

Beginning Beekeeping Course Outline

The Honey Company

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1. Welcome and Introductions
2. More beekeeping info at www.thehoneycompany.com under “Blog” then “Archive”
3. Expectations for Beginning Beekeepers
 - a. Expect to have honey surplus.
 - b. Expect to have bees die. (Winter, 2 years old, when beekeeping)
 - c. Expect to have disease and pests.
 - d. Expect to have swarms.
 - e. Expect to get stung.
4. Equipment:
 - a. Parts of the hive
 - b. What do I really need?
Now: Hive boxes, bottom board, lid, frames, foundation, hive tool, smoker, gloves, helmet, veil, suit or protective clothing, pallet or hive stand
Soon: 3 supers with frames and foundation for each hive, inner cover (winter), feeder tray
 - c. New Product for comb production
5. What should I focus on my first year?
 - a. Colony life cycle
 - b. Timing of nectar flow in your area, plants bees prefer
 - c. You should have a relatively disease-free first year. Save this stuff for next year.
6. Moving bees
 - a. 3 miles for 3 days
 - b. When all bees are home (dark or storm)
 - c. Place hives before dawn tomorrow morning
7. Where should I put my hive?
 - a. Sun or shade? Which compass direction? Can I mix bees and livestock? How close do hives need to be to water and nectar sources? What about playgrounds and sidewalks? Windbreak? Accessibility (24/7)? Visible or hidden?
8. Reproduction (see attached sheet)
 - a. Types of bees (queen, worker, drone)
 - b. Queens take 14 days to hatch, 1 week to mate, 1 week to lay eggs, total 4 weeks
 - c. Workers take 21 days to hatch
 - d. Drones take 24 days to hatch
 - e. Why do I need to know this?
9. Inside the hive
 - a. Things bees produce/collect: honey, pollen, propolis
 - b. Location of honey, pollen, brood chamber within hive
 - c. How do I know if there is an active queen?
 - d. How do I recognize eggs?

10. What do I do when I check on my bees?

- a. Timing: inspect your hive every 7-10 days through the summer
- b. Look for: eggs, brood, crowding, queen cups, honey stores
- c. Continue feeding bees in the spring until they stop eating it.
- d. When do I add a super? How do I prime it?
- e. How do I prevent swarms?
- f. Why do you use all deep supers?
- g. Demonstration: How to transfer frames from nuc box to hive body box

11. Honey

- a. When do I harvest honey?
 - i. As bees produce it (requires guesswork) –OR–
 - ii. All at once in the fall
- b. How much honey should I leave for bees in the fall?
- c. Last year's CRAZY weather
- d. Extracting demonstration

12. Wintering bees

- a. How long does a queen live?
- b. How do I feed bees?
- c. What is an inner cover? Do I need one?
- d. Do I need to wrap or insulate my bees?
- e. How often should I check on them in the winter?

13. Increasing or Maintaining Hives

- a. Raising queens/making splits
 - i. What do queen cells look like?
 - ii. How to make a split
- b. Need to increase to maintain hive numbers, plan for hive death after second year

14. Bee diseases

- a. Diagnostic hive
- b. Diseases and pests
 - i. Varroa Mites
 - ii. American Foul Brood (bacteria)
 - iii. *Nosema cerenae* (intestinal fungus)
- c. Integrated Pest Management: Strategies to avoid medications.
 - i. See *Honeybee Diseases and Pests* for awesome IPM strategies!
 - ii. Medications are expensive, can be harmful, and diseases become resistant
 - iii. Monitor disease loads and only medicate as a last resort
- d. Hygienic Bee Behavior (Genetic disease resistance)
- e. Cleaning wax comb every 3-5 years
- f. Laying Workers

Beekeeping in Northern Climates and *Honeybee Diseases and Pests* by Marla Spivak and Gary Reuter of the University of Minnesota Extension Bee Lab. Around \$20 for both, including shipping.

<https://shop-secure.extension.umn.edu/PublicationDetail.aspx?ID=1393>

<http://beelab.umn.edu>

Table 1. Honey bee developmental stages

Day	Workers		Queens		Drones	
	Stages	Moult	Stages	Moult	Stages	Moult
1	Egg <hr/> 1st larval <hr/> 2nd larval <hr/> 3rd larval <hr/> 4th larval <hr/> Gorging	(hatching) <hr/> 1st moult <hr/> 2nd moult <hr/> 3rd moult <hr/> 4th moult <hr/> (sealing)	Egg <hr/> 1st larval <hr/> 2nd larval <hr/> 3rd larval <hr/> 4th larval <hr/> Gorging	(hatching) <hr/> 1st moult <hr/> 2nd moult <hr/> 3rd moult <hr/> 4th moult <hr/> (sealing)	Egg <hr/> 1st larval <hr/> 2nd larval <hr/> 3rd larval <hr/> 4th larval <hr/> Gorging	(hatching) <hr/> 1st moult <hr/> 2nd moult <hr/> 3rd moult <hr/> 4th moult <hr/> (sealing)
2						
3						
4						
5						
6						
7						
8						
9						
10	Pre-pupa <hr/> Pupa <hr/> Imago	5th moult 6th month (emerging)	Pre-pupa <hr/> Pupa <hr/> Imago	5th moult 6th moult (emerging)	Pre-pupa <hr/> Pupa Imago	(sealing) 6th moult (emerging)
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22	Imago				Imago	6th moult (emerging)
23						
24						

From Laidlaw, Harry H., Jr. 1979. Modified from Bertholf, L.M. 1925. The moults of the honeybee. *Journal of Economic Entomology* 18(2):380-384.