NEBEEC
News You Can Use

Issue 05
www.nebeec.org
10 February 2026

Welcome to NEBEEC's newsletter!

NEBEEC (Northeast Beekeepers Education Collaborative) has the goal of bringing beekeepers in the Northeastern US the best available and most current knowledge for practical beekeeping success. Currently, our major contribution toward this goal is a monthly newsletter which provides summaries of recent local bee club presentations, important journal articles and peer-reviewed papers, timely information from bee inspectors as well as notices about upcoming events.

NEBEEC also has an opt-in, collaborative Slack-based community for members to interact in. This community also has an embedded and customized AI chatbot for answering members' beekeeping questions.

NEBEEC doesn't have membership fees. We do plan to incorporate it as a non-profit organization soon as one step to help us pay for the costs of software licenses.

We greatly value and appreciate your feedback, suggestions and contributions to make NEBEEC successful. If you have suggestions on items to include in future newsletters or any improvements, please contact us at nebeec@gmail.com

If this newsletter was forwarded to you, please consider subscribing at nebeec.org. You can also join our Slack community at the same time. You can also find all previous newsletters on that site.

Beekeeping Nuggets

We We need your help! We get to as many events as we can, but it isn't possible for us to get to many of the in-person club events. If you would like to help, please reach out at nebeec@gmail.com. It can be a one-time thing or regular, attributed or anonymous — it's the information that matters.

We have started carrying unpaid advertisements for any interested local bee and bee equipment supplier. We strongly believe that a healthy beekeeping ecosystem requires a strong set of local suppliers — people you not only buy from but have relationships with. So, please shop local whenever possible — it helps us all! If there are other suppliers who would like to be included in future editions, please send your ad as a graphic of any kind to nebeec@gmail.com.

Your Personalized Mite Treatment Plan Awaits — The NEBEEC Slack bot ChatGBeeT can now generate a complete, customized mite treatment calendar — from today through the end of the year. All you need to do is fill out a short form with your preferences and it will do the heavy lifting.

Here's how to get your plan:

1. Grab the form — In the NEBEEC Slack, go to the channel #ask-chatgbeet, and download the Mite Treatment Intake Form from either the Channel Topic at the top of the channel or the bookmark folder.

2. Fill in your details — Zip code, last mite count, treatment history, and most importantly, which treatment products you'd like to use and won't use.

3. Save it — Store the completed form on your device.

4. Tag me — Attach the form to a message, mention @ChatGBeeT, and ask for your treatment plan.

ChatGBeeT will analyze your situation — location, season, treatment preferences, even the weather forecast — and generate a full calendar covering every major treatment window. You'll get ranked product recommendations, temperature constraints, mite thresholds, and rotation strategies to keep those mites guessing.

If you want to try any of ChatGBeeT's features and aren't yet in the NEBEEC Slack, go to https://nebeec.org and request an invite.

If you haven't yet, please go to https://beecausealliance.org/tropilaelaps-petition/ to add your name to the petition to get the needed US government attention on the huge and imminent threats of yellow-legged hornets and Tropilaelaps mites.

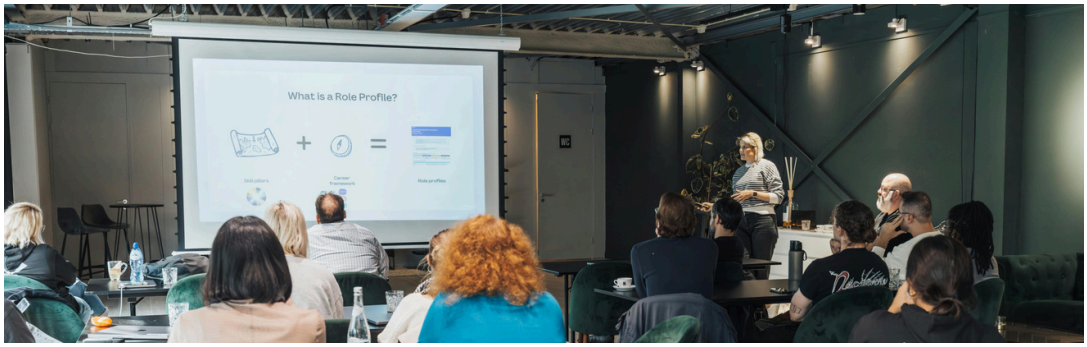
There are quite a few excellent video updates on yellow-legged hornets from Europe and the US. But because this edition is already quite long, we will hold off on those until next month.

A considerable amount of this month's newsletter is dedicated to the North American Honey Bee Expo (NAHBE — pronounced "nah-bee") in Louisville Kentucky from January 8-10. I had a blast there. Lots below.

Finally — if you keep bees in Massachusetts, please consider registering your apiary if you haven't already done it. For most states in the US and all New England states except Massachusetts and New Hampshire, registration is mandatory. It is purely voluntary in Massachusetts but it's easy and it helps you (e.g., you will be informed if there are instances of EFB near your apiary or if other invasive species are found nearby) and it helps us collectively by increasing beekeeper visibility politically and supporting greater MDAR resources. Registering is no-cost, is one-time and takes only a minute. Just go to https://www.mass.gov/forms/apiary-and-colony-registration-form.

Thanks!

Upcoming Events



Connecticut Beekeepers Association — February 12, 2026, 6:30-8:00pm EST, Bill Hesbach leads the CBA monthly Q&A for members on Zoom on the 2nd Thursday of each month. https://www.ctbees.org/event-details/bee-talks-2026-02-12-18-30. These meetings are also recorded and are available for replay via the CBA website and (currently) made public on their YouTube channel.

Penn State Extension — February 12, 2026, 12:00pm EST, "Beekeeping Around the World: Italy". Explore Italy's beekeeping history, unique monofloral honey varieties, and modern innovations in sustainable apiculture. This is a free seminar and the first of 6 weekly seminars of the "Beekeeping Around the World" series. Registering requires a Penn State account (which is also free to create). https://extension.psu.edu/beekeeping-around-the-world-italy. Others in this series will be: Israel (February 19th), Zimbabwe (February 26th), Korea (March 5th), New Zealand (March 12th) and Northern Quebec (March 19th).

Connecticut Beekeepers Association — February 19, 2026, 6:30-8:00pm EST, Hangry Bees: Environment Impacts Temperament in Addition to Genetics with Dr. Elizabeth Walsh. Dr. Walsh will discuss her research in honey bee health challenges, looking at how nutritionally stressed honey bees respond with increased aggression while also looking at genetic and environmental factors. https://www.ctbees.org/guest-speaker-series

Washington State University — February 19, 2026, 9pm EST, "Incidence and Colony Impacts of European Foulbrood in the Pacific Northwest", Dr. Ryan Kuesel. WSU seminars are free but pre-

registration is required.
https://wsu.zoom.us/webinar/register/WN_ydh0eJ56Q7aShYymXAMz9Q#/registration

Middlesex County Beekeepers Association — February 20, 2026, 7pm EST. Dr. Heather Mattila. Topic not currently listed. In person only at First Parish Unitarian Church, 20 Lexington Rd, Concord, MA.

Bristol County Beekeepers Association — February 24, 2026, 7-9pm EST, Paul Tessier will present on "Practical Winter Management of Honey Bee Colonies and How to Access Winter Losses". In person only at Bristol Agricultural High School, 135 Center St, Dighton MA.

At Home Beekeeping Series — February 24, 2026, 7:30pm EST, Dan Aurell will be presenting on "Treating Newly Split Colonies with Organic Varroacides". See
https://www.aces.edu/blog/topics/bees-pollinators/at-home-beekeeping-series/

Plymouth County Beekeepers Association — February 25, 2026, 7-9pm EST. David Wade will be presenting "Adding Beeswax to Make Honeycomb — A New Discovery". In person only: 228 High Street Hanson, MA. https://www.plymouthcountybeekeepers.org/events

Massachusetts Department of Agricultural Resources (MDAR) — March 4, 2026, 7-9pm EST. MDAR has several Zoom and in-person meetings throughout the year. I always find these meetings informative. They are not recorded but we will do our best to report on them. Topics for this session will be: Tropilaelaps mites, Yellow-Legged Hornets, Spotted Lanternfly and Northern Giant Hornet. Pre-registration required.
https://us06web.zoom.us/webinar/register/WN_VG6PBLHYRUq7Wvy2jnAdeg#/registration

Sustainable Beekeepers Guild of Michigan — March 7, 2026, 8am-6pm EST. 2026 Virtual Winter Conference begins. https://sbgmi.org/product/2026-virtual-winter-conference-registration. Speakers will include Dr. Ralph Buchler, Dr. Gard Otis, Dr. Zac Lamas, Lutz Eggert, Corinne Jordan, William Hesbach. SBGMI is an excellent organization with lots of member benefits including discounts, past conference videos, etc. Their annual virtual conferences continue to have first class speakers on a variety of topics but queen breeding for varroa resistance is their core ethic.

Worcester County Beekeepers Association — March 7, 2026, Speaker's Conference, 8am-5pm EST. Dr. Gene Robinson (University of Illinois) and Dr. Jay Evans (USDA Beltsville Bee Laboratory) will each give 2 talks. No talk information is currently available. LifeSong Church, Sutton, MA.
https://worcestercountybeekeepers.org/event/march-7th-speakers-conference/.

Massachusetts Beekeepers Association — Spring 2026 Meeting, March 14, 2026, 8am-3:30pm EDT, Topsfield Fairgrounds, 207 Boston Street, Topsfield, MA. https://www.massbee.org/event-6529454

Canada Honey Council — March 18, 2026, 1pm EDT 2026 Series — Part 1: Adaptive Management to Keep Honey Bee (sic) Healthy. This talk is free and will be recorded but the live event will be limited to 500 attendees. Topics: 1) New options for mite control, 2) Series of 20 minutes presentations of the following products : Apivar 2.0 + Amiflex (Vetopharma), Varroxsan (Vita Bee Health) and Norroa (Greenlight Biosciences), 3) General Discussion.
https://zoom.us/webinar/register/2117677735738/WN_d7_dh0s4SGS3ZLDWvp4cDQ#/registration

Washington State University — March 19, 2026, 9pm EDT, "Veterinary feed directives and honey bee disease", PhD student Mckaela Hobday. WSU seminars are free but pre-registration is required.
https://wsu.zoom.us/webinar/register/WN_J5n1WtRdSQWziFSAXV002g#/registration

Plymouth County Beekeepers Association — March 25, 2026, 7-9pm EDT. Ed Szymanski will be presenting on “Managing Spring Build Up”. In person only: 228 High Street Hanson, MA. https://www.plymouthcountybeekeepers.org/events

Canada Honey Council — March 25, 2026, 1pm EDT 2026 Series — Part 2: Adaptive Management to Keep Honey Bee (sic) Healthy. This talk is free and will be recorded but the live event will be limited to 500 attendees. Topics: 1) Weather Forecasts and Beekeeping Management Adaptations, 2) Tropilaelaps Mites: surveillance and beekeepers action response plans, 3) General Discussion. https://zoom.us/webinar/register/2617677736896/WN_zHKqhFKnSn2eFV8iF-tPWQ#/registration

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NAHBE 2026

The North American Honey Bee Expo (https://www.nahbexpo.com/) — where do I start? NAHBE was founded by Kamon and Laurel Reynolds just a few years ago and has become a phenomenon. The vendor floor is cavernous with just about everything the beekeeping world has to offer, big discounts, experts to talk to, always-available coffee and cookies and a shipping department staffed by Mann Lake with amazingly low costs. Many attendees arrived in large vehicles or pulling trailers and left with those full. The vibe of the conference was very upbeat, welcoming and friendly.

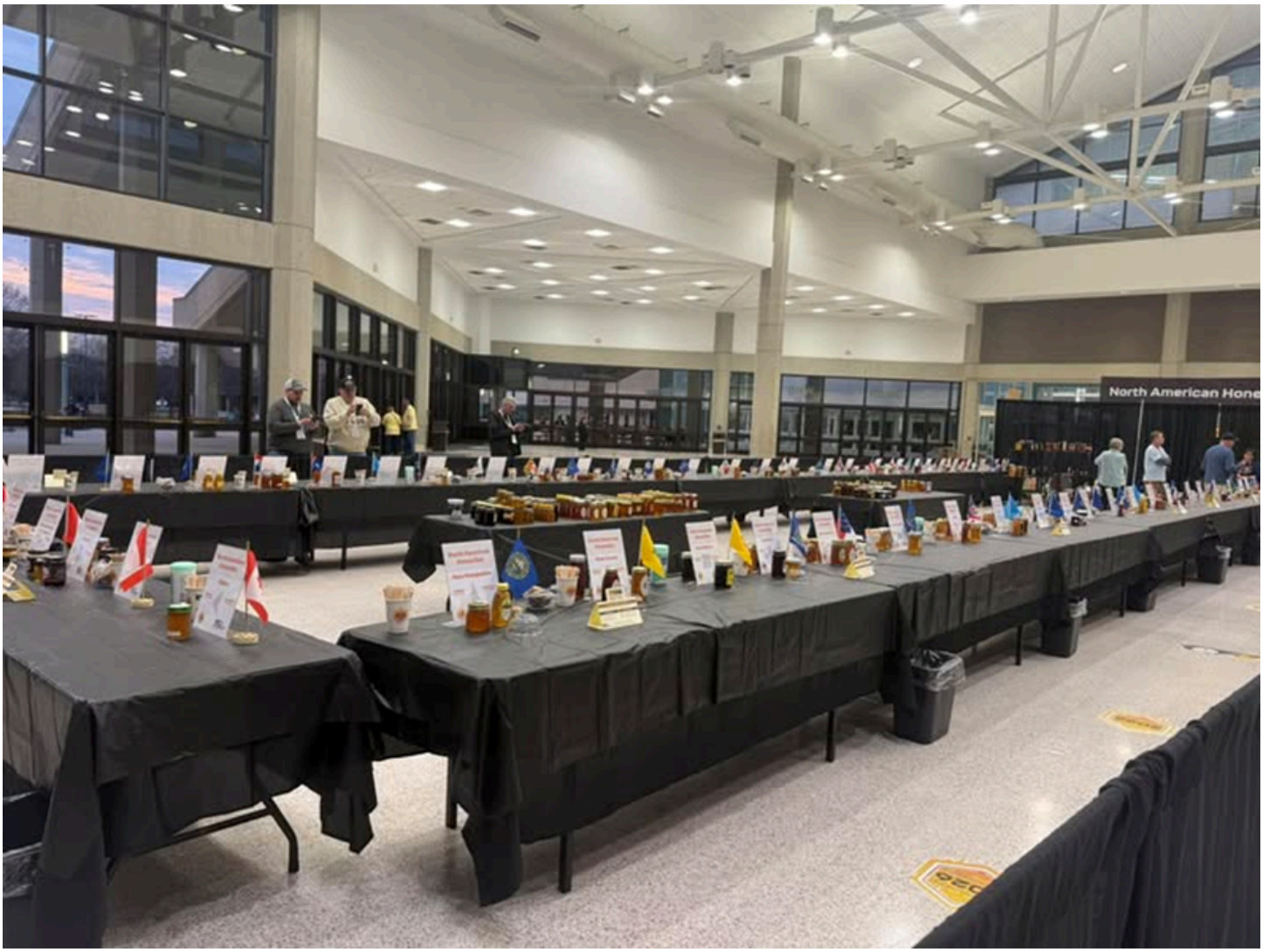
NAHBE 2026 was held at the Louisville Exposition Center — a huge conference center adjacent to the Louisville airport, very close to many hotels and only 3 miles from downtown Louisville. NAHBE 2026 had approximately 3600 paid attendees and another 600 staff and vendor staff. There were roughly 150 vendors on the floor.

The biggest vendor for sheer volume sold was HillCo. It was said that they brought 15 tractor trailers of product and, from the astounding space behind their booth, I don’t think that was an exaggeration. Their 33 person staff were extremely busy every time I was there. HillCo also generously provided carts for the whole show — whether you bought from them or not.

You can’t see the whole floor, but this picture gives you a sense of its size:

There were also a lot of great talks from people such as Kamon Reynolds, Bob Binnie, Randy Oliver, Maggie Hill, Jeff Pettis, Fred Dunn, Charles Linder, Ray Olivarez, Adrian Quiney, Cory Stevens and Robyn Underwood. **Every talk was recorded** and will be made available to paid attendees soon. That fact made the vendor always floor a lively place and was great for everyone. That has to be quite expensive but is a huge testament to Kamon and his team.

Another very cool thing they did this year was the honey bar — where donated honey from around the US and Canada was available for free tasting.



Also new this year was the **Whova** app. This is a commercial application which let people get show information quickly, to find other attendees, to form and participate in interest groups and to create personal schedules from the show agenda. There were some startup challenges but ultimately, about 1900 people were registered and I think it was extremely helpful. Because it was available before the show started an "**AI in Beekeeping**" interest group formed and ultimately had a large face-to-face meetup at the show.

And there were many other things going on — a BBQ dinner Thursday night, hands-on workshops, a traditional judged honey show, a honey swap, a honey label swap, book signings, etc. etc.

There was also a phenomenal program called the "Next Gen Bee Program" open to beekeepers 10-20 years old. There were 40 scholarship spots to be applied for by submitting a short video. The winners got 2 free tickets to the Expo and a $300 hotel reimbursement. Huge kudos to Kamon and team for this whole program.

There were some lessons from the show that I will try to remember for future years:

- Hands-on workshops (e.g., microscopy) sell out almost instantly.
- The BBQ dinner sells out.
- Some sizes of show t-shirts and sweatshirts sold out very quickly.
- Some vendors have significant pre-order-only discounts.

• Vendors sell out of things — they can only bring so much product. Be decisive or pre-order.

Fredrick Dunn made an excellent series of short videos with vendors. Some of those covered: NOPEC Bee Vacuums, HiveiQ, Apimaye, Propola, EZPZ, Hive Hugger, Hive Alive, Lorab Bees and Hives for Heroes. These videos are a great way to get updated on what these vendors are doing. https://www.youtube.com/@FrederickDunn/videos.

Here are some of the highlights of the discussions I had at vendor booths.

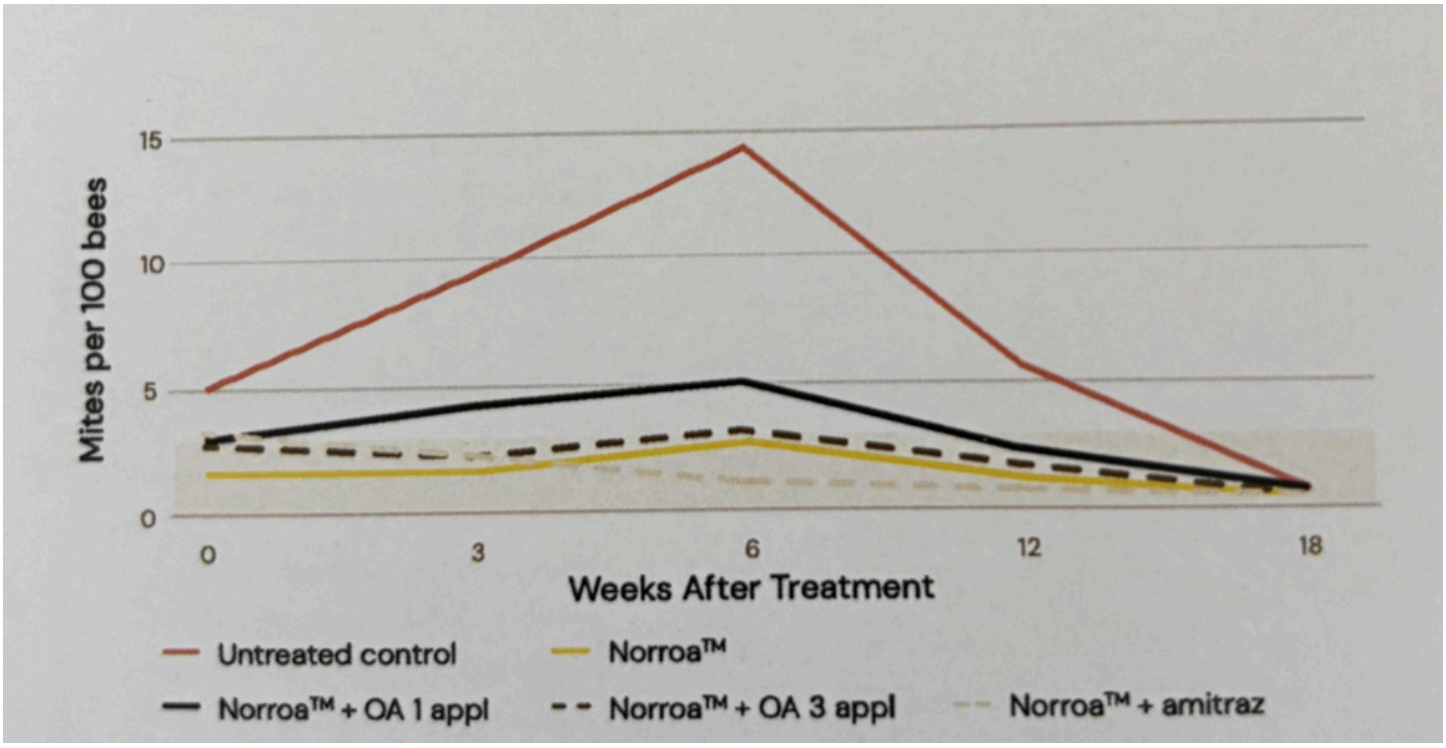
GreenLight Biosciences (Norroa)

I was able to talk with Eric Walgren of GreenLight Biosciences at NAHBE about Norroa for quite a while. The GreenLight booth also was directly across from the Mann Lake booth — which had a large quantity of Norroa which seemed to be being sold briskly.

My two primary questions to Eric were: (1) **When is the best time to apply Norroa?** and (2) How should I think about entering a Norroa application into Randy Oliver's mite management Excel model?

The answer to the first question was straightforward. Eric's answer is to apply Norroa **just before the spring flow** (and definitely before supers are on). The goal is to get the active ingredient to be taken up by nurse bees and fed to larva which will then transmit it to mites.

The answer to the second question was less clear. Randy's model has you enter a mite kill percentages at point in time and, of course, Norroa doesn't kill mites. Norroa marketing material has the results of some studies showing mite population growth for untreated, Norroa treated and Norroa plus miticide treatment colonies, however. The big takeaway from the graph below is that all the Norroa treated colonies, whether they had a miticide treatment or not, reduced mite counts though the 18-week test period — which is roughly the effective time for Norroa.



If Massachusetts approves Norroa in time, my plan is to use it in either half or all my colonies in late March or early April (depending on weather) along with an oxalic acid treatment. Since Norroa's sugar syrup application is taken up by bees typically within 48 hours I will plan to do OA treatment (probably OAV) immediately after I remove the empty packets.

Vita Bee Health (VarroxSan, AFB/EFB Test kits)

After my trouble with **VarroxSan** last spring (comb chewed out under the strips, bees staying on one side of each frame strips were hung over) I stopped by the Vita Pharma booth and talked with Sebastian Owen. Sebastian confirmed that what I saw was common and said that they had modified the strips this year to have notches in the center to help the strips lay flat on the top bars and hang straight down the comb instead of flaring out. I haven't found any other material that confirms that, however.

A second concern with VarroxSan strips is that Randy Oliver's research showed that at high humidity (>80%) there is rapid leeching of oxalic acid from the strips which, potentially, will reduce their efficacy.

I also asked Sebastian about availability of their field EFB and AFB test kits. These kits disappeared from the US market a couple of years ago. As I understand him, there isn't much hope for the AFB tests. The EFB tests required a change in formulation and, as a result, need a costly recertification by the EPA which isn't cost effective for Vita. So, for now, it can only be obtained under the guise of academic work and won't be generally available.

BroodMinder (Real-time swarm detection)

I'm a BroodMinder user and enthusiast but I haven't been using the temperature sensors to their full potential. I sat next to Theresa Martin, the author of "Dead Bees Don't Make Honey" and Steve Cantley from BroodMinder at an organizing breakfast for the "AI in Beekeeping" interest group. They told me something that I wasn't aware of — that BroodMinder already has real-time alerting and, specifically, swarm alerting. Never having seen any sort of alert from BroodMinder and confirming the same with a friend, I set out to understand why.

At the BroodMinder booth I was able to talk to the newly appointed General Manager and lead developer, Amanda Stolz. Amanda showed me why I wasn't getting alerts (there is a not-so-obvious place to enable SMS alerts in the BroodMinder web application. We also talked about some of the new products that are coming — like a software upgrade to the BeeDar product to enable it to detect Yellow-Legged Hornets at the hive entrance.

HiveAlive

After reading some of the peer-reviewed research on essential oils and thyme oil in particular, I decided to start using HiveAlive last year. Last fall I added HiveAlive concentrate to all my syrup, and, because of the drought, that was a lot of HiveAlive. I had two main reasons for visiting the HiveAlive booth — first to ask about what the target dosage should be per colony since there was significant variance in how much feeding each needed. Second was to take advantage of the show pricing, which was excellent. The answer to the first question was that it is best to dose all syrup going in — there is still benefit. Unfortunately, I didn't keep records about how my syrup each colony took down — something for me to add to my record keeping for next year. Unfortunately, by the time I went to purchase, the 2-liter concentrate size was sold out. Thankfully, I was able to take advantage of a web site discount they had going in parallel.

Bob Binnie (Probiotics)

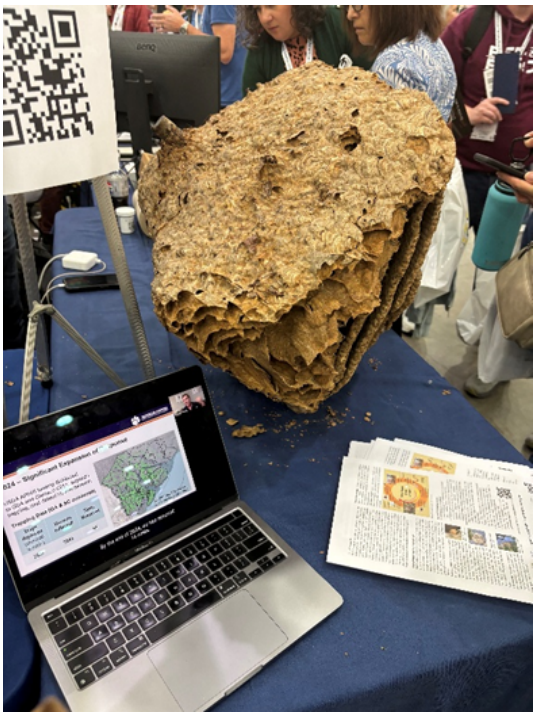
In one session Bob Binnie mentioned his use of and strong belief in probiotics in the context of avoiding EFB. I haven't seen papers to support this yet, but Bob was unequivocal about his belief in

them, so I've decided that I'll give it a try.

When he wasn't on stage Bob was often on the show floor walking around or near the Blue Ridge Honey Company booth. Bob, like Kamon, seem to be who you see on YouTube and was generous with his time to answer questions. I stopped by to ask him what brand of probiotics he uses and whether he uses it prophylactically or in response to issues. The answer to the first question was that he uses and sells StrongMicrobials SuperDFM (SuperDFM). The second is that he uses 1 teaspoon of SuperDFM monthly in every colony.

Apiary Inspectors of America (Tropilaelaps, Yellow-Legged Hornets)

Strangely, given the immediacy of the threat, there were no dedicated sessions on yellow-legged hornets. The Apiary Inspectors of America had a booth with hive and hornet displays and people to talk to, however. Below is a picture of the cutaway of a yellow-legged hornet nest. They can be much larger.



Yellow-legged hornets prey on many pollinators aside from honey bees. Once established outside a bee hive they will effectively starve the colony by preventing foraging. There is understandable trepidation in many of the more southern beekeepers I met at NAHBE. They are known to be established in Georgia and South Carolina now and could easily become a major problem across the southeastern US in the next few years.

NAHBE Talks

Because of conflicts, the lure of the vendor floor and the knowledge that the sessions were all being recorded, I only attended about 20% of the interesting NAHBE talks. Below are notes from some of those. I'll add to these once the videos become available.

Randy Oliver's Latest Research — Randy Oliver

Randy's talk was very similar to his NY Bee Wellness talk that we reviewed in November 2025. But he presented a potentially very useful new piece of work - a model, akin to his published mite management model, on the effectiveness of repeated OAV applications. With it you can model, for example, the effectiveness of a set of 5-day OAV applications during peak brood production. Randy has switched to an OA-only mite management strategy, so this is very important for him and he plans to publish this new spreadsheet at https://scientificbeekeeping.com soon. For a related talk, see the review of Cameron Jack's presentation for the At Home Beekeeping Series below.

Tropilaelaps: An Emerging Threat to Global Beekeeping — Maggie Gill
Tropilaelaps: Transmission, treatments and more — Maggie Gill
Tropilaelaps mites: coming to an apiary near you? — Maggie Gill, Jeff Pettis

The big talking point from Maggie — **Tropilaelaps mites are surviving in cold climates and across brood breaks**. So much for northern beekeepers having a sense of security — these bugs turnout to be much more resilient than we previously thought.

Some takeaways from these presentations:

• Tropilaelaps are spreading to the west — the country of Georgia is now fully infested.
• Some expect it to spread throughout Europe in as little as 2 years.
• Very little money and time is being spent to monitor and verify potential sightings — so reporting will continue to lag actual spread. This is critical for import considerations.
• Tropilaelaps can spread with swarms, migratory beekeepers, sales and inadvertent transportation on trucks, trains and ships.
• Untreated experimental colonies have been seen to effectively collapse in as little as 3 weeks and fully die out within 3 months.
• Wherever Tropilaelaps is, bee colonies are necessarily small, 5-7 frames of bees at most.
• Beekeeping with Tropilaelaps requires vastly more management time and expense.
• Tropilaelaps do not feed on adult bees and spend very little time outside of brood.
• Tropilaelaps do not prefer drone brood, probably the opposite.
• Tropilaelaps have been shown to survive at least 5 days on adult bees.
• Tropilaelaps survival in cold climates is not yet understood. Possibilities:
  - Diapause — 1.5% survived experimental 5F temperatures for 96 hours!
  - Alternate hosts — do they survive on rodents in winter? We have a 1961 report.
  - Some colonies may maintain some brood rearing year-round.

• Formic Pro is highly effective in reducing Tropilaelaps population but their very short period outside of brood makes other chemicals much less effective.
• Beekeepers in Thailand use a host of techniques and treatments to deal with Tropilaelaps — many highly suspect — and treat continuously. As a result, honey is often contaminated.
• Brood breaks and worker brood removal are widely used techniques in Thailand.
• Maggie worked with beekeepers in Georgia in 2025 trying to adapt to emergent Tropilaelaps infestation. Pre-existing varroa control techniques of caging queens from November to February and Formic Acid were somewhat effective but increased frequency of treatment and continuous monitoring were required. She will continue her work with them in 2026.
• Apiaries shown to be free of Tropilaelaps in Georgia were reinfested within a short period - source isn't yet understood.
• Varroa Sensitive Hygiene (VSH) behavior for varroa defense may make things worse. Uncapping lets Tropilaelaps out of cells earlier.
• Apis Dorsata co-evolved with Tropilaelaps and effectively managed them through grooming. However, speed of colony death in Apis mellifera makes adaptation unlikely in Maggie's current view.
• Maggie has co-authored "Tropilaelaps — At the edge of your apiary" as a primer.

Adrian Quiney is a northern Wisconsin beekeeper who wrote the book "A Cavity Compromise — A Sustainable System". The system he describes is complete and very interesting. I picked up this book at NAHBE and plan to read it very soon. Adrian did 2 related talks at NAHBE.

Insulate or ventilate? — Adrian Quiney

• Adrian lists the traditional practices taught to northern beekeepers and notes the high average annual losses with these practices in his area based on survey data.

• He lists a set of differing views credited to Etienne Tardif — Insulation Matters, Excessive ventilation negates insulation, moisture is needed, excessive ventilation causes greater consumption of honey stores and greater generation of moisture.

• Adrian's winter survival success is centered around 2-deep 5 frame nucs which he has averaged 81% survival rate with over 15 years vs. 51% with 10 frame-based colonies.

Adrian now runs an average of about 10x more nucs than 10 frame-based colonies over winter.

• Adrian was inspired into focusing on using nucs overwinter by Mike Palmer.

• Adrian overwinters his nucs in groups of 4 as shown in the picture below.

• Adrian noted a study suggesting that the greater energy expenditure of bees in uninsulated or excessively ventilated colonies increases stress and reduces average lifetimes.

Biotechnical Beekeeping — Adrian Quiney

In this second talk Adrian explains his practices for mite control without miticides.

• Adrian overwinters twice as many colonies as he wants and sells off any excess.

• Adrian moves his bees between 5 frame equipment for the winter, into 10 frame equipment for the core months of the season and then back into 5 frame equipment for fall and winter.

• Adrian lists his primary techniques:

- Insulation and “Skinny” hives improve survival
- Physical removal of mites in drone brood with a variety of techniques.
- Brood breaks for all colonies during the year.
- Use of mite resistant stock.
- Use big colonies only for honey or splitting.

Notes From Recent Live Events

Norfolk County Beekeepers Association — January 5, 2026, “Breeding VSH Bees”, Cory Stevens. Cory has been breeding varroa-resistant queens for 15 years. He is based in Missouri and provides queen cells, virgin queens and mated queens — mostly for larger beekeepers. His website is https://www.stevensbeeco.com/.

Takeaways:

· Cory uses only Harbo assay scoring (1-4 with 4 being the best) to assess queens. This is a laborious method requiring examination of 200 sealed worker brood cells for the presence of reproducing mites.

· Single frame analysis can take 45 minutes to 1 hour!

· Cory does not use mite washes to test — he has seen examples of high mite loads (perhaps due to drift) in colonies with perfect Harbo scores. A side note — I asked Randy Oliver about this at NAHBE since he only does mite washing in his breeding program. Let's just say that there is a passionate disagreement between Cory and Randy on this point.

· Cory also doesn't believe in the efficacy of freeze-kill testing.

· Cory showed pictures of brood cells that had been uncapped by his bees. If you aren't familiar with it, it may appear as brood disease initially.

· His experience with open-mated queens from his stock show that most remain Harbo 3 or 4 in the first generation.

Massachusetts Department of Agricultural Resources (MDAR) — January 7, 2026, "MDAR EOY Review".

Takeaways:

· This is an excellent time of the year to have early dead-outs inspected. Requests can be made at https://www.mass.gov/forms/mdar-apiary-inspection-request-form.

· Used equipment disposal day will be March 21st, 2026.

· The MDAR Zoom series for 2026 will continue on February 4th, February 11th, March 4th and March 11th. All on Wednesdays from 7-9pm.

· The Northeast apiary inspectors Zoom calls for 2026 will be on April 3rd, June 5th, August 7th and October 2nd (Fridays) from 12:00-1:30pm.

· The first two field days will be at the Amherst MA and Dighton MA sites on April 17th and May 15th.

· The MDAR Annual Honey Bee Health Survey is now open.

· A review of the 2024-5 loss survey shows the usual disheartening pattern — 23% of losses were self-reported to be caused by varroa while MDAR dead out inspections showed 70% due to varroa.

· Over 10,000 imported packages were inspected — none were positive for AFB, only 12 were positive for EFB.

· Of samples on imported nucs the average mite infestation was 1% but one was over 10%.

· In 2025, there were no confirmed cases of pesticide kills of honey bee colonies in Massachusetts.

· Inspected colonies going to cranberry pollination showed 8% infected with EFB and 1% with Chalkbrood. EFB levels were significantly lower than in 2024.

· There was an update on the infestation levels or Yellow-Legged Hornets and eradication efforts in Georgia.

· There were 4 confirmed cases of AFB in Massachusetts in 2025 — down from 2024 and substantially down from 2023.

· There were discussions of new mite treatments — Norroa, Amiflex and Api-Bioxal RTU. Amiflex is a new formulation of Amitraz.

NY Bee Wellness — January 20, 2026, "The Winter Hive's Secret Life -

A Data-Driven Journey into the World of the Superorganism", Etienne Tardif.

I really loved this talk. Like many of us (relatively) northern beekeepers I follow Etienne's work and findings closely. In the past, I'd sometimes struggled to fully understand the details of his presentations. But this talk and these slides were extremely well crafted and clear while still dense with information.

Etienne has made the slides public at https://drive.google.com/file/d/17SpX20sC29GzgDffH-di4yf2lJUdAmOj/view?usp=share_link. The replay of the talk is available at https://youtu.be/4eDpewNg2y4.

Etienne keeps bees in the Yukon and must plan around a 7-month winter and extremely cold temperatures by our standards. He keeps a modest number of colonies but collects a huge amount of data using a variety of sensors — temperature, moisture, CO2, etc.

Etienne runs all heavily insulated condensing colonies but, surprisingly, runs screened bottom boards to prevent ice buildups.

This talk could also be sub-titled "9 Data-Driven Discoveries". Each of these discoveries is explained in a slide with a data chart to back it up. Directly from the slides these are:

1. The "Cluster at 50F" Rule Isn't a Rule — Conventional wisdom is that bees will begin forming clusters at 50F ambient temperature. Etienne has found that clustering is associated with internal hive temperature and with his condensing colonies, clustering may not occur until ambident temperatures reach as low as 5F.

2. Bees Heat Their Home, Not Just Their Bodies — Etienne has many temperature sensors in some of his hives and showed that in a condensing colony, even the top corners of the away from the cluster remain 50F or more above ambient temperatures.

3. Hive Volume Matters as Much as Colony Size — Etienne found that in his hives, the volume of the hive is more critical than cluster size. The less space the better.

4. Most Winter Moisture is Made "Inside" the Hive — Etienne found that moisture inside a hive comes predominantly from bee metabolism. Lack of insulation and presence of top entrances causes greater consumption by bees, generating much more moisture than in condensing hives.

5. CO2 Isn't Just Waste, It's a Winter Tool — Etienne shows that bees maintain much higher CO2 levels than atmospheric — approximately 1% - and that this induces an "ultra-low metabolic rate". This reduces food consumption and reduces water production. Venting defeats this.

6. Hive “Breath” in Rhythmic Cycles — Etienne found that a bee cluster will periodically loosen to release moisture and CO2 which he analogizes to a lung’s behavior.

7. One Lower Entrance is Often Enough — To maintain all the positive characteristics of his hive thermodynamics, a single lower and protected (from snow and ice) entrance is needed.

8. The Superorganism is an Active Thermostat — Etienne found that colonies can rapidly raise internal temperatures if needed. He has observed a 30-degree F rise in just 2 hours.

9. The Law of Diminishing Returns — Etienne uses R40 top and R10 side insulation but shows that each additional increment of insulation has less added value. So, “right-insulating” for a given environment can be helpful in reducing cost.

At Home Beekeeping Series — January 20, 2026, “Using Oxalic Acid Effectively”, Cameron Jack, University of Florida. This was a combination of data from previous papers and some new research work. Recordings are available for 2 weeks after the session: https://www.facebook.com/LawrenceCountyextension/videos/899174352857733

Takeaways:

· Oxalic acid vaporization (OAV) with the newly approved 4g/brood box dosage is as efficacious as dribble and has somewhat less impact on brood.

· 4 OAV applications at 7-day intervals are highly effective even with brood present.

· With 4 treatments, a 7-day interval is marginally better than a 5-day interval but much more effective than a 3-day interval.

· The most important factor for any repeated sequence of OAV seems to be covering a full brood cycle so, in theory, a 3-day interval may be effective if applied enough times.

· Cameron’s lab is now testing Api-Bioxal RTU. This product is marketed primarily as a “no mixing just apply” product but has other important benefits — a higher percentage of oxalic acid than is approved for home mixtures and use of glycerin rather than sugar syrup as the base.

· Testing showed that the RTU formulation was marginally more effective at reducing mite load than the sugar syrup formulation but still not quite as effective as OAV. It appears to be an excellent option for anyone not able to or interested in vaporization.

· Testing of different temperature settings for Oxalic Acid Vaporizers showed that 230C/445F is optimal.

· Cameron’s lab has been testing Norroa. I can’t find published results of this work so far, however.

Massachusetts Department of Agricultural Resources (MDAR) — February 4, 2026, “2026 State of the State: Update on Honey Bee Health in the Commonwealth”. There was a lot of information in this presentation and in the Q&A. If you are in Massachusetts and not attending the MDAR talks, I’d encourage you to.

Takeaways:

· MDAR participates in the USDA-APHIS Honey Bee Survey annually. They submit samples from volunteer apiaries for molecular analysis to determine the presence and degree of infection from various pathogens.

· In 2025, over 60% of samples tested positive for 3 or more viruses.

· Sacbrood Virus was again the most prevalent followed by Black Queen Cell Virus and Deformed Wing Virus B and A.

· Data showed notable seasonal occurrence differences for some pathogens. EFB peaks in June and July for example. Interestingly, both Deformed Wing Virus variants do the opposite — they are at their lowest levels in June and July.

· The USDA labs test for bee pathogens as well as analyzing for over 500 chemicals in wax and pollen samples.

· MDAR is looking for volunteers for sampling for 2026. Apiaries need at least 10 colonies to participate — 8 will be inspected and sampled for analysis.

· Nosema Apis has not been seen in Massachusetts since 2022 — only Nosema Ceranae has. Nosema Ceranae presents without dysentery/feces symptoms — colonies simply dwindle. Effective treatment is not understood clearly — Fumagillin testing has mixed results.

· For many viruses (e.g., DWV-A and DWV-B) mite control continues to be the most effective deterrence but biosecurity, cleanliness of tools and gloves, limiting drift between colonies and keeping populations from extremes are all important as well.

· The 2024-5 Massachusetts Honey Bee Health Survey results were presented next.

· Beekeepers with 1-5 years of experience continue to be the largest group of respondents.

· 75% of respondents have registered their apiaries with MDAR.

· Over 80% of respondents indicated that they actively monitored for varroa with alcohol washing being the most frequently cited technique.

· 15% of respondents reported using miticides in winter, 30% in spring, 64% in summer and 83% in fall. It appears to me (person opinion, not MDAR's) that a considerable number of people are treating later than they should and seeing mite and viral load buildups greater than is optimal before treating.

· Formic Pro is the most popular treatment (good!) with Apivar still in 2nd place despite widespread resistance reports. Oxalic Acid vaporization is a strong 3rd place.

· Massachusetts had 4 known cases of American Foulbrood in 2025, the lowest in a few years.

· Surprisingly, 2/3rds of beekeepers reported not requeening any of their colonies in 2025 but most who did acquired queens from a Massachusetts supplier or from their own apiary.

· In Massachusetts, average reported colony losses for 2024-5 were 50% - very close to the national averages.

· For losses, the highest cited reason was varroa but at a far, far lower percentage than MDAR inspection rates. All of this suggests that we need to do a much better job collectively with helping

early tenure beekeepers manage varroa more aggressively.

Massachusetts had 0 confirmed cases of colony death caused by pesticides in 2025.

Podcasts

***Beekeeping Today Podcast* — Cold-Climate Beekeeping and Winter Feeding Insights with Etienne Tardif — January 19, 2026**

Etienne keeps bees in the Yukon — running highly insulated condensing colonies — with R40 top insulation, R10 side insulation, a single bottom entrance and, surprisingly, screened bottom boards. With extreme winter temperatures and a 7+ month long no-fly period Etienne has had to develop a very refined set of practices to be successful.

Etienne has a huge amount of data from his colonies across seasons and years and he keeps adding. That includes weight, temperature, humidity, CO2 and oxygen levels. He has a keen sense of what changes to those metrics implies about the dynamics of the colony. One of his colonies has 15 sensors so he can understand conditions throughout the hive, not just in one spot.

This episode was triggered by a BEE-L post Etienne made recently. He noted seeing increased temperatures (indicating brood rearing) after feeding some late season fondant. This was an unusual step for him but with abnormally high temperatures in the Yukon this fall, consumption rates were higher.

This year, with it still being warm in the daytime in September, he gave his colonies 5 lbs of fondant each. He then saw temperature increase in 3 of 4 hives. His high sensor colony was particularly interesting. It appeared that the queen laid eggs for about 3 days after the fondant was added. Temperature and moisture levels went up for 8-9 days; CO2 levels jumped to 1% (roughly 20x atmospheric level) until 22 days later when it went back down to 10x atmospheric.

Some takeaways:

· In his area, winter bees begin being raised starting in early August so, from the start of the season, he is working on population and nutrition with that in mind.

· He pushes brood rearing a month longer in the fall than natural resources allow by giving pollen sub. This buys him 30 days or longer of winter bee life.

· He gives pollen sub and light syrup early in the spring to shorten winter on the other side for his population. At this point his hives typically still have 40lbs of honey remaining.

· His lesson with unintentionally inducing later than normal brood rearing this year was that, without strong insulation, it may be problematic as bees need to maintain brood temperatures despite cold weather.

· Etienne has overwintered in many different cavity sizes but now primarily uses single brood boxes. He believes that the most important success factor in a well-insulated, condensing hive is the ratio of bees to cavity size rather than cluster size. Space not being occupied by bees is a liability.

· His single brood boxes will consume only 30-35lbs in 6-7 months. He has seen consumption in 5 frame nucs of as little as 10lbs.

· He uses screened bottom boards because moisture generated by consumption of honey otherwise will cause ice accumulation on the bottom board in his extreme temperatures.

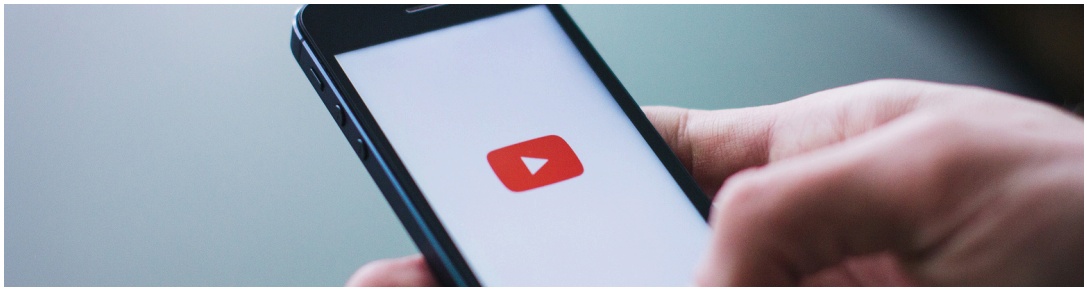
· He also uses debris analysis of bottom board trays to estimate cluster size and location without opening his hives.

· Well insulated condensing colonies consume much less honey and therefore generate much less moisture.

· Well insulated condensing colonies allow CO2 levels to be kept at the higher levels bees prefer in winter and induce a lower metabolic state.

· Honey mass in the hive is a thermal battery, helping dampen internal temperature swings.

YouTube Channels



Michigan State University Beekeeping — December 16, 2025, "European Foulbrood Office Hours 2025". Michigan State University postdoctoral researchers Dr. Peter Fowler and Dr. Megan Milbrath did a deep dive on EFB which was very interesting and informative. The replay is at https://www.youtube.com/watch?v=8GEOMFUAye4&t=20s.

Takeaways:

· A consortium of schools has created www.beesneedvets.com which aids beekeepers in diagnosing brood diseases. It also has a brood disease quiz.

· While AFB larva progression follows a single pattern, the result of EFB infection on larva differs dramatically — possibly because of secondary bacterial infections after death.

· EFB has two distinct lineages with very different behaviors — “typical” and “atypical”.

· Atypical EFB is much more likely to cause symptomatic disease.

· 300 strains of EFB have been identified so far.

· Sampling in Michigan showed that 1 in 3 colonies were positive for EFB and most had both typical and atypical strains present.

· EFB is highly seasonal with peak detectability and colony symptoms in May and June.

· Later season EFB-like symptoms are often cases of Parasitic Mite Syndrome.

· Causation of seasonality and incident reduction in July and August is not understood.

· There doesn’t seem to be any improvement in EFB incidence with hygienic bees.

· Reproduction of all strains is suppressed by oxytetracycline (Terramycin) but reproduction was seen to resume within a few weeks regardless of dosage.

· EFB is ***extremely*** resilient. Samples frozen for 3.5 years have resumed growth after thawing. Atypical EFB is much more resilient than typical EFB.

· EFB is effectively eliminated by a 10-minute emersion in 10% bleach solution but 70% ethanol is much less effective.

· Unlike AFB, EFB survives on adult bees — a critical consideration for biosecurity measures. Colonies can be asymptomatic but develop symptomatic EFB later.

· Recommendation is to practice biosecurity measures as much as practical between apiaries — within apiaries assume that all colonies are infected if any is.

· Recommendation is to avoid, as much as possible, bringing bees into apiaries from nucs, packages and swarms.

· MSU hasn’t seen any improvement in prevention or treatment of EFB with pollen supplementation or probiotics — though noted that both studies are now somewhat dated.

· Shook swarms can be effective in putting a hold on EFB but, the disease often returns over time. EFB survival in adult bees is the likely culprit.

· At the current time, the USDA Beltsville lab continues to provide EFB testing at no cost. https://apiaryinspectors.org/labs/ provides a listing of all known labs for testing. MSU plans to provide such a service in the future.

There is a very interesting and understandable description of how PCR (polymerase chain reaction) testing is done and how it works from 22:00 to 30:00.

Recent Journal Articles of Note

Bee Culture, February 2026, “UBC Research Reveals Why Honey Bees Overthrow Their Queen”, page 64. This mostly covers research that we covered in the November 2025 edition. But it also mentions something I hadn’t seen before — that adding synthetic pheromones with methyl oleate (the substance missing or reduced in virus-infected queens) will significantly dampen supersedure tendency.

Bee Culture, February 2026, “Norroa — Next Wave Mite Control — What’s to Know”, Sarah Gabric, pages 66-67. There isn’t anything here that Bill Hesbach’s column in January ABJ didn’t discuss (we in the NEBEEC January 2026 edition). But it’s good to see Bee Culture also helping to spread knowledge about Norroa.

Research Updates

Zachary S. Lamas, Tam Hoang, Ebubekir Mahmutoglu, et al. Hidden in plain sight: ***Varroa aggregate on adult drones of Apis mellifera*** — 08 January 2026, PREPRINT (Version 1) available at Research Square [https://doi.org/10.21203/rs.3.rs-8444535/v1]

This paper describes a series of experiments extending Zak Lamas’ investigations into the dynamics of varroa parasitization. They are looking at whether varroa mites prefer drones to workers and in both groups, what age bees are most likely to be parasitization and how that differs across the season.

Some takeaways:

> · Many parasites are known to aggregate on a relatively small number of their hosts during early infestation. This reduces the overall stress on the full population while allowing the parasites more time to propagate before the host population collapses.
>
> · In addition to the well-known preference of varroa parasitizing drone brood over worker brood, during early season varroa were found to parasitize drone adults at a much higher rate

than workers (6-10x more often).

· In laboratory conditions, when given choice, varroa preferentially parasitized drones.

· Drones were found to have a much higher incidence of being parasitized with multiple varroa mites than workers are.

· Varroa prefer older workers rather than nurse bees — another confounder for the typical mite wash sampling advice.

· Disbursed varroa move between bees frequently - greatly increasing their population-level impact and virus propagation potential.

· Later season dynamics of varroa population expanding rapidly and drones becoming less available lead to a rapid increase in worker parasitization. From the paper - “In highly infested colonies, the majority of worker bees can be parasitized in as little as 9 days”.

Tellarini Prieto EE, Pietropaoli M, Camus Y, Polizel Camilli M, Raza MF, Jose MS, Obshta O, Bezerra da Silva MC, Kozii I, Moshynskyy I, Edirithilake TLK, Baril E, Glavinic U, Simko E and Wood SC (2024) ***Safety assessment of high doses of vaporized oxalic acid on honey bee worker health and queen quality****. Front. Bee Sci.* 2:1442030. doi: 10.3389/frbee.2024.1442030

https://www.frontiersin.org/journals/bee-science/articles/10.3389/frbee.2024.1442030/full

The goal of the study described in this paper was to test very high levels of oxalic acid vaporization treatments for a variety of potentially negative impacts to queen, individual bee, brood and colony health. Levels tested were 0g (the control), 5g, 10g and 20g and applications were repeated 4 times at 7-day intervals resulting in the highest dosed study group getting 80g of OAV in the span of 22 days. Colonies tested were in single brood boxes and equalized to approximately 6.5 seams of bees before testing began. Note that varroa kill efficacy was not tested during this study — the authors note that that will be the subject of a follow-on study.

Some takeaways:

· Adult bee mortality was about 20% higher in the 20g group vs. the other groups.

· There was a modest decrease in brood rearing but only the 20g group had a meaningful reduction.

· Colony populations were unaffected across the treatment groups during the test period.

· Queen cell production post queen removal was not statistically different across the groups.

· No effect was found on queen acceptance or queen sperm viability across the groups.

Bottom line — though oxalic acid vaporization is now approved up to 4g/brood box with no limit on repeated applications, the effective and safe upper bound of individual applications hasn’t been established. This study showed that there were no negative impacts with repeated 10g/brood box applications so repeat OAV application strategies at the 4g/brood box all appear to be very safe.

Beekeeping Tools

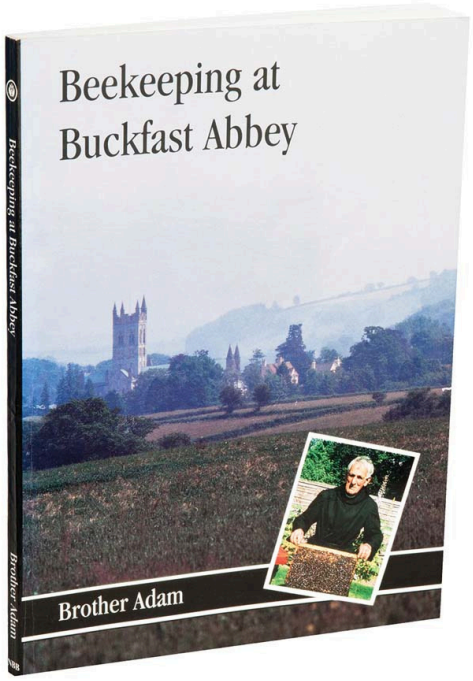
Many people agree that record keeping is an important tool for us, but the number of different methods people use and the depth of record keeping varies almost tremendously. After trying a few mobile applications, I found that none worked for me — they took way long to use and my phone quickly became a mess every time I tried. As a result, I currently use a clipboard in the apiary and transcribe my notes into Microsoft OneNote afterwards. It sort of works but has a lot to be desired.

I met a developer at NAHBE who is developing what may be a big improvement — a mobile app called Beekeeper Voice (https://beekeepervoice.com/) which is available on the Apple App Store. His core idea is to use voice and AI to have get notes entered into a database which can then be searched and analyzed (e.g., “what colonies need to be fed?”). He is also working to integrate pictures and personally uses this phone chest strap to allow that to be done hands free via his application https://www.amazon.com/dp/B0928DVLQN?ref=ppx_yo2ov_dt_b_fed_asin_title.

I have only played with the application a bit but intend to give it a test run for some early inspections to see if it is ready for full scale use.

Books

Beekeeping at Buckfast Abbey *— Brother Adam, 1975. From [BetterBee](#) and others.*



This is a short book, just 120 pages, but a wonderful description of how Brother Adam raised bees and queens, both along the way and as his practices were fully developed. He was meticulous in his observations and refinements and had the longevity (75 years of beekeeping) to experiment in volume. He brought in queen stock from all over Europe and seems to have experimented with a nearly infinite number of crosses with sub-species — many which we no longer even recognize as distinct.

Perhaps the biggest theme in the Buckfast practices was to treat queens as commodities and to always have only the strongest queens in production colonies. They always had queens available to replace failing or poor performing queens..

The list of takeaways from this small book is quite long:

· Colonies were left completely untouched from the beginning of October until the end of February. No extra feeding or observation was done on them at all.

· They overwintered many nucs on new queens in the equivalent of 3 frames.

· Colonies were equalized in mid-March with the goal of having uniform colony management during the season. This typically resulted in colonies having 7 frames of bees in a 12-frame box with follow boards to reduce space until more frames had to be added.

· Colonies were requeened from the previous year's nucs at the same time they were equalized. The old queens are placed in nucs as reserve until new queens were raised for the year starting at the end of May. They found that mature laying queens were readily and easily accepted and that this procedure yielded the strongest possible colonies for the spring nectar flow.

· They did not use spring feeding; they only fed as needed for colony survival.

· Supering typically began May 20th and wire queen excluders were used.

· Though procedures changed many times over the years, replacement of old brood comb was always part of their practice. They settled on replacing 3 of the 12 brood combs each year to have full replacement every 4 years.

· Queens were aggressively replaced if issues were found with inspections no less frequent than every 2 weeks.

· Prime swarm season at Buckfast was relatively short — just the 3 weeks in July. At one time queens were routinely removed from colonies during this period. However, because this impacted honey production it was abandoned. In later years they increased inspections to once per week during swarm season and cut out any swarm cells.

· To reduce the chances of dysentery due to bees having only access to honey with high solid content, they fed syrup aggressively in the fall.

· Overwintering was done on 10 frames without any sort of protection or insulation. Brother Adam describes some experiments done in the 1920s with hives grouped together and covered by insulation on all sides. However, he says that these colonies "…without exception, failed to build up." So, insulation was abandoned and apparently never revisited.

· They sterilized their brood boxes every 4 years by boiling in "caustic soda solution".

· There are fascinating descriptions of Brother Adam's experiments with crossbreeding numerous bee varieties and observing their behaviors along many traits.

· Brother Adam describes a long set of metrics for evaluating queens but his primary ones were: (1) Fecundity — that is, brood rearing rate, (2) Industry — Some strains foraged more aggressively than others, (3) Resistance to disease — tracheal mites were a huge issue at the time but they were also looking for resistance to some brood diseases. (4) Swarming — or rather a lack of inclination to swarm.

· Evaluation was done across several experimental apiaries with differing floral and climate conditions.

· Brother Adam noted exceptionally large averages differences in honey yields for different strain crosses in the same apiaries.

· Brother Adam believed that restricting the laying space for breeder queens led to her laying better eggs which led to stronger queens. To achieve this, they were kept in mini colonies rather than full-sized colonies.

· In his time, it was thought that good queens could only be raised from eggs. Brother Adam determined that grafted 18-hour larva produced queens that were just as high quality. Buckfast settled on grafting from 12-hour old larva and were meticulous in how they achieved that.

· Brother Adam's method of queen rearing is quite interesting. Starting from a very strong, 2 box queen-right colony:

- o Restrict the queen to the lower box.
- o Remove queen cells from the top box after 10 days.
- o On grafting day, the lower box would be moved with the top box put in its place.
- o Most of the nurse bees from the queen-right box would be shaken in front of the original site and would go into the queenless box. This resulted in a single box cell builder packed with nurses with no larva, other than the grafts, to take care of.
    - o Feed would be given to the cell builder.
    - o The queen-right box would be moved to another apiary and fed.
    - o After 6 days when the queen cells were capped, the grafting frames would be concentrated into just 3 of their 12 cell builders so that the others could be freed for honey production use.
    - o At this point, the queen right colonies would be returned to their original apiaries.

· They would graft 60 cells per cell builder and expect a minimum take of 45 cells while averaging 55.

· To control mating they initially used a "flood the zone with drones" approach but later switched to an isolated mating area.

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