



Improving Survival Success Rates with Honey bee Colonies through Supportive Cohorts

Meeting #14 Q & A – Knowledge Review

Project Leader:	Tiffany Ayres, CEO Keys to Bees, Master Beekeeper
Project Consultant:	Marty Jones, PhD
Project Partner:	Kim Patten, Manager Diakon Wilderness Greenhouse
Project Partner:	Lindsey Lyons, Director of Sustainability Learning Dickinson College

This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number PG24-021.



1



Improving Survival Success Rates with Honey bee Colonies through Supportive Cohorts

Meeting #14 Q & A – Knowledge Review

Project Leader:	Tiffany Ayres, CEO Keys to Bees, Master Beekeeper
Project Consultant:	Marty Jones, PhD
Project Partner:	Kim Patten, Manager Diakon Wilderness Greenhouse
Project Partner:	Lindsey Lyons, Director of Sustainability Learning Dickinson College

This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number PG24-021.



2



Sustainable Agriculture Research & Education

SARE made funding possible.

SARE is a branch of the United States Department of Agriculture with funding through the National Institute of Food and Agriculture (NIFA).

The NIFA fund research and education projects to support sustainable agriculture; funding projects that help farmers, ranchers, and educators develop new ideas and strategies.

This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number PG24-021

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

3



4



5

WINTER INSPECTIONS

- Lift hive to assess for weight.
- Peak in the inner cover if concerned.
- Feed a form of solid feed (fondant, candy board, etc. if necessary).
- Keep bottom boards clean & clear of dead bees.

www.kaytobees.com

6



7



8



MOST COMMON REASONS FOR WINTER DEADOUTS

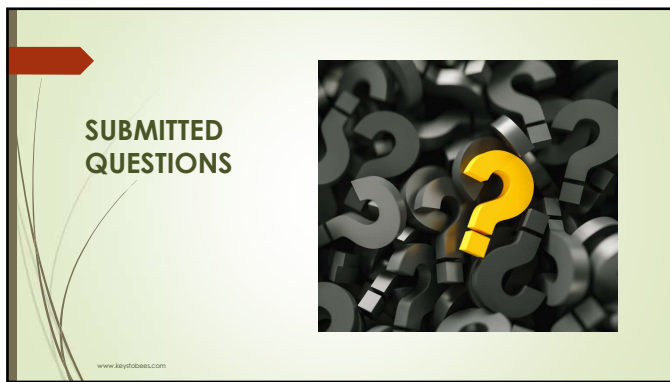
- Impact of high varroa mite thresholds when winter bees were developing (shortened life spans, viruses, etc).
- Colony was too small to endure the duration of the cold winter.
- Starved.

<https://www.youtube.com/watch?v=pmGidzpmkX8>

9



10



11

50. Identify the condition of this bee.

☐ This is a premature emerged bee.
☐ This bee has deformed wing virus.
☐ This bee has been attacked by neotromas.
☐ This bee is missing most of her hair in a condition known as sacrood virus.

☐ Small Hive Beetle
☐ Wax Moth
☐ Nosema
☐ Foulbrood

33. True or False The queen cell identified with the red arrow shows signs of a healthy adult queen that has emerged.

☐ True
☐ False

www.keytothehive.com

12

25. Identify what is seen in the picture below and if any action is needed. (The adult bees have been removed from the frame so we can see the brood).



- ☐ Very spotty brood. The queen should be found and replaced with younger healthy queen.
- ☐ Very spotty brood indicating the hive is ventilating itself; offer additional ventilation to the hive.
- ☐ Recently mated queen; she has not gotten up to quality laying yet. No action needed at this time.
- ☐ Brood are all drones an indicator of laying workers. Immediate action is required to remove the laying w...

www.kaytobee.com

13

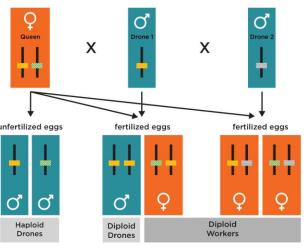
44. Match the types of honey with their descriptions

	Multifloral	Sugary excrement of sap-sucking insects	Harvest from a distinct nectar source	Commonly called wildflower honey	Commonly called Spring or Fall honey	Clover honey	Spotted lanternfly honey
Polyfloral	☐	☐	☐	☐	☐	☐	☐
Monofloral	☐	☐	☐	☐	☐	☐	☐
Honeydew	☐	☐	☐	☐	☐	☐	☐

www.kaytobee.com

14

BEHAVIOR & BIOLOGY



Genetic recipe

<https://www.honeybeesuite.com/what-they-didnt-teach-you-in-bee-school/>

<https://extension.psu.edu/honey-bee-genetics-basics>

15

DISCUSSION

When I open a hive and find queen cells, I never really know what to do. Should I cut the cells, leave them, or remove most and leave only two or three of the best? It feels risky to remove queen cells if I can't find the queen—even when eggs are present—and that situation came up for me several times this year. I understand the logic behind emergency, swarm, and superscedure cells, but they often look the same to me, or sometimes I find different types in the same colony and really have no idea what to do.

I was also interested in the regenerative beekeeping method that our speaker shared with us. A lot of it made sense to me, and it seemed like a more hands-off style of beekeeping (not lazy, just hands off). I got the impression that you didn't necessarily agree with all of it—or maybe just parts of the method. Reflecting on my own season, I managed my bees diligently and still lost them all, while my neighbor did very little beyond mite treatments and now has seven thriving colonies. Maybe it was luck or other factors, but it's something I keep thinking about. It's always nice to maximize honey production, but is swarming really a bad thing—especially if you can catch the swarms and create new, smaller colonies? I've been reading that smaller colonies are often healthier than large booming ones. In your experience, is there any truth to that?

Another question I have is about properly using diatomaceous earth. I have asphalt shingles under my hives to keep grass and weeds down—about a 12×6-foot area. This past year, I applied the diatomaceous earth only on the shingles under the hives. Do you think it would be better to spread it around the grass perimeter instead, since hive beetle larvae have to bury themselves in the ground?

16

20% off ALL beekeeping supplies

Valid from 01/03/26 till 01/17/26. While supplies last, in stock items only, cannot be combined with any other offer and limit one per customer.

Mechanicsburg Agway

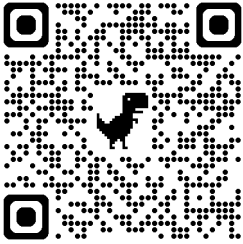
977 W. Trindle Road

Mechanicsburg PA 17055

717-766-4726

www.seattobee.com

17



THE NORTH AMERICAN
2026
HONEY BEE EXPO

January 8-10, 2026
Kentucky Expo Center - Louisville, KY

www.seattobee.com

18



SAVE THE DATE

3/14/26 SARE COHORT SOCIAL

www.keystobees.com

19

FUTURE MEETINGS

1/14/26
Virtual Meeting with Cici Sweeney
"Absconding Bees"

2/11/26 ~ Robyn Underwood, Brood & Adult Disease & Viruses

3/11/26 ~ Virtual Meeting

4/8/26 ~ Virtual Meeting ~ Exam

4/22/26 ~ Virtual Meeting ~ What's Next

SOUTH CENTRAL PA LOCAL CLUBS

YCBA – meets 4th Tuesday 7:00pm-9:00pm at Aldersgate Church, 397 Tyler Run Rd., York

CABA – meets 3rd Friday 7:00pm-9:00pm at HACC, 1 HACC Dr., Harrisburg

LCBS – meets 3rd Tuesday 6:30pm-8:30pm New Meeting Place in Mt. Joy

PCBC – meets 3rd Sunday 2:00pm at Penn State Ext. Office, 8 S. Carlisle St., New Bloomfield

FCBA – meets 3rd Thursday 6:00pm-8:30pm at locations vary check on website fcbapa.com

20

THANK YOU

- KEYS TO BEES
- Tiffany Ayres
- www.keystobees.com
- saybees.apary@gmail.com



SARE
Sustainable Agriculture
Research & Education

21
