

Beekeeping Basics – Beginning Beekeeping

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- Honey bees are responsible for pollinating over \$15B of U.S. crop production – over 100 varieties of fruits, berries, vegetables, field crops & nuts - **over 1/3 of everything we eat!**
- Honey bees may be important for your farming needs – where to get honey bees for pollination?
 - Contract from local beekeeper - \$55-60 / hive per blossom set.
 - Learn to manage your own colonies.
 - Maybe a business opportunity – sell honey, pollen, bees wax, queens and bee colonies.
- “Be a beekeeper, not a beehaver”.
 - It’s important to learn how to manage honey bees, not just have them.
 - Understand not only individual honey bee biology, but the colony biology – the life cycles.
 - Queen’s function – cell stages, mating flight, and egg laying.
 - Worker bee’s function – cleaning, feeding, wax cell building, honey production, entrance guarding, and foraging.
 - Drone bee’s function - mating.
 - Colony cycles and needs throughout the year – egg laying cycle, nectar flow, nectar dearth, swarming, food storage, winter cluster, etc.
 - Importance of honey bee health.
 - Nectar (carbohydrate) stored as honey.
 - Pollen (protein) stored to feed developing young.
 - Water for food processing and cooling the hive.
 - Inspection of the hive – know when & how often.
 - Food – honey & pollen stores – supplemental feeding of syrup or pollen.
 - Queen evidence – actually see her or eggs, larvae, pupae, and capped brood stages.
 - General bee quantity & activity – winter buildup, overcrowding and swarm control.
 - Signs of pests or diseases – tests and treatments.
- Colony Collapse Disorder (CCD).
 - 1940’s U.S. with est. 5 million colonies – late 2000’s down to 1.8 M – currently back to 2.7 M.
 - Since 2006, over 30% colony loss per year – prior normal of 10-15% loss per year.
 - Contributing factors compromising honey bee health.
 - Environmental – climate change & loss of foraging habitat.
 - Commercial transport stresses.
 - Increase in pests & diseases.
 - Pesticide misuse – neonicotinoids.
 - Increase in monoculture crops & GMO crops.
 - Lack of complete testing by EPA – lawsuits made – newer test regulations being enacted.
 - Many on-going, university research studies worldwide – bee genetics & pesticide exposure.
- Beginning Beekeeping.
 - Take a beginner beekeeping course – usually in late winter into early spring.
 - Read beekeeping books – library with many good ones.
 - Join a local and/or the state association – bee schools, discussions, speakers, harvesting equipment.
 - Get a mentor – work at their bee yard.
 - Many other resources – national organizations with websites and events.

- Get your protective equipment and tools.
- Determine your management style and hive design.
 - Natural vs. treatment free vs. chemical usage methods.
 - Top bar designs vs. Langstroth frame designs.
 - ♦ Top bar / Warre – more natural comb build - can be difficult to handle comb – honey extraction destroys the comb – more for pollination only.
 - ♦ Langstroth – multi-frames in stacked boxes – sturdier comb handling – easier honey extraction – more for bee inspection and honey collection.
 - ♦ Decorative – garden hive designs – create your own look.
 - Purchase and assembly frames, hive boxes, etc.
- Choose honey bee variety.
 - Italians – gentle, very productive, easy to manage, swarms.
 - Carniolans – dark color, very gentle, bit more to manage, over winters well, swarms.
 - Russian – gentle, erratic nature, slower spring buildup, swarms quickly, varroa mite resistant.
 - Hybrid varieties – hygienic, etc.
- Purchase honey bees.
 - Three pound packages (\$) – 10,500 bees with queen – no frames or combs.
 - Nucleus or Nuc (\$\$) – 4 to 5 frames of bees with laying queen, brood & food stores.
 - Full colony (\$\$\$) – 8 or 10 frame deep of bees with laying queen, brood & food stores.
 - Swarm (free) – bees with queen – no frames or comb.
- Recommended two- colony startup - total cost \$500 - \$700 if purchased new.
- What to do for the bees – honey bees and native bees?
 - Plant outlying areas or 10% of crop land with bee friendly plants – studies indicate a 20-30% yield increase with more pollinators.
 - Plant diverse wildflowers and trees with different bloom times for balanced, year round nutrition.
 - Reduce chemical pesticide & insecticide spray exposure – use dusting in late evening – even organic kills bees!
 - Contact your local political representatives encouraging them to plant bee-friendly habitats.
- Expectations.
 - **Always focus on the bee’s health first and foremost.**
 - Learn all you can from an experienced beekeeper before you even get your bees.
 - Make sure you have all your equipment & hives prepared before you get bees.
 - First year – work to get your bees established and through the first winter – don’t expect to get honey from packaged bees.
 - Learn why, when, and how to supplemental feed your bees in winter – syrup, fondant, or honey.
 - Learn your way you want to successfully manage your bees – don’t be afraid of trying new methods – determine what works for you.
- References & Suppliers.
 - North Carolina State Beekeepers Association (NCSBA) – www.ncbeekeepers.org
 - Miller Bee Supply – N. Wilkesboro, NC – www.millerbeesupply.com
 - Brushy Mountain Bee Farm – Moravian Falls, NC– www.brushymountainbeefarm.com
 - Dandelion Bee Supply – Bob Safrit (RCBA member) – Concord, NC – 704.796.2972
 - Triad Bee Supply – Trinity, NC – www.triadbeesupply.com