

“Promoting the Craft, Science and Future of Beekeeping since 1947”

# THE BEELINE

Official Newsletter of the Central Iowa Beekeepers Association



## ISSUE: Fall 2024

Editor: Laura Miller

### CIBA MEMBER MEETING

**Saturday, Sept. 21** 5 p.m.

**Northridge Baptist Church**

**3700 6<sup>th</sup> Avenue, Des Moines**

Mead maker Scott Dennis will talk about how honey influences his final product. We'll also elect a new treasurer. See **page 3**.

### CIBA MEMBER MEETING

**Saturday, Nov. 16** 5 p.m.

**Northridge Baptist Church**

**3700 6<sup>th</sup> Avenue, Des Moines**

Our program committee is working hard to finalize a speaker so stay tuned!

**Questions?** Call Don Moody (515) 770-5754, or [ds.moody1@hotmail.com](mailto:ds.moody1@hotmail.com)

### DEADLINE FOR WINTER NEWSLETTER:

**December 10, 2024**

**Email submissions and comments to:**

Laura Miller, [Beeline\\_editor@yahoo.com](mailto:Beeline_editor@yahoo.com)



We encourage you to receive the newsletter via email; however, we understand if electronic delivery is not for you! You may update your subscription by contacting Cindy Spiker, [ciba.mbsp@gmail.com](mailto:ciba.mbsp@gmail.com), or leave a message at (515) 556-6637.

## FROM THE PRESIDENT, JAMIE BEYER

As you will read in this newsletter issue, I am humbled by being named the 2023 recipient of the Spencer Award from the Leopold Center for Sustainable Agriculture at Iowa State University. And a \$1,500 gift goes with it!

I am donating all this money to launch a new CIBA Pollinator Education Program called Bees & Beyond. In a nutshell this program will connect beekeepers to educators and children. A committee of five dedicated volunteers has been actively working out the many details. Since it will need dollars to get going, I decided to give the award money to CIBA. You'll get a lot more information when the program is unveiled at our September member meeting.

I am excited about this new program, but I am just as excited about what CIBA does for its members (and for beekeepers in general) in so many other ways. Because of great volunteers, CIBA has the largest bee auction, the best club field day, a first-class Winter Seminar, the best club publication (the BEELINE), the best club website, one of the best royalty programs, a super youth scholarship program, and finally programs at our meetings that bring in some of the best presenters the Midwest has to offer. Most of these programs are FREE, not only to our members but also any beek who wants to come.

How can we do this? Our great members so freely give their time to pay it forward. Most of us have been blessed with someone who showed us how to be better beekeepers. CIBA fills part of that need when a member takes advantage of our programs, which is one reason that I am dedicated to this club.

In this column – if I can convey any message – it is the need for more volunteers. We are looking for a webmaster to take over for Val Just, who has done a fantastic job. There are other volunteer needs such as an auction committee chair and someone to chair the youth scholarship program. I also have been looking to step down as president, so keep that in mind.

A lot of us donate dollars. I would like to see more of us donating time to continue the great work that CIBA is doing. If you're up to the challenge, contact me or any CIBA director (see back page for info). Thanks for being a member!

Your President, *Jamie*

Find us on the web: [www.centraliowabeekeepersassoc.org](http://www.centraliowabeekeepersassoc.org)

Find us on Facebook: [www.facebook.com/CentrallowaBeekeepersAssociation](https://www.facebook.com/CentrallowaBeekeepersAssociation)

Join our CIBA Facebook group: [www.facebook.com/groups/353306835159561](https://www.facebook.com/groups/353306835159561)

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## CIBA Club Meetings/Communications

CIBA meets 6 times annually, the third Saturday every other month. During active beekeeping season (May and September), they are late afternoon or early evening; in off-season (November and January) they are early afternoon. The March winter seminar and July field day are full-day events.

The official CIBA newsletter, the **BEELINE**, is published four times a year on the first day of January (Winter); March (Spring); May (Summer) and September (Fall). A special Student Edition is published each January for people enrolled in central Iowa beekeeping classes.

CIBA members also receive the **CIBA Newscast** email from the president on months when the BEELINE is not published (not available for members who choose to receive CIBA info only via USPS).

**CIBA Bee Bits**, an email newsletter with helpful hints about beekeeping, comes out the 15th of each month (not posted on the CIBA website and available only for CIBA members who receive CIBA info electronically).



*Harvesting the work of ketchup bees.*

## It's All About Mead at Our September Meeting

**Date:** Saturday, Sept. 21

**Time:** 5 p.m.

**Where:** Northridge Baptist Church, 3700 Sixth Avenue, Des Moines

**Schedule:** We'll have a business meeting (including election of a new treasurer) and snacks, followed by this program, "What is Mead and How Honey Influences the Final Product" by Scott Dennis

If you've tried mead and did not like it, you may change your mind after CIBA's September member meeting. Scott Dennis is an expert mead maker, also a certified beer, mead and cider judge and founding member of the local home brew club, the Iowa Brewers Union. He has been brewing and judging since 2000 and has judged more than 120 homebrew contests throughout the Midwest. After tasting his first mead, he became hooked and has focused on making and judging them ever since. Scott has undergraduate and doctorate degrees in microbiology. He worked 38 years as a microbiologist and fermentation expert for Pioneer. His other hobbies include birdwatching, barbecue, history and biking.



CIBA members also will get a first look at a unique program that aims to build pollinator ambassadors by connecting beekeepers with educators and young people. Members of the CIBA Pollination Education Program committee have been working all summer on this project. They are anxious to share how you can be part of this new program.

## Treasurer Election Set for September Meeting

Be sure to attend the September 21 CIBA member meeting when we'll have a special election for a new treasurer. **Kristin Griffith** of Des Moines has been nominated for this important position in CIBA. She brings 25 years of nonprofit experience in the United States and abroad. During that time, she has had financial oversight for budgets ranging from several thousand to several million dollars.

Kristin has been a member of CIBA since 2021 when she started keeping bees. She is employed at the Iowa Insurance Division where she manages the Senior Health Insurance Information Program (SHIIP) that provides free Medicare counseling for older Iowans.



Many thanks to **Linn Wilbur**, who has been serving as secretary/treasurer since 2020, and acting treasurer for the past year. We appreciate your many contributions as treasurer and so many other roles in CIBA!

## Looking Ahead: Mark Nov. 16 on Your Calendar

**Date:** Saturday, Nov. 16

**Time:** 5 p.m.

**Where:** Northridge Baptist Church, 3700 Sixth Avenue, Des Moines

**Schedule:** We'll have a business meeting and snacks (of course) followed by a program



Get out your calendars and mark Nov. 16 for our fall CIBA member meeting. Your program committee has identified a list of fascinating topics and are working hard to finalize a speaker for this program. If there's something you'd like to know, or have an idea for a program, contact Don Moody, (515) 770-5754 or [ds.moody1@hotmail.com](mailto:ds.moody1@hotmail.com). And stay tuned!

## Thank You Silent Auction Donors!

One of the highlights of the July 20 field day was the silent auction to benefit CIBA's youth scholarship program. More than \$600 was raised for the Susan Kelly Memorial Youth Scholarship program. There were 50 donations of items for the auction, including merchandise from these businesses: **Brad Guthrie** of Hettinger, North Dakota on behalf of Commercial Bee Supply; **Mike and Madison Fry** of Fry Family Farm in Medford, Oregon on behalf of SimplKomb; **Wayne Mitchell**, a mead maker from north of the Twin Cities in Minnesota; **Dadant Supply** of Sioux City; and **Strong Microbials**, Milwaukee, Wisconsin. The program was created in 2022 in honor of the late Susan Kelly, who was the mother of a family of beekeepers and a CIBA director and member. Thank you, donors and silent auction bidders!

## CIBA 2024 Membership Directory: Did You Get Yours?

You should have received an email this summer with an important attachment, the 2024 CIBA Membership Directory. The directory contains contact information and some apiary information for all CIBA members who consented to share their information. Please do not share it with people outside this organization.

If you are not on the email list (you selected USPS delivery on your 2024 CIBA membership form) and wish to have a directory, contact Cindy Spiker, CIBA Membership Secretary (her contact info is on the back page of this newsletter). We'll figure out how to get you a copy.

If there are errors in your basic information (name, address, contact info), contact Cindy, who will correct it for future years. If there are errors in apiary numbers or those need updating, please make those changes on next year's membership form. We make every effort to keep correct information about our members, but errors can occur.

## September through December CIBA Board Meetings

The CIBA officers and directors have regularly scheduled board meetings on the second Monday of each month starting at 7 p.m. (the Zoom link opens at 6:30 p.m.). These meetings are open to CIBA members and you are encouraged to participate. Here are the Zoom links for connecting via the internet or by phone:

### September 9:

<https://us02web.zoom.us/j/85658626489?pwd=dWbvO0pZ7TnWpoPebbFRYaQUeH05YB.1>

Meeting ID: 856 5862 6489 Passcode: 541873

Find your local number: <https://us02web.zoom.us/j/kbcUdtRXn4>

### October 14:

<https://us02web.zoom.us/j/82660874137?pwd=C0B4gWWyi0AqqAcHeqmUUBxapE4M1K.1>

Meeting ID: 826 6087 4137 Passcode: 581400

Find your local number: <https://us02web.zoom.us/j/kb6vDildhP>

### November 11:

<https://us02web.zoom.us/j/82289292949?pwd=NqWQ7FjxH8ZDbsMCI4smtYpUabXaH.1>

Meeting ID: 822 8929 2949 Passcode: 907170

Find your local number: <https://us02web.zoom.us/j/kcQBLFD0JC>

### December 9:

<https://us02web.zoom.us/j/86714003017?pwd=RLSYsr9b1waXbuhhGMzWbYOYvS9rDe.1>

Meeting ID: 867 1400 3017 Passcode: 277042

Find your local number: <https://us02web.zoom.us/j/krK792Zyy>

To connect via phone, find a local number at the link under each month's meeting information or use the Chicago number (312) 626-6799 and then the meeting ID and passcode for that month's meeting.



**WE NEED YOU**

**CIBA is looking for**

- ▶ A webmaster
- ▶ Auction committee chair
- ▶ Youth Scholarship chair
- ▶ President
- ▶ Committee members

**INTERESTED? CONTACT JAMIE BEYER**



## EXTRA! EXTRA! CIBA Offers Opportunities for Young People

**December 1** is the deadline for two exciting CIBA programs that are geared for our next generation of beekeepers.



The **CIBA Royalty Program** is looking for applicants interested in becoming the 2025 CIBA Queen or Ambassador. Applicants must be at least 16 years old and not older than 20 by January 1 of the year she/he will be a queen or ambassador. The role of a queen or ambassador is to represent CIBA and to speak about beekeeping. Responsibilities include (but are not limited to) promoting and educating the public about CIBA, the value of honey bees, honey, beeswax and other products of the hive.



December 1 also is the deadline to apply for the 2025 **Susan Kelly Memorial Youth Scholarship Program**. CIBA is looking for young people interested in keeping bees. They are provided – at no cost to the winning applicant – with a hive, bees and equipment, plus a CIBA mentor who will lead them through their first year of beekeeping.

Do you know of a young person who might be interested in either one of these programs? BOTH programs are designed to teach not only about keeping bees but also to help a young person develop leadership and communication skills. Please take a minute to read about both programs on the CIBA website:

- **Royalty:** [www.centraliowabeekeepersassoc.org/queen-ambassador](http://www.centraliowabeekeepersassoc.org/queen-ambassador)
- **Youth Scholarship:** [www.centraliowabeekeepersassoc.org/youth-scholarship-program](http://www.centraliowabeekeepersassoc.org/youth-scholarship-program)

### Minutes of the May 18 CIBA Member Meeting

The meeting called to order 5:10 p.m. by Past President **Mike Sanders**. The reading and approval of previous meeting notes was waived. Motion was made by Tony Christianson and seconded by **Lynn Hammel** to vote to separate the Membership Secretary from the current Secretary/Treasurer position. Motion passed. **Linn Wilbur** nominated **Cindy Spiker** to be the new Membership Secretary. **Tony Christianson** seconded the nomination. **Lynn Hammel** moved to cease nominations for Membership Secretary and **Tony Christianson** seconded the motion. A vote was taken and **Cindy Spiker** is the new Membership Secretary.

Motion was made by **Tony Christianson** to make auctioneers **Roy Kraft, Harold Phipps and Jodi McCaskey** honorary CIBA members. Seconded by **Jan Yagge**. Motion to cease nominations by **Cindy Spiker**, seconded by **Grace Reiner**. Motion passed.

Treasurer report was presented by **Linn Wilbur**.

BEELINE Update: The editor, **Laura Miller**, was not present but last year's scholarship student, **Morgan Spaulding**, will be helping with the newsletter.

There was no website update.

Youth Scholarship Committee: Reported via email from **Jamie Beyer** that he had caught a swarm to set up a second hive for **Noelle Dittman**, this year's scholarship student, and helped to install it in a 10-frame deep.

Royalty Committee: **Keri Kenoyer** reported that there is still a need for applicants for the 2025 year and asked members to encourage possible candidates. She also asked if any adults would be willing to take on presentation requests in the absence of a 2024 queen or ambassador. Keri also reported that she had given one presentation and donated the stipend to CIBA.

A report was given by **Scott Fiene** about a new program still in development. The new program would focus on creating educational presentations for kids to learn about pollinators. President **Jamie Beyer** is donating \$1,500 startup funds.

The CIBA Summer Field Day will be July 20 at the Iowa Arboretum. This will be a FREE event again this year. Pre-registration will be required. Items are needed for the silent auction to benefit the Susan Kelly Memorial Youth Scholarship program. Presentations at the field day include a honey extraction demonstration, mite control and cooking with honey.

Motion to adjourn by **Tony Christianson** and seconded by **Cindy Spiker**. Meeting adjourned at 5:36 p.m.

*Respectfully submitted, Keri Kenoyer*

## Jamie Beyer Selected for Conservation Award



CIBA President **Jamie Beyer** has been selected as the 2023 winner of the Spencer Award from the Leopold Center for Sustainable Agriculture at Iowa State University (ISU). The award was presented August 19 at the annual meeting of the Conservation Districts of Iowa. The prestigious Spencer Award recognizes farmers, researchers, teachers or others who have contributed significantly to the environmental and economic stability of Iowa agriculture and farming communities.

The Spencer Award honors Norman and Margaretha Spencer, who farmed in Woodbury County for 40 years. Graduates of ISU, the Spencers maintained an active relationship with the university and several professors who encouraged them to conduct research on sustainable practices and family farming. The Spencer family established the award in 2001 through an endowment that provides a cash prize for each winner.

Beyer speaks and writes about the value of honey bees and native bees. He has been CIBA president since 2019 and is active in the Iowa Honey Producers Association (IHPA). He coordinates the IHPA's annual Honey Bee Day at the Iowa Capitol to showcase to legislators the value of bees and other pollinators and policies that are needed to protect them. He is involved in other conservation activities, including a newly organized South Ames Ecological Alliance.

Beyer has a bachelor's degree in fisheries and wildlife biology and a master's degree in wildlife biology from ISU. He has been an active alum, serving as a guest lecturer for horticulture and entomology classes and helping professors and graduate students connect with landowners and beekeepers to answer research questions and raise grant funding.

"Jamie Beyer works tirelessly to promote healthy hives and the joy of beekeeping across the state," said **Randall Paul Cass**, bee specialist ISU Extension and Outreach, one of Beyer's nominators for the award. "He is an early adopter of management practices for bee health and a staunch supporter of Iowa State research and bee programming."

Honey bees are what some entomologists call a "gateway" insect that can expand interest to other insects and pollinators, according to Beyer.

"One of the reasons is because honey bees have economic value," he said. "They are really a type of 'livestock' for a growing number of farmers and landowners. They are also just an amazing feat of nature. When people become educated about bees and the threats they face, they often also become advocates for our native bees and other insects and pollinators so important to our ecosystem."

**Linn Wilbur**, a veterinarian and longtime leader among Iowa beekeepers, has been an important mentor to Beyer. Wilbur and Beyer have worked together on many projects, including with the national Honey Bee Health Coalition.

"Jamie's efforts have advanced the recognition and importance of honey bees and other pollinators to farmers, the farming industry and the public," Wilbur said. "He emphasizes the need for stewardship of these insects and how that stewardship assists farmers and the public in preserving and enhancing our ecosystem."

Beyer grew up on a small farm near Jefferson and credits his parents for encouraging his interests in the natural world. He and his dad built a canoe that they often took on the Raccoon River, paddling and listening to nature. Inspired by his ninth-grade science teacher, Beyer raised many varieties of tropical fish in an array of tanks, moving many of them outdoors during the summer. That hobby eventually turned into a career: Midwest Waterscapes, a business to help landowners develop water gardens and ponds. Semi-retired, Beyer still serves as a water garden consultant and contributes regularly to Pond Trade magazine.

Beyer lives near Boone with his partner, Danise Warriner, on 80 acres that include many water features. He maintains approximately 50 honey bee hives between their home and Ames.

*Read the rest of this news release from Iowa State University at:*

<https://www.leopold.iastate.edu/leopold-center-selects-pollinator-champion-jamie-beyer-spencer-award>

## First Year of Beekeeping, So Far So Good

*Submitted by Noelle Dittman, 2024 CIBA Youth Scholar*

My bees are performing very well. I'm grateful for Jamie (Beyer, her mentor) and my parents, who have supported and guided me through the process of raising bees. It's been extremely rewarding so far. I love watching them progress and grow stronger each time I check them.

Jamie was kind enough to provide me with a swarm he caught a little later in the season. We had some trouble with wacky comb during the start of the swarm hive. The bees started building vertical comb and then a gap, in a pattern, on two of the inner frames. However, I noticed it before it became too troublesome. We ended up scraping the comb. After that, the bees got the idea, and we had no further problems.

My original hive is doing incredibly well. I just put the fourth super on to prevent them from swarming. I was surprised that they've thrived so well and I'm very grateful. Thanks again to Jamie for his mentorship and lending me his equipment. And, of course, I thank CIBA for choosing me for this scholarship.



## CIBA Scholar Builds Her Own Business

*Submitted by Morgan Spaulding, 2023 CIBA Youth Scholar*

Hello, my name is Morgan Spaulding. I was the Susan Kelly Memorial Youth Scholar in 2023. I received a single hive and equipment from CIBA to set up my first year keeping bees. I also had Mike and Julie Sanders, who are excellent beekeepers, as my mentors. I appreciated their patience and willingness to let me learn at my pace. After they taught me the basics, they often asked me what I thought I should do when a problem arose. This is, in my opinion, a great teaching technique.

When I tell people I'm a beekeeper the first thing I get is praise, mostly for being outside working and not on my electronic devices. Being surrounded by a family of entrepreneurs I have a lot of people to fall back on to ask for advice.

The next is being 15 years old, an entrepreneur and independent beekeeper. At first, I wanted to name my business Honeyholic, but I soon discovered that domain already had been taken. I brainstormed with a friend and decided to name my business Imagine Raw Honey, which has become a point of unmatched pride. Being a business owner has allowed me to improve my communication and speaking skills. I'll never forget the reaction I got when I gave honey to a family friend – she danced with joy. The ability to share this creation and see the joy it brings is truly valuable.

One of my favorite things is being asked about bees. It's so satisfying when I can share my knowledge of bees. It also challenges my memory and how well I understand what I'm talking about.

Last year I had nothing but good news and success to share. I'm actually happy to report that this year isn't as easy as last year. It's been difficult and I've had to make choices, some good and some bad. As an example: I added two hives this year, one of which was a walk-away split. That process has humbled me, taught me patience and how I cannot force bees to work how I want, when I want, or where I want. That alone has given me a wealth of experience.

My dad tells me all the time that "you often learn more from mistakes and failure than you do success." This year has proved him absolutely right. I've made several mistakes this year, all of which made me wiser. The key is to learn from your mistakes so that you don't repeat them.

Whenever I meet beekeepers my age, and they tell me they've had a challenging year or made mistakes, I tell them it's a good thing. It may not be ideal but it needs to happen. If all things were smooth sailing, there would be no fun – and no challenge -- in our trade.





## Field Day Message: Get After Those Mites!

If you missed the July 20 CIBA field day, you missed important info on a topic that's key to honey bee survival: how to battle varroa mites.

Several demonstrations at the field day focused on varroa mites, and for good reason. Varroa mites are one of the most destructive pests of honey bees. If they don't kill adult bees outright, they feed on bee larvae and pupae in brood cells, resulting in deformation of the wings and bodies of bees when they develop and vectoring viruses in those new bees.

If you don't think you have varroa mites, just wait. In time and without treatment, most hives will battle mites. And without further treatment, the mites usually win.

ISU Extension bee specialist **Randall Cass** showed how to check for varroa mites. You can watch videos of several different methods to check for mites on the ISU Bee program web page at: <https://bees.cals.iastate.edu/>

Two other CIBA members shared how they monitor and manage mites in their hives. **Adam Ebert** demonstrated the Swedish sponge method to help control mites during June and July as a secondary treatment before he puts on a primary chemical treatment. **Jamie Beyer** demonstrated another often-cited method, oxalic acid vaporization. Both the sponge and vaporization methods use oxalic acid, but the sponge method has not yet received federal approval for mite treatment.

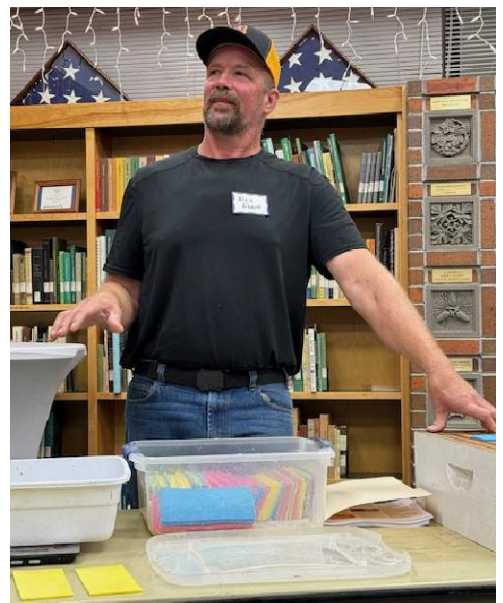
Because mite treatment is such an important issue, you'll find several items in this newsletter about varroa, including:

- Article about Beyer's presentation on oxalic acid vaporization, page 9
- Handout from Ebert's demonstration, Oxalic Acid Sponges, pages 10-11
- Brochure, Integrated Pest Management for Varroa Mites, pages 12-13
- List of Iowa-approved products for control of varroa in honey bees compiled by **Linn Wilbur**, page 14

Other field day sessions included:

- Honey Extraction by **Mike Sanders**
- Honey Moisture Determination by Iowa Apiarist **Andy Joseph**
- Cooking with Honey by **CaroleAnne Vannoy, Anna Carr and Keri Kenoyer**
- Pollinator Efforts in the Iowa DOT's Integrated Roadside Vegetation program by **Tara Van Waus**
- Relationship of Perennials to Pollinators by **David McKinney**, curator at the Iowa Arboretum.

Nearly 100 people registered to attend CIBA's annual field day at the Iowa Arboretum. Rainy weather didn't dampen the enthusiasm or the hands-on demonstrations during this full-day event. For the second year this event was offered at no charge, including a delicious lunch served by the food committee: **Keri Kenoyer** (chair), **Cindy Spiker, Jan Yagge, Chris Crandall and Ann Wilbur**.





## First-hand Look at Oxalic Acid Vaporization

By *BEELINE* Editor Laura Miller

July field day participants had a great opportunity to learn about oxalic acid vaporization to control varroa mites in bee colonies. Thanks to CIBA President Jamie Beyer, who brought his equipment and provided a step-by-step look at the process (he did not heat the oxalic acid because the gas that forms is very dangerous).

Oxalic acid (OA) is a dicarboxylic acid with a chemical formula  $C_2H_2O_4$ . Also called wood bleach, this naturally occurring organic compound is found in many fruits such as avocados and raspberries, and vegetables including spinach and kale, also nuts and whole grains.

However, OA is very caustic, hence it is used in some household cleaners. In its crystal or powder form, OA can cause skin irritation and burns. OA that is heated forms a dangerous gas that can damage the lungs and respiratory system (users **MUST** wear protective gear during this treatment).

When used in bee colonies, OA kills mites when they contact the OA gas, which is not harmful to bees. This method works best in broodless hives when mites are on the adult bees and not hidden in brood cells.

Most programs recommend treating hives once a week for several weeks to cover the worker brood cycle and kill mites as they emerge from capped cells. Jamie does six treatments, each separated by five days, beginning in September with a final “cleanup” treatment at the end of the year. Outside air temperatures must be above 37 degrees F (a better range is in the mid-40s to low-50s F).

The method that Jamie uses is based on investigations done by California beekeeper Randy Oliver (for specifics, go to Oliver’s website, [www.scientificbeekeeping.com](http://www.scientificbeekeeping.com)). A wand with a small cup (called a crucible) on one end holds the oxalic acid powder, which is placed in the hive and heated by a portable battery to create the OA gas. The hive must be totally closed and the vapor allowed to penetrate the colony for about 10 minutes.

According to the research, Jamie said OA vaporization is 95 percent effective in controlling mites when used correctly and at the right time. It also is believed that mites will not develop a resistance to this treatment like they have with other chemicals on the market. This method is approved for use when honey supers are not on the hive.



## Researchers Close to Mapping Tiny Bee Genome

Scientists at the USDA’s Agricultural Research Service and university research partners developed a near chromosome-level genome for the Mojave poppy bee, a specialist pollinator of conservation concern, according to a recent journal paper.

Putting together the Mojave poppy bee genome is part of the Beenome100 project, a first-of-its-kind effort to create a library of high-quality, highly detailed genome maps of 100 or more diverse bee species found in the United States. The expectation is that these genomes will help researchers answer the big questions about bees, such as what genetic differences make a bee species more vulnerable to climate change or whether a bee species is likely to be more susceptible to a pesticide.

Source: *USDA ARS News Service*: <https://content.govdelivery.com/accounts/USDAARS/bulletins/38f8ca2>

## Oxalic Acid Sponges

### OA Sponges

Every new year brings a beekeeper a healthy dose of anticipation and hope for healthy bees and a good honey crop. Unfortunately, each new year confirms the continued persistence of the varroa mite as well.

Beekeepers are always on the look out for new techniques and treatments in order to keep varroa in their hives in check. One promising new tool appears to be Oxalic Acid sponges.

The sponges hold a solution of oxalic acid and glycerin and are used as an extended release treatment. Oxalic acid is found naturally in honey and many plants and vegetables. This natural ingredient makes oxalic acid sponges a suitable mite control during the summer honey production when many other mite treatments are not allowed.



Aldea Swedish Dishcloths used in making the oxalic acid sponges.

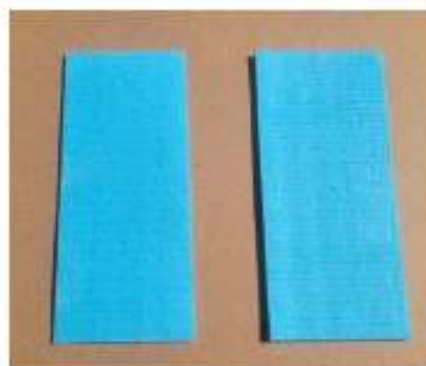
Oxalic acid sponges offer two distinct advantages. The first is a form of mite control during a time that would otherwise allow the mite load to build without restriction. Second, it is a good practice to rotate mite treatments. Relying on one active ingredient for mite treatment runs the risk of breeding or selecting mites that can resist that treatment over time. Oxalic acid can be that alternate active ingredient.



### Making the sponges

To make extended release oxalic acid sponges, you will need the following equipment and supplies:

- ◆ Oxalic acid
- ◆ Vegetable glycerin
- ◆ Swedish dish cloths (sponges)
- ◆ Waterproof gloves
- ◆ Safety goggles
- ◆ Container to hold the sponges
- ◆ Canning pot with enamel coat
- ◆ Nonmetal stirrer
- ◆ Thermometer
- ◆ Hot plate



A dose of 2 half sponges are applied per hive between the brood boxes.

In this example we will be making 10 half sponges. The ratio of oxalic acid to glycerin is 1:1 by **weight**.

Each sponge is half of a full Swedish dish cloth. Each half sponge will hold 50g of the oxalic acid / glycerin mixture.

### Step 1 Sponges

Take 5 full Swedish dishcloths and cut them in half. Place them on edge in a suitable container. The oxalic solution will be poured over the sponges. Other methods such as dipping or submerging the sponges may be practical depending on the number of sponges being prepared.

### Step 2 Glycerin

Weigh the glycerin into the canning pot. For 10 half sponges, 10 x 50g of solution is needed, or 500g of solution. This means half, 250g of vegetable glycerin is measured into the pot. Place the pot onto the hotplate and warm to 90-95F under medium to high heat.



# Oxalic Acid Sponges

## Step 3 Oxalic Acid

Weigh 250g of oxalic acid powder. Add to the glycerin before it reaches 100F and mix. This is a super saturated solution that is going to be very thick at first. Continue to stir occasionally as the solution heats.

As the solution heats to 140F, more significant clearing will be evident. As soon as the solution is clear, remove from heat. Do not heat more than necessary to make the oxalic acid go into a clear solution. Do not exceed 160F when making this solution.

Carefully pour the solution over the sponges using caution to avoid splattering. Wearing gloves, periodically flip the sponges over to allow the solution to soak back into the sponges. As the solution cools, more will be locked into the sponges. Allow the sponges to completely cool before use.



A few notes on production. The choice of a portable hotplate was made because the oxalic acid solution can get a little stinky and may not be welcome on the kitchen stove.

Also, while the oxalic acid solution is generally safe to handle, gloves



and safety goggles are recommended. The solution is a skin irritant and also has the potential to splatter some while pouring.

## Application

Oxalic acid sponges are applied between the two brood boxes of a typical beehive. A dose of 2 half sponges are spaced evenly along the top bars of the bottom box.

The typical effectiveness last from 2-2 1/2 months. This is a softer mite control and should not be viewed as a primary treatment, but another tool to keep mites from building unencumbered during the summer. The sponges will be most effective in maintaining lower mite levels in colonies with lower initial mite loads.

That is to say, there is no replacement for doing mite counts and knowing what the mite load is before applying the oxalic acid sponges.

This puts an emphasis on Spring mite load monitoring, and treating

with other mite treatments if necessary before utilizing the sponges.

Oxalic acid sponges can be a useful tool in the never ending battle against the varroa mite. There is still no silver bullet to eradicate varroa mites, however, oxalic acid sponges can be a good tool to maintain lower mite loads for healthier bees.

## Additional Information

This information on oxalic acid sponges came from reading the work of Randy Oliver on his website [ScientificBeekeeping.com](http://ScientificBeekeeping.com). His website also indicates that at this time there is no EPA approved/registered oxalic acid sponge product available.

The website is full of useful information about experiments and trials that have been run over the years to try and bring practical insights to better beekeeping for everyone.



## Integrated Pest Management for Varroa Mites

**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](mailto: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

Version 4, May 2020. Publication produced by the Massachusetts Department of Agricultural Resources (MDAR), University of Massachusetts, and Maine Department of Agriculture, Conservation, and Forestry (MDACF), funded by the Northeastern IPM Center through grant #2014-70006-22484 from the National Institute of Food and Agriculture, Crop Protection and Pest Management, Regional Coordination Program, and reprinted with permission from the Northeastern IPM Center.

Drawings by Hannah Whitehead. Brood photo by Kim Skym. Other images from USDA Office of Communication in Research Science <https://www.usda.gov/media/blog/2014/05/13/helping-honey-bees-healthy>



## 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

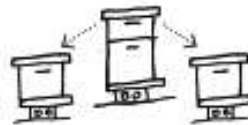
#### Re-Queen

Select mite resistant stock when available



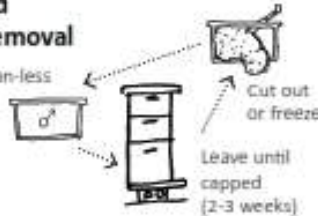
#### Brood Interruption

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: <a href="http://www.kellysolutions.com/MA/pesticideindex.htm">http://www.kellysolutions.com/MA/pesticideindex.htm</a>	Personal Protective Equipment
Synthetic	<b>Apivar®</b> 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
	<b>ApiGuard®</b> 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	<b>Api Life Var®</b> 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 	
	<b>MAQS®, Formic Pro®</b> 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	<b>Oxalic Acid, Api-Bioxal®</b> 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 (liquid) Dribble (liquid) Fumigation (vapor)	
	<b>HopGuard II/III®</b> potassium salt of hops beta acids [contact]	Pop. Increase Pop. Peak Pop. Decrease [50-85° F]	YES	1 month	CARDBOARD STRIP 	



## Iowa-Approved Products for Treatment of Varroa Mites

### Iowa approved products for control of varroa in honey bees

Product Name	EPA Reg. No.	Restricted use	Active Ingredient	Method of Application
AMIFLEX <sup>a</sup>	87243-4	Yes	amitraz (formamidine pesticide)	gel placed by dosing gun/syringe applicator on top of frames
API LIFE VAR	73291-1	No	thymol/menthol/oil of eucolptus (aromatic monoterpenoid)	tablet(s) placed in hive
API-BIOXAL	73291-2	No	oxalic acid (dicarboxylic acid)	concentrate for dilution for drenching
APIGUARD <sup>b</sup>	79671-1	No	thymol (aromatic monoterpenoid)	slurry placed in hive
APISTAN VARROA CONTROL STRIPS FOR BEES	2724-406-79671	No	fluvalinate (organochlorine insecticide)	strip hung in hive
APIVAR	87243-1	No	amitraz (formamidine pesticide)	strip placed in hive
CHECKMITE+ BEE HIVE PEST CONTROL STRIP	11556-138	No	coumaphos (organophosphate insecticide)	strip hung in hive
FORMIC PRO	75710-3	No	formic acid (carboxylic acid)	packet on top bar
HOPGUARD 3	83623-2	No	hop beta acids resin (lupulone, colupulone & adlupulone-- biochemical pesticide)	strip hung in hive
HOPGUARD II	83623-2	No	hop beta acids resin	strip hung in hive
HOPGUARD III	83623-2	No	hop beta acids resin	strip hung in hive
MITE-AWAY QUICK STRIPS	75710-2	No	formic acid (carboxylic acid)	packet on top bar
VARROXSAN	94413-3	No	oxalic acid (dicarboxylic acid)	strip hung in hive

<sup>a</sup> use only by certified applicators or persons under their direct supervision, and only for use covered by the applicator's certification

<sup>b</sup> also has claim for treatment of tracheal mites and chalkbrood

source of IA product approval information: Iowa Department of Agriculture and Land Stewardship (IDALS) as of 7/7/2024

source of active ingredient information: US Environmental Protection Agency (EPA):

source of characterization of ingredient: Google search on class of each compound

source of method application: Product insert registered with the EPA

7/16/2024



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