5"N
70°58'33.2"W

bees@mass.gov

Health - Pest & Diseases - Management

Let's Talk about Beekeeping!

JOIN THE NEW ENGLAND AND NEW YORK STATE
APIARY INSPECTORS "LUNCH AND LEARN"

2022 PROGRAM
90 MINUTE SESSION ON
FRIDAYS

April 8

June 3

August 12

October 7



12:00 to
1:30pm

VIRTUAL ONLY!



**Free &
Open to
the Public**

Educational content will
focus on topics of
interest to beekeepers
and regional colony
management. Events will
not be recorded so BEE
THERE to BEE
INFORMED!



**Sponsored by
the Apiary
Inspectors of
America (AIA)**

Join Zoom Meeting

[https://us06web.zoom.us/j/84953761589?](https://us06web.zoom.us/j/84953761589?pwd=V0NEbld0NkdjOUdiOCs0UXdoYlhpQT09)
pwd = V0NEbld0NkdjOUdiOCs0UXdoYlhpQT09
Meeting ID: 849 5376 1589 Passcode: 609112

One tap mobile: Find your local number:
<https://us06web.zoom.us/j/84953761589>



Join the MDAR Apiary Program Team



Left to right: YOU!, David Saleh, Shay Willette, Kim Skyrn and Paul Tessier.

Are you interested in joining the MDAR Apiary Program Team? We will be hiring a new inspector to join the Apiary Team in 2022 to assist in covering inspections for Worcester County beekeepers. We are hoping for a March 2022 start date for the new full time, seasonal, contracted (no benefits) position. The job posting will be available soon so if interested check out the [Mass Careers](https://www.mass.gov/info-details/mass-careers) website and search for "Apiary Inspector" as the Job Title.

Fight the Mite! Plan for Varroa Mite Management NOW!

SAMPLE REGULARLY
(EVERY MONTH!)

Alcohol wash
The most accurate way to determine
Varroa levels in your hives

MATERIALS

Pint jar

Original solid lid + Mesh lid*

1/2 cup measure

Dishpan

Rubbing alcohol (50-70%)

*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 1/2 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 >3, 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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Drawings by Hannah Whitehead. Brood photo by Kim Skyrn. Other images from USDA Office of Communication in Research Science <https://www.usda.gov/media/blog/2014/05/13/helping-honey-bees-health>



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.

PREVENT PEST BUILD UP USING NON-CHEMICAL PRACTICES

SPRING AND SUMMER

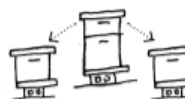
Re-Queen

Select mite resistant stock when available



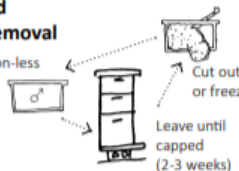
Brood Interruption

Split hive or allow to swarm (capture swarm!)



Drone Brood Trapping/Removal

Insert foundation-less or drone frame



Cut out or freeze
Leave until capped (2-3 weeks)

ALL YEAR

Screened Bottom Board

Check mite drop for effectiveness



CHEMICAL TYPES:

Synthetic

PROS: Targeted toxicity
CONS: Last longer in the environment

Organic

PROS: Degrade quickly
CONS: Broad-spectrum toxicity (more harmful to the beekeeper!)

PERSONAL PROTECTIVE EQUIPMENT (PPE):



Chemical-resistant gloves



Safety goggles



Respirator with an organic particulate filter

INTERVENE W/ PESTICIDES WHEN PESTS EXCEED THRESHOLDS (>3 MITES/SAMPLE!)

TABLE OF MITICIDE OPTIONS for full product labels, visit <http://www.kellysolutions.com/MA/pesticideindex.htm>

Name Active Ingredient [mode of action]	Season [temp] less effective when brood is present	Honey super safe?	Treatment Duration	Application Type For instructional videos: honeybeehealthcoalition.org/varroa	Personal Protective Equipment
Synthetic Apivar® amitraz [contact]	Pop. Increase Pop. Decrease [Not Temp Dependent]	NO 	6-8 weeks wait 2 weeks to add honey supers	PLASTIC STRIP 	Miticides can harm people too!! Protect yourself with proper PPE
Organic: essential oil ApiGuard® thymol [fumigant]	Pop. Increase Pop. Decrease [60-105° F]	NO 	4-6 weeks Can add honey supers immediately after	GEL OR GEL TRAY 	
Organic: essential oil Api Life Var® thymol, menthol, eucalyptus oil [fumigant]	Pop. Increase Pop. Decrease [64-95° F]	NO 	26-32 days wait 1 month to add honey supers	FOAM WAFER 	
Organic: organic acid MAQS®, Formic Pro® formic acid [fumigant]	***Kills mites in brood Pop. Increase Pop. Peak Pop. Decrease [50-85° F]	YES 	MAQS: 1-3 weeks Formic Pro: 2-3 weeks	GEL STRIP 	Recommended (but not required)
Organic: organic acid Oxalic Acid, Api-Bioxal® oxalic acid dihydrate [contact, fumigant]	Pop. Increase Pop. Decrease [Not Temp Dependent] Dormant	NO 	Immediate (but may need to repeat) wait 2 weeks to add honey supers	POWDER, 3 options: Spray Dribble Fumigation (liquid) (liquid) (vapor)	
Organic: organic acid HopGuard II/III® potassium salt of hops beta acids [contact]	Pop. Increase Pop. Peak Pop. Decrease [50-85° F]	YES 	1 month	CARDBOARD STRIP 	

Varroa Mite Integrated Pest Management (IPM) Plan



Year _____

Apiary Name _____

Hive Type _____

Month	Colony Inspection Timeline (i.e. time - type)	Colony Population (i.e. stage)	Honey Flow (i.e. super)	Mite Monitoring Timeline (i.e. time - notes)	Non-Chemical Tools (i.e. cultural, mechanical, genetic)	Chemical Tools (i.e. miticides)
March						
April						
May						
June						
July						
August						
September						
October						
November						
December, January, February						

Registered Pesticides for Honey Bee Hives

The following is a list of the United States Environmental Protection Agency (EPA) and Massachusetts Department of Agricultural Resources (MDAR) registered pesticide products labeled for use in honey bee hives for management of pests and parasites. These product registrations are currently active and will expire on 6/30/2022. Stay up to date on current product registrations and label changes by visiting the *Massachusetts Pesticide Product Registration Information* website: <http://www.kellysolutions.com/MA/pesticideindex.htm>.

These general use products can be applied to individual beekeeper owned hives. If applying to hives other than those owned by the beekeeper, then a pesticide license is required. Visit the following pesticide regulations to learn about the pesticide applicator license: <https://www.mass.gov/files/documents/2017/10/30/333cmr10.pdf>.

PRODUCT NAME	ACTIVE INGREDIENT	EPA REGISTRATION NUMBER	PEST/PARASITE
Api-Bioxal	oxalic acid dehydrate	91266-1-73291	Varroa mite
Apiguard	thymol	79671-1	Varroa mite
Api Life Var	menthol, eucalyptus oil, thymol	73291-1	Varroa mite
Apistan	fluvalinate	2724-406-79671	Varroa mite
Apivar	amitraz	87243-1	Varroa mite
CheckMite+	coumaphos	11556-138	Varroa mite, Small hive beetle
Formic Pro	formic acid	75710-3	Varroa mite
HopGuard 3	potassium salts of hop beta acids	82623-2	Varroa mite
Mite Away Quick Strips (MAQS)	formic acid	75710-2	Varroa mite
B402 Certan	<i>Bacillus thuringiensis aizawai</i>	94413-1	Greater wax moth
