

## About Bees

- Queen – 16 days to produce
  - Largest bee but large variation in size from hive to hive
  - Mates with several Drones
  - Emits Pheromones to calm hive
  - One queen per hive
  - Live 2-5 years
  - Can be raised from any fertilized egg under 3 days old, Replace failing queens quickly
- Drone – 24 days to produce
  - Comes from an unfertilized egg
  - No stinger
  - Large, goggle eyes
  - Don't do any work, are kicked out of the hive by the workers as winter approaches
  - Live 4-8 weeks
- Worker – 21 days to produce
  - Live about 15-38 days in the summer, live 140-320 days in winter
  - Start out as nurse bees, and progress to foragers
  - Some do lay eggs, the unfertilized eggs produce drones
- Egg : 3 days
- Larvae: 4-6 days
- Pupa : 7-14 days ,Capped brood
- Adult

## Bee Products

- Honey
- Beeswax
- Propolis
- Pollen

## Equipment

- Hive – Bee Space – Bee's building code is no construction in a 3/8 inch space. Less space is plugged with propolis more space and they build comb.
  - Deep – where the bees live : 9 5/8" Hive body (Uses 9 1/8" frames and 8 1/2" foundation)
  - Super – where the honey goes: 6 5/8" Medium Super (uses 6 1/4" frames and 5 5/8" foundation)
  - Frames : 10/box
  - Foundation: 1/frame
  - Bottom board
  - Inner Cover
  - Lid
  - Queen Excluder
  - Feeders (top, entrance, division board)
  - Mouse Guard
  - Propolis Trap
  - Pollen Trap

- Clothing
  - Gloves
  - Bee Suit/Jacket
  - Veil
- Tools
  - Hive Tool
  - Smoker/fuel
  - Bee Brush

### **Where to keep a hive**

- Flight pattern
- Prevailing wind
- Sunlight
- Easy access – harvesting and checking
- Rule for moving hives is move hive 3 ft or 3 miles

### **Diseases/Pests/problems**

- Nosema
- Mites
- Foul Brood (AFB)
- Wax Moths
- Skunks, mice, bears, raccoon, neighborhood kids
- Starvation

### **Meds/Feed**

- Pollen Patties
- Essential Oils
- Antibiotics, Fumigilin
- Mites: Thymol, Apistan, Mite Away Quick strips, etc.

### **Breeds of Bees**

- Italian
- New World Carniolan
- Russian
- African

### **Extracting**

- Extracting Tank
- Knife/scratcher
- Extractor
- Buckets/Valves
- Filters
- Jars or Bottles

### **Getting Bees**

- Package Bees
- Nucs
- Full Hive
- Swarm