Dickson Bee Club

Spring 2022 Beginner Beekeeping Class

March 26, 2022

Thank you to our partners and sponsor who made this class possible!

A Bees Closet
6169 Hwy 100 931-996-5074

Zochem
ZnO

Back Alley BBQ
est. 2012
Dickson, Tennessee

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Bee Club

Don’t Forget!

Tennessee Apiary Registration – The State of Tennessee requires all beehives to be registered. This is for your protection in the event of a virus being detected in a neighboring hive. This allows the state Apiarist to warn you and come out to inspect your hives to assure the spread is contained. This also protects you from any legal action taken against you do to stings anyone might receive from/possibly from your hives as long as there is no negligence on your part.

https://www.tn.gov/agriculture/businesses/bees/apiary-registration.html

Field Watch Registration – Field Watch is a wonderful program that helps connect the farmer and the beekeeper work together to help eliminate the issue of poisoning. The farmers, or any other party using field watch is required to notify you that they will be spreading oesticides you’re your location and you can take the proper precautions to protect your bees! If they do not notify you and you have losses, the state may offer compensation, but on a case-by-case basis. Please register at https://beecheck.org/

Tennessee Bee Association – TBA is a statewide organization that represents beekeeping interests with lawmakers, helps clubs with fundraising and community events, sets up educational opportunities and assists with beekeeping research. Register at www.tnbeekeepers.org

Sign up for our Facebook and Instagam!

Website: www.DicksonBeeClub.com

Instagram: dicksontnbeeclub

Facebook:

https://www.facebook.com/threeriversbeeassociation

https://www.facebook.com/groups/249959936260500

Yes, we have 2 Facebook accounts! We keep track of each of them every day. The original page was made as a business page, so a group page was added. Our original business page is where

you will find all of our meeting and event info, and the group page you can share any pictures, victories and questions with other beekeepers.

LIFE CYCLES OF BEES

Queen:

Egg Hatches: 3.5 days

Cell Capped: 10th day (+or- 1 day)

Emerges: 16th day (+or- 1 day)

Ready to mate: 23rd day (+or- 5 days)

Worker:

Egg Hatches: 3.5 days

Cell Capped: 9th day (+or- 1 day)

Emerges: 21st day (+or- 1 day)

Foraging: 42nd day (+or- 7 days)

Drone:

Egg Hatches: 3.5 days

Cell Capped: 10th day (+or- 1 day)

Emerges: 24th day (+or- 1 day)

Ready to mate: 38th day (+or- 5 days)

*Temperature, nutrition and/or cell size can increase or decrease this timeline

Will You Raise Good Bees?

Having a strong, worker laying queen is crucial to the survival of your colony. To make sure that you have an easy time finding your queen during inspections, it is a good idea to mark her or purchase an already marked queen.

To make sure you stay on top of the age of your queens an acronym has been up into place…

Will You Raise Good Bees?

W. Y. R. G. B

Years ending in:

1 or 6 =W, White

2 or 7 = Y, Yellow

3 or 8 = R, Red

4 or 9 = G, Green

5 or 10 = B, Blue

Always mark on the top thorax, making sure not to get any paint in her eyes or on other body parts, especially the wings. Allow paint/marker to dry slightly before putting her back in the colony, otherwise the workers with clean it off.

Drones make great practice bees!

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Kent Williams Feed Recipes

Winter Patties

1 Batch

25lbs sugar
1 Quart Apple Cider Vinegar
3tbs Honey-B-Healthy
3tbs Powdered Citric Acid

½ Batch

12.5lbs sugar
1 Pint Apple Cider Vinegar
4.5tsp Honey-B-Healthy
4.5tsp Powdered Citric Acid

1/4 Batch

6.25lbs sugar
1 Cup Apple Cider Vinegar
2.25tsp Honey-B-Healthy
2.25tsp Powdered Citric Acid

*Mix well and form with un-waxed parchment paper onto cookie sheets

Pollen Patties

1 Batch

2 Cups Pollen
2 Cups Sugar
2Tbsp Veg Oil

*Mix until a “Play-doh” like consistency and form with un-waxed parchment paper onto cookie sheets

Woodenware Suppliers

A Bee's Closet	931-996-5074	6169 Hwy 100, Bon Aqua TN
American Bee Supply	336-497-4310	americanbeesupplyllc.com
Beeline Apiaries & Woodenware	269-496-7001	beelinewoodenware.com
Mann Lake	800-880-7694	mannlakeltd.com
Maple Bend Bee Supply	931-670-6862	7523 Lascassas Pk, Lascassas, TN
Peter Zook	no phone	1617 Stevenson Rd, Franklin KY
Albert Zook	no phone	92 Hudson Rd, Ethridge TN

Bee Suppliers

Barnyard Bees – Chatsworth, GA

Packages $165 mailed

Barnyardbees.com

Ian Campbell – Gallatin, TN

Nucs-5deep frames with queen $185 pick-up

Will also do full hives

504-250-8493

Leonard Walker – Old Hickory TN

Nucs-5 deep frames with queen $185 pick-up

615-347-1062

Agenda

8:00a-8:30a – Sign in and Registration

8:30a-8:45a – Welcome and Introductions

8:45a-9:30a – "Beekeeper Equipment, Hive Components and How it all works" – Betsy Morgan

Become familiar with the hive, tools and how to dress for beekeeping success!

9:30a-9:45 – Morning Break

9:45a-10:45a – "Life Cycles of Bees and Division of Labor" – John Smith

How each bee contributes to the overall health and well being of the colony.

10:45a-11:30a – "I just bought Bees… What should I do?" – Chelsea Vargas

Installing bees in your hive, placement of your hive and laws and regulations.

11:30a-1:00p – Lunch and Raffle

Lunch Brought to you by the Fantastic People at **ZOCHEM LLC**

1:00p-1:45p - "Feeding and Honey Bee Nutrition" – Anthony Vargas

Keeping your bees happy and healthy

1:45p-2:30p – "Disease and Pest Management" – Aaron Sullivan

Learn about the issues your bees face and help them fight!

2:30p-2:45p – Afternoon Break

2:45p-3:45p – "Virtual Hive Inspection" - A deep dive into the hive! – Wylie Johnson

3:45p-4:30p – Q&A and Final Remarks

Varroa Treatment

Varroa Destructor is one of the top causes for many colony losses throughout the year.

Things to be aware of when treating your bees:

READ THE LABEL!!!

Check the label for temperature regulations

Check to see if it can be used while honey supers are on

Check the timeline

Use chemical or acid resistant gloves

Wear proper eye wear

Avoid inhaling fumes

Some treatments require respiratory masks to be worn throughout the process

Varroa Management Decision Tool:

https://cantilever-instruction.com/varroatool/story_html5.html

Some different treatments include:

Checkmite+

Hop Guard (Hop Compounds)

Formic Pro

Thymol

Apivar

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MiteAway Quick Strips

And many more.

For those that would like to remove mites naturally, there are many treatments to be found on-line but please double check your sources to make sure you are not harming your bees!

Mites develop a tolerance, so changing the treatment regularly is a good way to get continued results.

Varroa Mite Treatment Options

ALWAYS READ THE LABEL – THE LABEL IS THE LAW

Name	Active Ingredients	When to use	General Application Info	Length of Treatment	Temperature Restriction	Use during honey flow?
Apistan®	Fluvalinate	Spring and autumn	Strips hung in the brood chamber. Bees contact and transfer active ingredient.	6 weeks	Above 50°F (10°C)	No. Can add honey supers 2 weeks after treatment.
Apivar®	Amitraz	Spring and autumn	Strips hung in the brood chamber. Bees contact and transfer active ingredient.	42 - 56 days, not longer	None but bees should not be dormant.	No. Can add honey supers 2 weeks after treatment.
CheckMite+®	Coumaphos	Spring and autumn	Strips hung in the brood chamber. Bees contact and transfer active ingredient.	42 to 45 days, not longer	None but bees should not be dormant.	No. Can add honey supers 2 weeks after treatment.
ApiLife Var®	Thymol, eucalyptys oil, L-menthol	Early spring and after honey harvest	Tablet broken in 4 pieces, each place on top bars at the edge of the brood nest to fumigate the hive.	3 consecutive applications: 1st - 7 to 10 days; 2nd - 7 to 10 days; 3rd - 12 days	Between 64° and 95° F (18° and 35° C).	No. Add honey supers 30 days after treatment.
ApiGuard®	Thymol	Spring and autumn	Place open tray (which may require a spacer) in the hive to expose thymol gel. Bees contact gel and carry it through the hive.	2 consecutive treatments: 1st - 10 to days; 2nd - 2 to 4 weeks	Between 60° and 105°F (15° and 40°C). Avoid during nectar flows.	No. Manufacturer website is silent. Some forums indicate waiting 2 weeks.
Formic Pro®	Formic acid	Spring and autumn	Strips placed on top bars in brood boxes fumigate the hive with formic acid.	2 options: 14 day or 20 day	Between 50° and 85° F (10° and 29° C).	Yes.
Hop Guard II®	Hop compounds	Any time of year but best with less brood present	Hang strips over brood frame top bar so it hangs between frames.	30 days	Between 52° and 92° F (11° and 33° C).	Yes. Don't harvest wax and honey from brood boxes.
HopGuard 3®	Hop compounds	Any time of year but best with less brood present; follow with another miticide before overwintering	Hang strips between brood frames	14 days	Above 50°F (10°C)	Yes.
MiteAway Quick Strips®	Formic acid	Spring and autumn	Strips placed on top bars in brood boxes fumigate the hive with formic acid.	7 or 21 day treatment options	Between 50° and 85° F (10° and 29° C).	Yes.
Oxalic Acid	Oxalic acid dehydrate	Anytime there is no capped brood as it does not kill mites in cells	2 methods of treatment: dribble method mix of oxalic acid and light sugar syrup OR fumigation with a vaporizer.	3 consecutive weekly treatments recommeded	Between 35° and 55° F (2° and 13° C).	No.

Pre+Post Treatment, Mite Checks

Even if you are treating your hives on a regular basis, you want to be sure the treatments are working!

Alcohol Wash- Collect 200-300 bees into jar, add alcohol, close lid, shake vigorously. Check bottom of jar for mites.

Sugar shake- Collect 200-300 bees in a jar, add scoop of powdered sugar, shake vigorously. Quickly replace lid with hardware cloth lid and shake mites through onto white paper towel or plate. Then release bees

Mite Threshold

1 Mite per 100 bees in Spring

3 Mites per 100 bees in Fall

Pollen Chart

Sugar Syrup

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There are a lot of different reasons to be feeding your bees! Such as anytime you get new bees (nuc, package or swarm), during “dearth” (the summer months that it is too hot for plants to make nectar), and late fall when late year crops are dwindling. Also, if you have a very small colony that needs help, you might want to supplement their feeding until they are strong enough (there are many reasons for a colony to not grow, so first you should address the cause of the problem and then feed to strengthen).

Bees will always choose nectar over syrup! So, as soon as they naturally have what they need, you will see that the syrup is not being consumed as quickly or possibly not at all. That tells you to remove the feeder from the area to help reduce ants and any other pests that could smell it.

Not all sugar syrup ratios are created equal! You want to make sure that when you are feeding, you are giving them what they need for that timeframe:

Thinner syrups like 1:1 (with less sugar) are similar to flower nectar and should be fed in the spring and summer.

Heavier syrup like 2:1 has more sugar with less water which is best for fall feeding. Fall days are often shorter and cooler than summer days. With more sugar than water, it is easier for the bees to evaporate off the water quickly for storage in preparation for winter.

Never use brown sugar, confectioners’ sugar or molasses to feed your bees!

Always use granulated white Cane sugar

Syrup Mixing Chart

Desired Ratio of **Sugar : Water**	Sugar	Water

2:1 **(Feed in Fall)**		
	16 ¾ pounds *(34 cups)*	1 gallon *(128 ounces)*
	8 pounds *(16 ¼ cups)*	½ gallon *(64 ounces)*
	4 pounds *(8 cups)*	1 Quart *(32 ounces)*
	2 pounds *(4 cups)*	1 Pint *(16 ounces)*
5:3 **Feed year-round**		
	14 pounds *(28 cups)*	1 gallon *(128 ounces)*
	6 ½ pounds *(13 cups)*	½ gallon *(64 ounces)*
	3 ⅓ pounds *(6 ⅔ cups)*	1 Quart *(32 ounces)*
	1 ½ pound *(3 cups)*	1 Pint *(16 ounces)*
3:2 **Feed year round**		
	12 ½ pounds *(25 cups)*	1 gallon *(128 ounces)*
	6 pounds *(12 cups)*	½ gallon *(64 ounces)*
	3 pounds *(6 cups)*	1 Quart *(32 ounces)*
	1 ½ pound *(3 cups)*	1 Pint *(16 ounces)*
1:1 **Feed in Spring**		
	8 ¼ pounds *(16 ½ cups)*	1 gallon *(128 ounces)*
	4 pounds *(8 cups)*	½ gallon *(64 ounces)*
	2 pounds *(4 cups)*	1 Quart *(32 ounces)*
	1 pound *(2 cups)*	1 Pint *(16 ounces)*

NOTES