

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 Wildemess 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.



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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.

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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.

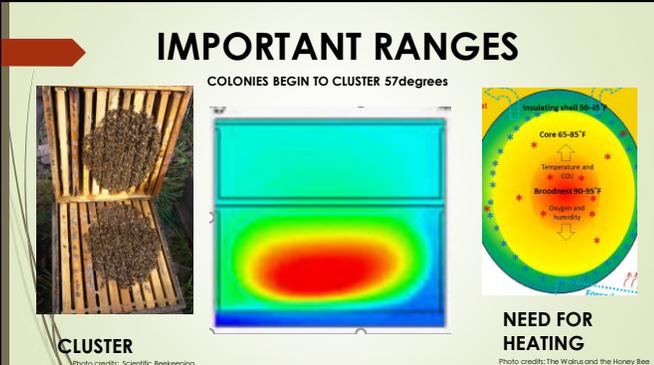
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MAIN GENERAL KNOWLEDGE CATEGORIES

- TOPICS:
- Definitions
- Biology
- Inspections
- Life cycle
- Varroa Mites, Diseases, & Pests
- Nutrition
- Horticulture
- Honey

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IMPORTANT RANGES

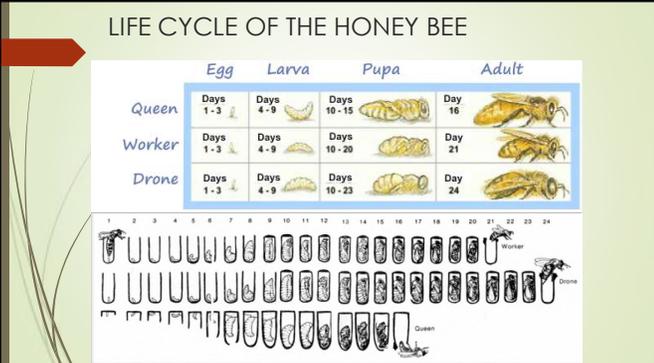
COLONIES BEGIN TO CLUSTER 57degrees

CLUSTER
Photo credits: Scientific Beekeeping

NEED FOR HEATING
Photo credits: The Wax and the Honey Bee

Heating shell 62-63
Core 65-85°F
Temperature and CO₂ Broodnest 90-95°F
Flight and Humidity

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LIFE CYCLE OF THE HONEY BEE

	Egg	Larva	Pupa	Adult
Queen	Days 1-3	Days 4-9	Days 10-15	Day 16
Worker	Days 1-3	Days 4-9	Days 10-20	Day 21
Drone	Days 1-3	Days 4-9	Days 10-23	Day 24

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Worker
Queen

6

INSPECTIONS #1

Develop poor queens

Develop mediocre queens

Develop best queens

QUEEN CELLS???

7

Healthy laying pattern vs. unhealthy patterns

SPOTTY BROOD PATTERN

SOLID BROOD PATTERN

Varroa Mites, European Foul Brood, or In-Breeding?
Diploid Drones will be cannibalized.

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**SUMMER BEES?
Or
WINTER BEES?**

Summer bees' life expectancy 4-6 weeks
Winter bees' life expectancy 4-5 months

www.keytothebees.com

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FUTURE MEETINGS

10/22/25 Virtual Meeting
Robert Dwyer ~ State Inspector

11/12/25 Virtual Meeting

12/10/25 Virtual Meeting

1/14/26 ~ Virtual Meeting with
CiCi Sweeney

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 at Millersville University, Roddy Hall Room 261

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

PSBA – Conference 11/14/25-11/16/25

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