October 2024

THE BEE HERDER

Published by the Medina County Beekeepers Association

MCBA Monthly Meeting
October 21st, 2024

Medina County Library
210 S. Broadway, Medina OH 44256
Rooms A and B

Questions & Answers 6:30-7:00
General Meeting 7:00 PM - 8:00 PM

Topic: Questions and Answers
Speaker: Panel Discussion

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Brad Deering
https://agri.ohio.gov/divisions/plant-health/apiary-program

October Speaker(s)

The October meeting will feature a panel of your fellow beekeepers. Many of you have questions that it is hard to find time at a meeting to ask. This is your chance!

We will be doing an Ask a Beekeeper panel. We will have beekeepers on different levels and interests.

Remember, If you would like to submit a question, use the link, Ask a beekeeper. This is a great opportunity to engage with your fellow club members and see how other people are caring for their bees!

Upcoming Events

Club Officer Nominations / Elections

Election of officers and one director will be held at the November meeting. All officers and one director will be up for nomination at the October meeting on Oct 21!!! If you want to nominate yourself or another member for any of the positions, you need to attend the meeting or contact Peggy before the meeting.

October – OSBA Fall Conference 10/25-26

December – Christmas Party

MCBA November Meeting

Monday, November 18th, 2024

Topic – Assembling frames for the club yard. Come and learn how to build frames and equipment common in beekeeping.

Guest Speaker – Panel of club members

Q & A 6:30 to 7:00 pm
Monday, 7:00 to 8:30 pm

Location: Medina County Library
210 S. Broadway, Medina OH 44256

Rooms A and B

MCBA Mission Statement

To promote beekeeping, broaden the knowledge and understanding of honeybees (and all pollinators) and the challenges they face in today's world, and educate by teaching best practices and techniques in apiary management.

President's Corner

By Peggy Garnes

It's beginning to look a lot like fall with the leaves changing and the cooler nights. Mouse guards and 2-1 syrup should be on for winter survival insurance.

The Honeybee Festival at John's Country Nursery in Middlefield, Ohio, was a wonderful day spent with the public sharing bee information, rolling candles, and managing a lot of honey sticks! Thank you for the invitation!

OSU Ag Day was a success with several members volunteering to share beekeeping career information with 7th graders from the Wadsworth Schools. Thank you to Shari Baker and Steve Moysan for writing the notes used in the presentations and along with Neal Klabunde gave engaging presentations to the children. A good way to spend time with young people!

Elections are coming up and if you are interested in volunteering at a board level, please attend the October meeting where information on the positions available will be shared. You can also find the information on our website.

Looking forward to the next two months winterizing the hives and trying to estimate how much resources to supply for the expected mild winter months.

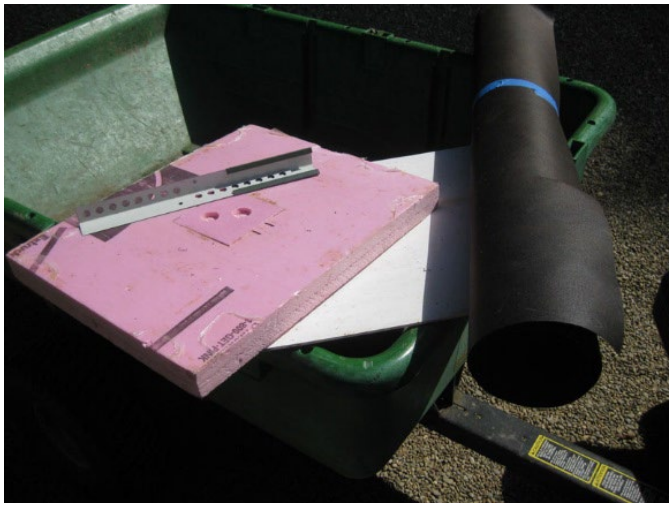
Ten Minutes with the Bees – What are the bees doing in October?

By Paul Kosmos

Your bees will continue to get their hive ready for winter. Most of the things you have heard about the last month or so still apply. Make sure they have enough food to get through the winter. The temps are looking fairly good for October so they should still take SS if light. But they may be slow to start their days due to some chilly nights.

Have you treated for Varroa recently? If so, they should not need another treatment but many beekeepers time their treatments so they can treat one last time in late November. As you know, there is very little capped brood by then so treatments should be very effective. Watch for a day in the 50's if possible.

That brings us to preparing your hives for winter weather. Adding some insulation on top of your hive is always a good idea. It prevents moisture from hitting the inner cover, condensing on the cold surface, and dripping on

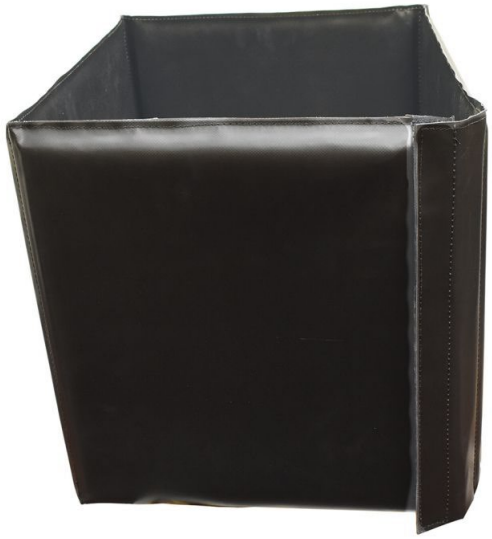


Mouse Guard, Insulation and Wrap

the bees. Many beekeepers tilt their hives a half inch or so towards the front so that if they do get moisture it will run towards the front and not drip on the bees.

It is time to add a mouse guard. They are inexpensive to buy. Hardware mesh (1/2" size) works well. Just cut a strip, fold it over and push it into the hive opening.

Many beekeepers also wrap their hives. Roofing paper works great and is cheap. It's also black and may help on a sunny day to hold some heat. There are also a number of "Easy On" type wraps available that are easy to put on. You have heard numerous speakers talk about the Wind Chill Factor and your bees.



One Type of Easy On Wrap

One last thing to consider is the strength of your hives going into winter. Some beekeepers make hard decisions if they find any of their hives extremely weak at this time of the year. They will often combine a weak hive with a stronger hive or combine two weak hives. It's called taking your losses before the winter. Better to cut your losses.

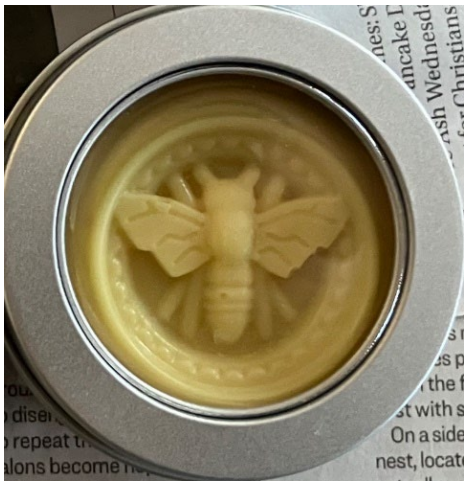
Should you think that one of your hives is "weak" talk to some other beekeepers for advice. It can be hard to tell for newer beekeepers. Why? Different strains of bees prepare differently for winter. Some cut way back on brood as soon as the honey flow weakens. Many times, we get questions about "Have I lost my Queen, etc.". Russian bees, for example, are known for very early shut down.

Lotion Bars: So much simpler than candles!

By Kym Lucas

Once upon a time, I thought I'd make candles from our hives' beeswax, but I bought the wrong size wick so my brief foray into the art produced a single pillar that didn't burn properly.

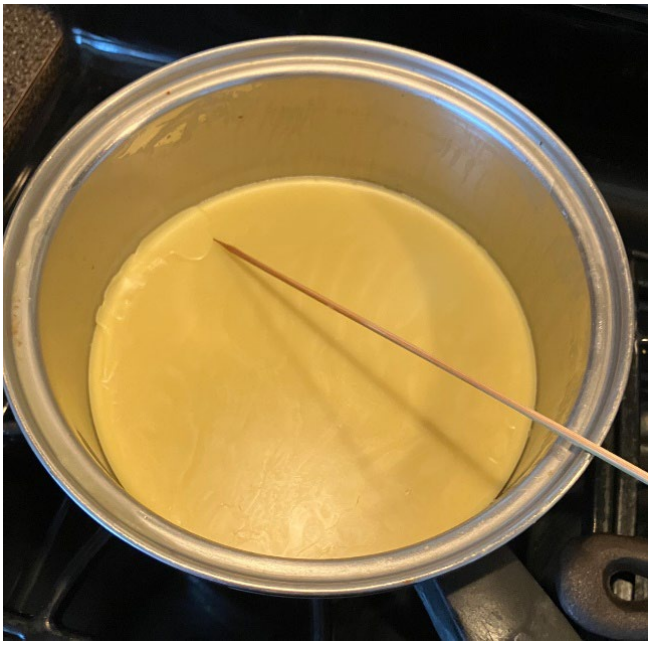
Then, when I began rendering the wax from our seven hives into clean wax, I quickly realized they don't produce enough to make more than the occasional odd (in more ways than one) candle.



Fortunately, I stumbled across this recipe for lotion bars on the Carolina Honeybees website. Since I'm a fan of these solid bars of skin softener, I thought I'd give it a go. The end results in the pictures looked attractive, and the recipe seemed simple enough.

I called a friend, who bought the molds and the cocoa butter (I have good friends), and we each bought tins. She also bought a scale so we could get the measurements right, though I ended up investing in one also.

The actual process couldn't have been easier. We melted the beeswax, and then we added the cocoa butter. After the cocoa butter melted, we stirred in the coconut oil.



Neither of us had the Vitamin E oil called for in the recipe, but I had some jojoba, so we substituted that. It's only a few drops anyway.

Also, since my friend and I agreed the mixture smelled good enough to eat, we didn't add any essential oil.

All that was left was to pour the mixture into the molds and let it solidify. The next morning, I popped the lotion bars out of the molds and put them into their tins. Easy-peasy! Or should that be easy-beesy?

Notes

1. The recipe links to the ingredients on Amazon, so the writer probably gets a cut when you click the link, but of course, you don't have to buy them there if you don't want.
2. The blog writer updated the recipe, halving it since we made ours. It now calls for "one piece" silicone mold, but the link goes to two of them for $9.99, and the link to the tins is for twelve, so maybe you should just go ahead and double the recipe now on the site … or not — it's your decision.
3. When we followed the recipe (the original doubled one), we had a fair amount left over which I re-melted to make more bars.
4. Be sure to do a good job cleaning the molds between batches or the bee design on the finished bars won't be clear.

Commercial Beekeeping

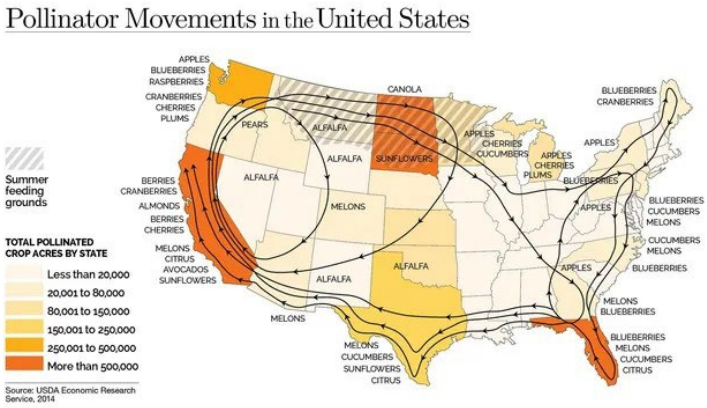
By Shari Baker and Steve Moysan

Commercial beekeeping is basically farming with bees, also known as Apiculture. It is the raising and use of bees for pollination and honey production on a large scale. Bees are livestock, just like cows and chickens, and Bees require care and feeding like other livestock. Beekeepers are crucial to agriculture and support other farmers' needs through pollination services. Commercial beekeeping is a business, rather than a hobby It requires commitment and financial planning, like any business. Need to build up a network of customers for pollination services, or honey sales or sales of queens and bee packages. An advantage of commercial beekeeping is the ability to work "in the field" rather than in an office. Commercial beekeeping work is done primarily outside. Inspecting and caring for each of the colonies, transporting and placing them for pollination, and removing and extracting honey from the hives.

There are three primary areas of Commercial beekeeping: Pollination services, honey production, and queen and package bee production.

Pollination

Migratory beekeeping involves moving hives to crops in need of pollination. Once a crop has finished blooming, the hives are packed up and go on to the next crop in bloom. Migratory beekeepers typically keep 4 hives together on a wooden pallet and use forklifts to load these onto flatbed trucks for transport. Farmers with trees or plants in need of pollination can increase their crop yields dramatically by using honeybees for pollination. Since the "bloom" normally lasts only a few weeks, it is typically more economical for the farmers to contract with a beekeeper to "rent" their bees for the pollination. Many commercial beekeepers make at least half of their annual income from renting their hives to farmers to pollinate crops. California produces about 80% of the world's Almonds. Almonds rely almost entirely on pollination by honeybees. With ~ 1 million acres of almond trees, they need a lot of bees. The Almond trees bloom at the same time, so for a short while in February each year beekeepers ship about 2 million hives to California for the Almond pollination. This is the largest market for pollination services in the world. Pollination contracts between almond growers and beekeepers is about $360 million. But almonds are not the only plants that benefit from honeybee pollination. Beekeepers also rent out hives for the other crops and can move them to multiple locations throughout the year. Such as apple and cherry orchards in Washington State, then to alfalfa, sunflowers, and clover in North and South Dakota, where the bees produce the bulk of their honey for the year. Then other plants across the country.



Honey production

North Dakota is the largest producer of US honey. In 2023, North Dakota produced 38.3 million pounds of honey, over 1/4th of the entire US honey production for the year. (Ohio ranks 20th, producing 1.3 million pounds.) Once the bees have collected the nectar from the various plants and stored it as honey in their wax combs, the beekeeper then removes the hive boxes with the frames of honeycomb from the hives and takes them to a "honey house" where each frame is un-capped, and the honey is extracted by spinning the frames in large centrifugal extractors. After this the honey is filtered and placed in 55-gallon drums for storage and transport. In 2021, the average honey yield per colony was about 47 pounds, and averaged $2.54 per pound wholesale. Commercial beekeepers typically sell their honey to large honey packing companies that then bottle and distribute the honey throughout the country.

Packages/Queen production

Another aspect of commercial beekeeping is producing bees for other beekeepers. Just like other farmers raise chickens and cattle. A beekeeper can raise bees. Some beekeepers specialize in producing queen bees, and others produce "packages" of bees. Over a million queens are produced each year to support beekeeping. A queen can sell for around $40-70 each. These queens are then distributed across the entire country to the various beekeepers to replace old or missing queens in their colonies. "Packages" of bees are also produced to support beekeepers by allowing them to start new colonies of bees. A package of bees contains about 10,000 bees and a queen. These are placed into beehives and will grow into full sized productive colonies.

Research in Beekeeping

Research is another significant career opportunity in beekeeping. We've discussed how important the commercial farming of bees is to our food supply. Albert Einstein is sometimes quoted as saying, "If the bee disappears from the surface of the earth, man would follow in no more than four to five years." It's doubtful that Einstein actually said that. However, there is a kernel of truth and the loss of bees would significantly impact our food supply. The goal of research is to stay ahead of and prevent issues in commercial beekeeping that eventually become issues that affect the hobby beekeepers and even wild pollinators.

Research work is most often done in a laboratory, although there is some fieldwork.

There are three main areas of research that we will discuss 1) breeding bees, 2) research regarding pests such as the Varroa Destructor mites and the viruses they carry, and 3) studying comb and colony diseases.

1) Breeding bees - scientists are studying bee genetics to develop stronger, smarter bees that are better able to survive winter and that are hardier and more resistant to the pests and diseases bees encounter. Bees can be artificially inseminated like other livestock. And researchers follow the genetics of specific queens. Reproducing queens that are proven to be more resistant to mites and viruses, hardier to survive harsh winters, docile, and more prolific.
2) Varroa Destructor mites and viruses - one of the primary threats to honey bees is the Varroa Destructor mite. Research into varroa mites is helping beekeepers to better understand the mites and how to deal with them. Varroa mites

have been a significant threat to our bees for nearly 40 years. And researchers believed they fed on the hemolymph or blood of the bees. Just a few short years ago, in 2019, researcher Dr. Sammy Ramsey determined that the parasitic varroa mites feed on the bees' "fat bodies". The fat body in bees is an organ similar to the liver in humans. When the mites feed on the bees they damage the fat bodies and also transmit viruses and diseases to the bees. To date, scientists have identified nearly 30 different viruses transmitted by varroa mites. More research is needed to find better ways to remove the mites from the bees and treat the viruses.

3) Studying comb and colony diseases - numerous pests and diseases affect the honeycomb and the colony as a whole. Wax moths and Small Hive Beetles invade the hives and feed on the wax, honey, stored pollen, and even the bees' eggs and larvae. Researchers are working on methods to prevent these pests from entering the hives and removing them when they do gain entry. Maybe one of you will invent a new hive entrance that blocks these pests from entering the hives.

Scientists are also studying the build-up of pesticides, fungi, molds, and bacteria in the comb. They are studying the effects these foreign substances have on the bees and honey; as well as, how and where the bees are encountering these substances outside the hive and how they are bringing them back to the hive. Are they bringing these things back to the hive in the pollen and nectar or tracking it in on their little feet.

There are also several bacterial infections that can infect honeybee colonies, such as American Foul Brood and European Foul Brood. AFB is considered the most destructive of the bacterial brood diseases. It's spread by spores that can remain dormant in colonies or equipment for DECADES. AFB is fatal to colonies and there's currently no cure. EFB is less virulent than AFB and colonies can sometimes recover from it. Researchers have determined that EFB can be controlled by feeding to simulate a nectar flow, replacing the queen, or treating it with antibiotics. Researchers are working on ways to easily identify, prevent, and treat these diseases.

Most research is done through college universities such as Ohio State University, there is an excellent entomology program right here in Wooster, Penn State University, the University of Oregon, and the University of Minnesota. Remember these universities when you are applying to colleges in a few years.

Winter hive prep basics

By Clint Allen

As winter approaches, beekeepers must take extra steps to ensure their colonies are well-prepared for the cold months ahead. Preparing the hive properly can make a significant difference in helping bees survive and thrive until spring. Here are some essential tips to get your colonies ready for winter:

First, make sure the bees have enough honey stored to last through winter, usually 60-80 pounds, and place these stores near the cluster so the bees can access them easily. Reduce the hive entrance with an entrance reducer to keep warmth in and help the colony defend against pests like mice. Insulating the hive will also help to retain heat but be careful to allow enough ventilation to prevent moisture buildup, which can be deadly to bees in winter.

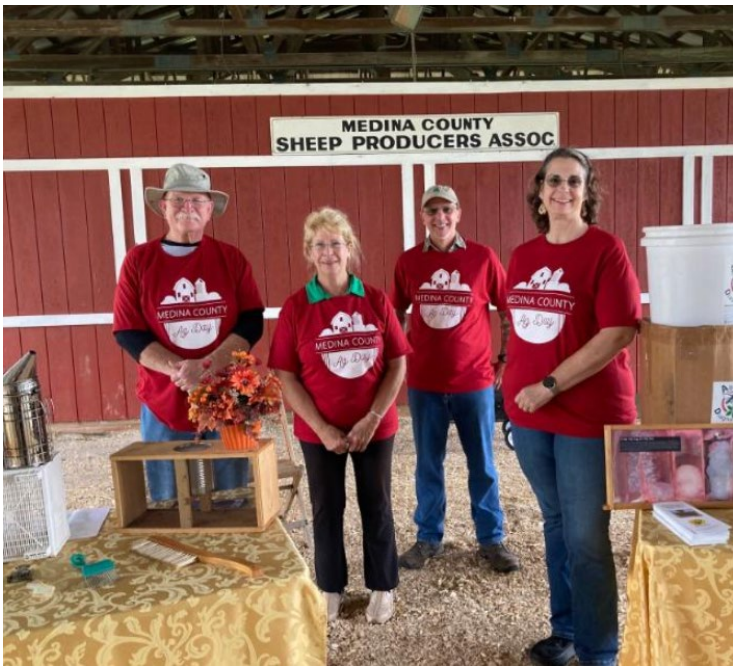
It's important to check for a healthy queen in early fall, as a strong queen will produce enough young bees to carry the colony through winter. Feeding the bees 2:1 sugar syrup in early fall, if they are short on honey, and providing a pollen substitute will help them build up their reserves. Reducing the space inside the hive by removing empty boxes will also help concentrate the bees' efforts to keep warm.

Installing a mouse guard will protect the hive from mice seeking warmth, and ensuring proper ventilation will help moisture escape without losing heat. Be sure to check and treat for Varroa mites and other diseases before winter begins, as healthy bees are more likely to survive. Placing hives near windbreaks, such as trees or barriers, will also help reduce the impact of cold winds.

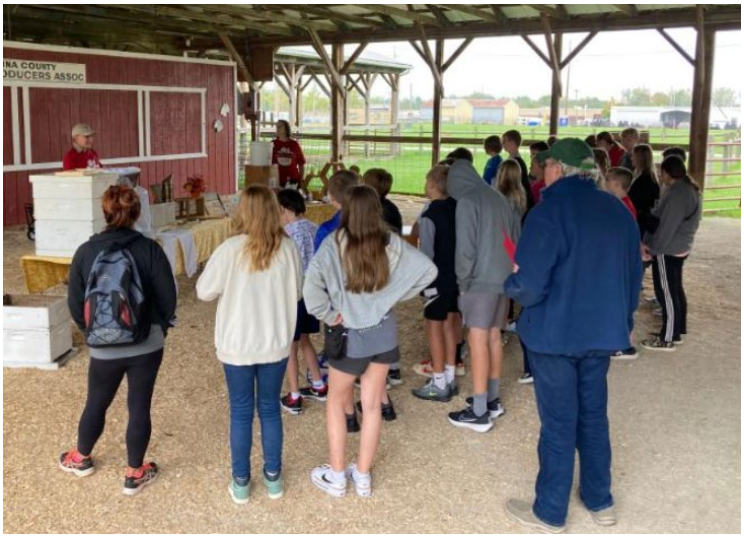
Adding a moisture-absorbing board above the inner cover will prevent condensation from dripping back onto the bees, while providing winter patties or fondant as emergency food can help if the bees run low on stores. Finally, try to avoid opening the hive unnecessarily in cold weather, as this lets valuable heat escape and disrupts the bees' winter preparations.

By following these tips, you can help ensure your bees have the best chance of surviving the cold months and emerging healthy and strong in spring.

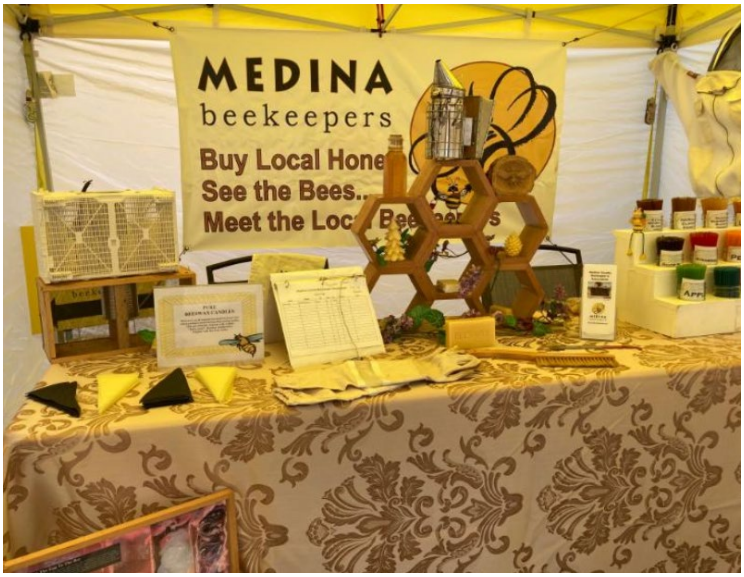
MCBA Volunteers



MCBC Club Members at AG Day



MCBA Presenting at AG DAY



John's Country Nursery Honey Bee Festival

Big Tree Competition

A MCBA member, Mark Frederic participated in the Medina County Soil and Water's Big Tree Contest! Mark was identified as having the 8th largest tree in the area! His tree has a circumference of 88" and a height of 54'. If you see Mark at a club meeting, make sure to tell him congrats on his placement in this year's competition.

Making your first batch of mead

By Clint Allen

I have been an avid homebrewing for nearly 20 years and have used honey as an adjunct in many of my beers. It wasn't until this year, when I removed 54.5 lbs. of honey from a cut out that I decided to try my hand at making mead. With my current operation, I can make as many as 4 5-gallon batches at a time but if you are interested in trying your hand at making mead you can start small! Making your first batch of mead is a fun and it doesn't require a lot of experience or expensive equipment. Mead is essentially fermented honey, water, and yeast, and beginners can follow these simple steps to get started:

Ingredients:

- 3 pounds of honey (raw, local honey works best)
- 1 gallon of filtered or spring water
- 1 packet of wine yeast (Lalvin D-47 or EC-1118 are good beginner options)
- Optional: Fruits, spices, or herbs for flavor (e.g., berries, cinnamon, ginger)

Equipment:

- 1-gallon glass carboy or fermentation jug
- Airlock and bung (to fit the carboy)
- Siphon tube
- Sanitizer (like Star San) for cleaning equipment
- A large SS pot
- Funnel

Step-by-Step Instructions:

1. Sanitize Equipment: Thoroughly clean and sanitize all your equipment, including the carboy, funnel, and siphon. Proper sanitation is critical to prevent unwanted bacteria from spoiling your mead.
2. Mix the Ingredients: In a large pot, heat about half a gallon of water until it's warm (not boiling, around 100-110°F). Stir in the honey until it's completely dissolved. Heating helps mix the honey with the water but avoid overheating as high temperatures can destroy some of the honey's delicate flavors. This mixture is commonly referred to as a "must".
3. Cool and Combine: Pour the honey-water mixture into your sanitized carboy using a funnel. Add enough cool water to fill the carboy up to about 3-4 inches below the neck. This space will be necessary for fermentation, as the mixture may bubble up.
4. Add Yeast: Activate the wine yeast according to the instructions on the packet (usually involves mixing it with warm water and letting it sit for a few minutes). Once ready, pour the yeast into the carboy. You can also add optional fruits, spices, or herbs at this stage to flavor your mead.
5. Mix and Aerate: Seal the carboy with a clean hand or a stopper and give it a good shake for several minutes. This aerates the mixture and provides oxygen to the yeast, which will help kick-start fermentation.
6. Attach the Airlock: Attach the bung and airlock to the top of the carboy. Fill the airlock with water (or sanitizer solution) as directed. The airlock allows gases to escape during fermentation without letting contaminants in.
7. Ferment: Place the carboy in a dark, cool place (ideally around 65-75°F) and let it sit undisturbed. Within a day or two, you should see bubbling in the airlock, which means fermentation has started. This process usually takes 3-6 weeks, depending on the yeast and temperature. Once the bubbling slows to a stop (often after 4-6 weeks), the fermentation is complete.
8. Racking and Aging: After fermentation is complete, use a siphon tube to transfer (rack) the mead into another clean container, leaving

behind the sediment (called "lees") at the bottom. This helps clarify the mead. You can then age the mead for a few months in the carboy to allow the flavors to mellow and develop.

9. Bottling: When you're satisfied with the flavor and clarity, siphon the mead into sanitized bottles, seal them, and store them in a cool, dark place. Mead benefits greatly from aging and waiting at least 3-6 months (or longer) will lead to a smoother drink.

Tips for Success:

- Patience is key; mead improves over time. The longer you let it age, the better it will taste.
- If adding fruits or spices, remember that their flavors will change over time—taste periodically to ensure the flavor doesn't overpower the mead.
- Avoid using tap water that contains chlorine, as it can affect the yeast and the quality of the mead.
- You can stabilize/preserve your mead post fermentation by adding Campden tablets (Sodium Metabisulphite)
- Add yeast energizer to the must before the addition of yeast. This adds additional nutrients to the solution to aid in yeast health.

Following these steps, you'll have your first homemade mead—a sweet, natural beverage that's perfect for sharing or savoring on a special occasion. Enjoy the process and feel free to experiment with different flavors once you're comfortable! Lastly, we are very lucky to have a homebrew shop here, in Medina County. All the equipment and supplies can be purchased locally! The employees there are also very helpful and can answer most, if not all your questions.

MCBA Meeting Minutes

Club Member Meeting

Meeting Date: September 16th, 2024

Sharon Carpenter, MCBA Secretary

Board Meeting 6:08pm -6:30pm

MCBA Member Meeting

Called to order 8:20pm

Minutes approved as posted in the newsletter.

Treasurer report given.

Volunteers requested for the Honey Bee Festival – 2 shifts (4 volunteers) Set up on Friday afternoon.

OSU Ag Day has 5 volunteers. Careers in Beekeeping is the target presentations. Set up Thursday afternoon.

Bee Yard Report- Sustained some queen loss after mite treatment, otherwise bee yard doing well.

Elections are in November, Nominations at October meeting and nominations from the floor at the November meeting. Board and one director positions are being sought. Some board members would like to continue.

Old Business:

Suggestions for an MCBA Presentation Tote to be available to members giving presentations on behalf of MCBA. A list of items and cost to be presented to board for approval.

New Business:

Fly Zones – Maps were compiled by club member Steve Clutter, representing Fly Zones in Medina County. No names or addresses were used only located dots representing overlaps in hive locations. Maps were made available to members present for take home.

Please contact Steve or Peggy to be included in this project.

Motion to Adjourn

Meeting adjourned 8:37pm

Club Bee Yard

Sept 22

Hive 1 - Very strong hive. Did not see queen. Saw brood in all stages. Needs another box as soon as possible. Building comb and filling with honey above and below frames, under inner cover, etc.

Hive 2a - added Formic pro. Do not disturb until it is removed, Oct 6.

Hive 3a - Saw queen and brood in all stages. Mite check - 1 mite per ½ cup of bees. Recheck in a few weeks. One wax moth larva and some webbing above inner cover. Bees cannot patrol this area as there is no bee space above the inner cover. No evidence of wax moth or SHB in the hive. Keep an eye on this.

Sept 15

Hive 1: did not check.

Hive 1a: dispersed resources (brood to hive 3 and 3a), found queen and killed queen.

Hive 2: no matted queen, will need to disperse resources to other hives next time in yard.

Hive 2a: consolidated down to 2 deeps, saw 2 mites, needs treated.

Hive 3: added frames of brood from 1a, might need to switch bottom deep with upper deep.

Hive 3a: good laying pattern, added frames of brood, strong hive.

From Around the Web

Northeastern' Bee Society helps rescue honeybee hive in Boston Public Garden

https://news.northeastern.edu/2024/10/01/bee-hive-rescue-boston-public-garden/

Study: Good nutrition boosts honeybee resilience against pesticides, viruses

https://news.illinois.edu/view/6367/992759873

NM company works on a product to treat mite parasitizing honey bees

https://nmpoliticalreport.com/news/nm-company-works-on-a-product-to-treat-mite-parasitizing-honey-bees/

Scientists Create 'Vaccine' To Protect Bees from Pesticides

https://plantbasednews.org/news/science/bee-vaccine-for-pesticides/

Impacted by Hurricane Helene? USDA Is Here to Help
https://www.farmers.gov/blog/impacted-by-hurricane-helene-usda-is-here-help

Ideas & Suggestions

This newsletter is for you, our members. If you have any ideas for content, format, corrections, or anything else, please, don't hesitate to reach out to me, Clint Allen via email.

Did you know that honeybees can sense the electric fields that flowers emit? When bees approach a flower, the slight difference in the electric field helps them distinguish if the flower has been visited recently by another bee.