NEBEEC
News You Can Use

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NEBEEC (Northeast Beekeepers Education Collaborative) is a new organization with the goal of bringing beekeepers in the Northeast US the best available and most current knowledge for beekeeping success and promoting collaborative learning. It isn't a club and doesn't have membership fees. What it does provide is a collaborative Slack-based community for members and a customized AI chatbot for answering beekeeping questions and analyzing images.

We plan to publish this newsletter monthly with relevant articles, updates, and upcoming events.

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

Together, we can make this a timely and beneficial resource for everyone!

If this newsletter was forwarded to you, please consider subscribing by sending mail to nebeec@gmail.com

If you would like to join our Slack community, please send mail to nebeec@gmail.com

Enjoy this second monthly newsletter and please forward it to all your beekeeper friends!

- NEBEEC Team

Beekeeping Nuggets

Yellowjackets were a significant problem for many people this fall – they have been numerous and hungry. Best advice is to address the issue in the spring – before the solitary over-wintered queens get a chance to build their colonies. More tips for that in a future newsletter and, in the meantime, we'd love to hear your solutions for dealing with yellowjackets.

Was it a bad year for **wax moths** generally or was I just unlucky in seeing some wax moth-caused disasters? I had some very modest infestation in supers I had pulled but not extracted immediately. But two friends had major disasters with stacks of supers being thoroughly infested – destroying both honey and comb - and making spectacular messes. As a result, I bought a small, dedicated freezer that holds 3 honey supers. Now I can freeze-cycle any supers I'm not going to extract immediately and more efficiently freeze cycle supers for winter storage.

Winterization, however, you do it, should be complete by now. For a lot of people that has meant a painful amount of feeding. I am still trying to dial in what winter weight needs to be in my condensing colonies to safely get through winter and to ensure there is plenty of brood space for early spring. Last year my two scale hives lost 18 lbs (single deep) and 32 lbs (double deep) from November 1- April 1. In the single, the brood area was constrained because I'd overfed them. I also have 2 more scales, so I'll be collecting more data points this winter.

By request, we added a new section to the Newsletter - **"How Tos"**. The first one is on the available methods and pros and cons for applying oxalic acid. Confession – most of that content was generated by our ChatGBeeT bot.

Recent Events

WCBA Fall Conference Takeaways - October 18, 2025

What is the best habitat for hives? Seasons Matter - Dr Clare Rittschof

Takeaways:

1. Colonies placed near cornfields in early spring can experience unexpected growth advantages due to the availability of early-season floral resources.

2. The value of a habitat for honey bee colonies shifts significantly across seasons, making strategic hive placement dependent on aligning floral abundance with colony needs throughout spring, summer, and fall.

3. Honey bees exhibit flexible foraging behavior that adapts to the surrounding landscape, allowing them to optimize productivity across diverse habitat types.

Breeding for Varroa Resistance - Current Programs and Strategies for Developing the VSH Trait in our Honeybees - Dr Jeff Harris

Takeaways:

1. Resistant (VSH) behavior is to uncap potentially invested brood cells, kill or recap depending on whether cell is infested with reproductive mites.

2. A queen line is considered resistant if they achieve 70% kill of infested larva.

3. Open mated daughters of VSH queens will have only half the mite resistance of their mother colonies.

Queen Rearing for Small-Scale Beekeepers - Dr Jeff Harris

Takeaways:

1. Hobbyists can raise quality queens without grafting.

2. Miller method is suggested.

3. Using a Cloake board can allow a colony to be both a queen cell starter and finisher.

4. With all queen rearing methods, lots of nutrition and lots of nurse bees are essential.

NY Bee Wellness webinar with Randy Oliver - October 28, 2025

Takeaways:

1. Breeding for Varroa resistance – Randy updated us on his varroa resistance breeding program. He has talked about this each year and showed the steady progress – by virtue of selective queen rearing and an increasingly resistant drone stock due to the size of his operation. A good demonstration that, at scale, this can be done.

2. Studies of oxalic acid – Because of widespread Amitraz resistance and the relatively high cost and temperature challenges of formic acid, oxalic acid treatment and efficacy has become very important

to commercial beekeepers. Randy is doing a wide range of tests on the various methods of OA application and their efficacies (see the “How To” section below). Some takeaways:

a. A full dose of VarroxSan between frames or his Swedish sponges on top were the most effective application while laying VarroxSan strips on top of the bars does a very poor job.

b. He documented the VarroxSan problem of bees destroying comb around the strips.

c. In very high humidity OA will leech out of strips much more quickly than the application period – presumably rendering them much less effective.

3. Pollen substitutes – This is an update of the work Randy has previously published on pollen substitutes looking for the right composition of amino acids for bees, potentially with some additional micronutrient supplements. His contention is that natural pollen is not inherently better for bees because it may or may not provide all the necessary amino acids or at the right levels. Current work is to refine the previous studies and to arrive at a recommendation formulation.

4. Oxalic acid vaporizer tests – Randy presented a series of tests and results. Some takeaways:

a. Maximum OA production occurs with a starting temperature of 400F or 210C (note: this is well above the default temperature of an InstantVap)

b. Oxalic acid is essentially neutralized in a hive within 24 hours.

c. Screened bottom boards reduce OAV effectiveness significantly.

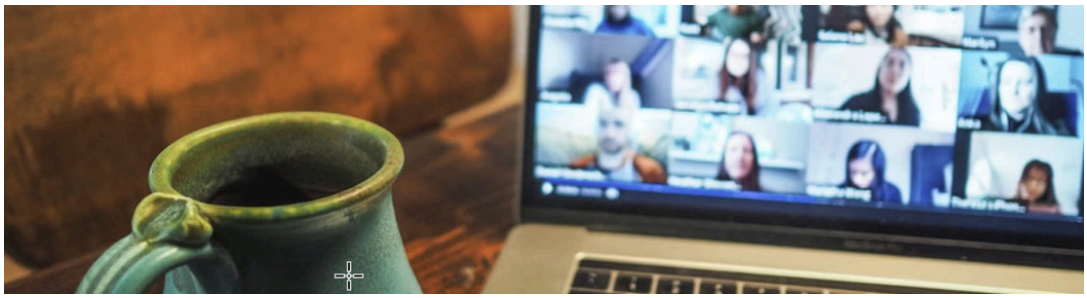
d. There was no real difference between vaporizers in effectiveness.

5. Robbing guard tests – Randy recently had a long series in American Bee Journal about robbing screens and the issues with the current generation of them. Most importantly, he shows that having entrances above the screen is simply a bad design. New commercial robbing screens are already available based on this research.

6. Insulation and ventilation – Randy did some studies and some theorizing about the value of insulation and of top ventilation. To be honest, this section confused me, but it is work in progress. Randy contends that passive air flow even with a top entrance is insufficient to drive the necessary intake of oxygen to allow for bee metabolic activity. And, though he shows some of the classic pictures that motivate condensing colonies he seems to conclude that there is no significant air flow (and therefore thermal loss) due to a top entrance. But, other tests, such as the massive reduction in honey stores in condensing colonies show empirically that that isn’t the case. And are we really confused about what causes air flow in a beehive? More to come I’m sure.

As always, visit www.scientificbeekeeping.com for more details. Expect this talk to be available in the NY Bee Wellness channel in mid-December - https://www.youtube.com/@NYBeeWellness.

Upcoming Events



Connecticut Beekeepers Association – November 6, 2025, 6:30pm. "Bee Health: Nutrition, Pesticides and Climate Change and the Impacts on Honey Bee Health" with Dr. Priya Basu via Zoom. Hopefully the recording will also be available via the CBA site: https://www.ctbees.org/event-details/bee-health-nutrition-pesticides-and-climate-change-and-the-impact-of-honey-bee-health.

Massachusetts Beekeepers Association – November 8, 2025. Fall 2025 Meeting, https://www.massbee.org/event-6117893. In-person in Natick MA. Announced speakers include Dave Hackenberg, Dave Wade, and Michael Palmer (who will be presenting via Zoom).

Franklin County Beekeepers Association Meeting – November 17, 2025, 6:30pm, Zoom and In-Person. From the FCBA web site: "Black bears commonly cause damage to unprotected apiaries in Massachusetts. Join the Franklin County Beekeepers Association meeting for a presentation about black bear behavior and how beekeepers can take effective steps to prevent hive damage from bears. The presentation will be led by MassWildlife's Black Bear and Furbearer Biologist, Dave Wattles." Registration required – see FCBA website at https://www.franklinmabeekeepers.org/events/fcba-monthly-meetings.html.

Bristol County Beekeepers Association – November 18, 2025, 7pm, "End-of-Season Review & Overwintering Strategies" with Paul Tessier from MDAR. In-person only. https://bristolcountybeekeepers.wildapricot.org/event-6418458.

At Home Beekeepers Series, November 18, 2025 — "Recordkeeping: Finding the Method that Works for You", Julia Mahood, Georgia Beekeepers Association. https://www.aces.edu/blog/topics/bees-pollinators/at-home-beekeeping-series/

Connecticut Beekeepers Association – November 20, 2025, 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-2025-11-13-18-30. These meetings are also recorded and are available for replay via the CBA website and (currently) made public on their YouTube channel.

Sustainable Beekeepers Guild of Michigan – March 7, 2026. 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.

North American Honeybee Expo - https://www.nahbexpo.com/. This is a large and still growing show which will be held January 8-10 2026 in Louisville, Kentucky at the Kentucky Expo Center. It's known for a massive vendor floor and huge honey show as well as excellent speakers.

American Beekeeping Federation - 2026 Conference and Trade Show - https://abfnet.org/2026-abf-conference/. January 6-10, Mobile, Alabama. Keynote speakers will be Dr. Priyadarshini (Priya)

Chakrabarti Basu of Washington State University and Dr. Dave Tarpy of North Carolina State University.

Podcasts

Beekeeping Today Podcast – The October 20, 2025 episode is *"Fall Honey Sales"*. Jeff Ott and Becky Masterman share their individual approaches to marketing and sales on the relatively small scale. https://www.beekeepingtodaypodcast.com/356-fall-honey-sales/

Beekeeping Today Podcast – October 27, 2025 episode is *"Norroa: A New Era in Varroa Management"* is timely and informative. There is subtlety to applying Norroa for best efficacy. The mode of transmission of the active agent to mites is via brood food. So, Norroa needs to be applied when the bees aren't going to consume it and when supers aren't on, so it doesn't just get stored instead of used. That seems like threading a needle and suggests that the best time to apply it might be at the onset of the spring flow. We have a bit to learn. It is also going to be quite pricey initially. With the current Mann Lake pricing it will be $18/single deep and $36/double deep. Thankfully, GreenLight plans to bring this significantly down over time. https://www.beekeepingtodaypodcast.com/357-norroa-varroa-management/

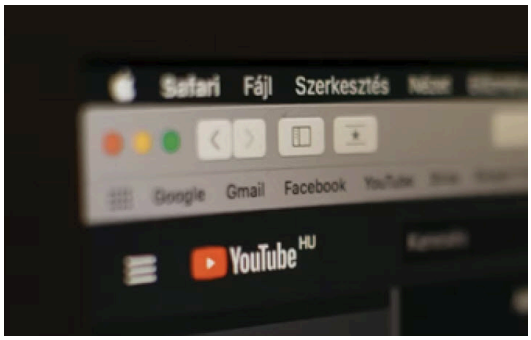
The GreenLight representative also confirmed that they are testing it specifically along with other RNAi-based treatments against Tropi mites.

A Mann Lake video on the mechanical application of Norroa to a colony is here - https://www.youtube.com/watch?v=q5xfnBfWbBU.

Two Bees in a Podcast – Their October 21, 2025 episode is on how Australia is dealing with the onset of Varroa destructor. On one hand, they can make use of the knowledge accumulated around the world on how to control Varroa, but the economic disruptions and adjustments are going to take quite a bit of time to work through. This is a good reminder about the systemic changes to come when Tropi mites arrive in the US. https://podcasts.apple.com/us/podcast/episode-216-varroa-introduction-in-australia-with-dave/id1494010558?i=1000732809804

YouTube Channels

Bob Binnie has a new 3 part series comparing extended Oxalic Acid treatments - https://youtu.be/nqy_MCn5mHY.



The ***British Beekeepers Association*** has an excellent channel at https://www.youtube.com/@BritishBeekeepersAssociation. A very recent video is a presentation about current research on Tropilaelaps mites with Maggie Gill https://www.youtube.com/watch?v=wsmO69Xu-Ag. Besides being another great injection of information about Tropilaelaps I learned that Apis dorsata migrate. Less cool is the march of Tropilaelaps and the potential for a quick jump (via ship most probably) into the US. A recent report is that the US had a very close call – it could happen anytime. There is some synergy between Tropilaelaps and Varroa management, but Tropilaelaps will be much more challenging and labor intensive to deal with. Maggie is extremely knowledgeable and a great presenter.

BetterBee has a dedicated channel and Dr. David Peck does have some great episodes. It isn't new but this interview with Dr. Heather Broccard-Bell of NOD is excellent - https://www.youtube.com/watch?v=STd3JM2hgHk. It's a deep dive on Formic Pro and well worth the listen if you haven't heard it yet.

The Way to Bee Podcast with Fredrick Dunn does lots of interesting videos including a Q&A every Friday of a selection of previously submitted questions and a live Q&A session on the last Friday of the month. The Q&As are available as a podcast and all videos are available on YouTube: https://www.youtube.com/@FrederickDunn/videos

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Recent Journal Articles of Note

American Bee Journal, October 2025, pages 1097-1102, ***"The How and Why of Oxalic Vaporization"***. Randy Oliver and Janos Fenyosy dive into OAV including reviews of a wide range of devices. Part 2 of this series is in the November 2025 issue with more to come. If you are doing or considering OAV I would suggest reading this series. Randy's part 2 data on output efficiency at a range of temperatures is very interesting. For example, the InstantVap default temperature setting is too low if that data is correct.

American Bee Journal, October 2025, Pages 1105-1107, ***"How a Colony Decides to Replace its Queen"*** by Alison McAfee. This short and innocuous sounding article is actually quite important. As often happens, curious researchers pulled on a thread and made discoveries that are important both academically and for beekeepers directly. They found that queen ovary shrinkage – which can be induced by viral infections, age or simply restriction in laying, leads to a reduced production of methyl oleate in Queen Retinue Pheromone (QRP). They also showed that this signal is how workers determine queen insufficiency and why they initiate queen cell building and supersedure. This has implications for queen introduction into colonies, queen grafting, package installation, queen banking, queen sequestering to induce brood breaks, etc. Also important is to know that open brood produces methyl oleate – which explains well-known dynamics such as better queen acceptance in the presence of open brood. Interestingly, Queen Mandibular Pheromone alone does not contain methyl oleate and precisely where it is produced is not yet known. As was noted in the article, this has implications on the effectiveness of artificial QMP for suppressing queen cell building as well.

Bee Culture, November 2025, pages 12-13, ***"Micronutrients with Large Impacts"***. In Jay Evans monthly "Found in Translation" column he talks about some of the new research (see "Research Updates" below) on micronutrient impact on colony performance. One of the important takeaways is that natural pollen is highly variable in nutritional content and in areas with less floral diversity, may not sub-optimal. Supplementation to ensure they are getting enough of a small number of key micronutrients may make a big difference.

Bee Culture, November 2025, pages 28-29, ***"What a Bee Chooses to Eat May Not Match Ideal Diet"***. Katie Bohn's article discusses research which shows that bees do not preferentially consume an ideal diet and analogizes this weakness to humans. Evolution adapted humans to consume sugars when they were available and honeybees seem to have a parallel weakness. What do we do about it? That seems a bit daunting but maybe products like the ones Jay Evans discusses in his article will be important.

Research Updates

Engineered yeast provides rare but essential pollen sterols for honeybees

This paper received a lot of popular press attention when it was published in August 2025. It discusses how genetically engineered yeast was used to enhance the nutritional value of pollen substitutes to generate tremendous improvements in colony performance. Commercial products utilizing it are a way off but it is an interesting technology to be aware of even if the popular press takes on it are very misleading. https://www.nature.com/articles/s41586-025-09431-y

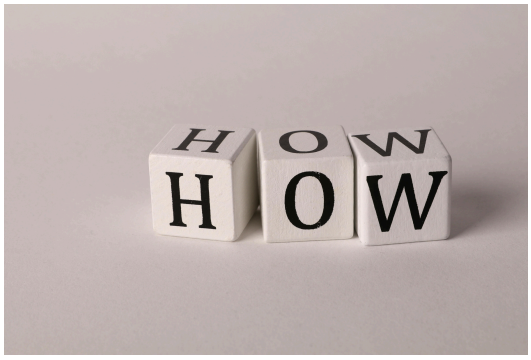
Elevated virus infection of honey bee queens reduces methyloleate production and destabilizes colony-level social structure

This is the paper underlying the Alison McAfee article in the October 2025 American Bee Journal mentioned above. https://www.pnas.org/doi/10.1073/pnas.2518975122

Books

Let us know what you are reading or have read recently and would recommend.

How-Tos



Oxalic Acid Application Options

Oxalic acid (OA) is becoming more popular as a miticide, especially given the concerns about Apivar resistance in Varroa. With the caveat that no oxalic acid treatment kills mites in the reproductive stage (that is, under brood cappings) and doesn't help with tracheal mites, oxalic acid can be a great tool for keeping mites under control. OA itself is very inexpensive, very safe for bees and leaves no residue in honey.

If you've decided to use OA you have to decide how – dribble, vaporization or OA strips. Each has its pros and cons. Here is a short summary of those:

1. Dribble Method

An OA solution is mixed with sugar syrup (usually 1:1) and applied using a syringe or dosing bottle directly between frames onto bees. Typical dosage is about 5 mL per seam of bees, not exceeding 50 mL per colony.

Pros:
• Simple, inexpensive, and quick to apply.
• Requires no specialized equipment.
• Highly effective (90–95%) on broodless colonies.

Cons:
• Too frequent repeated use can harm bees due to acidity.
• Can't be used in very low temperatures.
• Requires access to bees.

2. Vaporization (Sublimation)

Crystals of OA dihydrate are heated with an electric vaporizer (e.g., Varrox, InstantVap, ProVap) until they sublimate, producing vapor that coats bees and hive surfaces. It is often used after honey removal or during broodless periods, but can be repeated for colonies with brood.

Pros:
• High efficacy on phoretic mites (95%+ on broodless colonies).
• No sugar syrup contact; minimal stress to bees.
• Repeated treatments are possible if brood is present.
• Quick – application time takes 2-5 minutes per hive typically.

Cons:
• Requires specialized equipment and protective gear.
• Must be done carefully to prevent inhalation exposure to the beekeeper.
• Slightly reduced efficacy in heavily brooded colonies.

3. Oxalic Acid Strips (e.g., VarroxSan)

Strips impregnated with oxalic acid and glycerin are placed between brood frames. The acid is released over 30–45 days as bees contact and spread it throughout the colony. This extended exposure targets mites over multiple brood cycles.

Pros:
• Long-lasting protection without repeated visits.
• Works even in colonies with brood present, unlike dribble or single vapor treatments.
• Easy to apply and safe for bees.

Cons:
• Effectiveness can vary with humidity, temperature, and bee activity.
• Inconsistent release if strips dry out or become propolized.
• Potential brood disruption or queen avoidance of treated areas.
• Potential comb destruction below strips.

I have used each of these OA methods. Due to what I saw with comb use and destruction I'm not sure I'll use VarroxSan again. If I did, it would only be in the fall. Dribble is great, especially in single-deep colonies and when temperatures allow. It is fast and very inexpensive. But since I seal up the tops of my colonies and don't have ready access to them from November 1 to March 1 it is now less useful for me. Though I resisted it for a long time for cost and safety reasons, I finally switched over to vaporization last year and will stick with that as my primary application method.

Thank you for reading!

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