



INFORMATION FOR BEE-GINNERS

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The honey bee is the only source of honey and beeswax. Bees produce more than 260 million pounds of honey and about 5 million pounds of beeswax annually in the United States. However, these are merely by-products of the honey bee. The bees principal role is in the pollination of over 60 different crops. Bees annually cross-pollinate a number of important fruit and seed plants such as clovers, apples, lima beans, asparagus, buckwheat, cherries, pears, cantaloupes, water-melons, pumpkins, cucumbers, and many berries. In addition, they harvest and make available to man a portion of the nectar resources of the flowers. This nectar crop is a resource just as certainly as coal, lumber, game and shellfish, can be gathered only by means of the honey bee.

APICULTURE AS A HOBBY

Honey bees are kept by many persons as a hobby or as a sideline. Apiculture, which is the keeping of bees and a study of their life and habits, holds a fascination for people in all walks of life – both young and old. A few colonies to furnish honey for the home table or to effect pollination can be kept virtually anywhere.

Apiculture as a hobby can be a self-supporting avocation. It is especially attractive to those interested in natural science. It is a hobby which, if pursued intelligently, involves considerable reading, along with direct observation and study of the behavior of an interesting insect, and a knowledge of the various nectar-secreting and pollen-bearing plants.

APICULTURE AS A SIDELINE

As a sideline, beekeeping offers a splendid paying project for urbanite or farmer. Many beekeepers realize enough return from a sideline bee project to substantially reinforce their regular income. On the farm, the honey produced and farm pollination services are a valuable cash crop.

A few persons keep bees on a commercial basis. Prior beekeeping experience and a strong desire to work long hard hours are necessary for the commercial operator. The rewards of independent, outdoors-type work is a strong lure for the commercial or sideline beekeeper.

REQUIREMENTS FOR SUCCESS

Success in beekeeping requires an intimate knowledge of the biology of the honey bee, as all management practices are

based on colony habits and bee behavior. This necessitates considerable reading on the one hand, and observation of the activities of bees in the hive and in the field on the other. A good reference text on honey bees will prove invaluable to supplement state and federal extension publications.

Apiculture cannot be successful unless modern equipment is used. There is no place for “box hives,” “gums,” “cross comb” hives or related receptacles. Comb must be kept within frames; full frames of good comb are needed in every hive body and super. Hives must be standard and frame removable.

Persons highly allergic to bee stings should not keep bees. Stings should not be frequent when colonies are handled properly and normal precautions are taken. They will, however, occur from time to time. Most persons develop a tolerance for bee venom. This reduces the sensitivity to pain and there is less swelling and reaction from the stings.

SIZE OF PROJECT

A beginner should start with 2 or 3 colonies. More than one colony is desirable because of the opportunity it gives for comparing colony growth and production. After a trial of one season or more, additional colonies can be added with great ease and little expense. An alternative method of starting would be to assist a neighbor beekeeper in his operation for one or more seasons.

EQUIPMENT NEEDED

A complete hive would require:

- a. 1 metal covered top
- b. 1 inner cover
- c. 1 bottom board
- d. 2 standard 10-frame hive bodies (each body contains 10 frames)
- e. 1 queen excluder
- f. 2 shallow 10-frame supers with frames

Also needed would be:

- a. bee veil
- b. bee smoker
- c. hive tool
- d. bee gloves and coveralls (optional)

Used equipment may be purchased from a beekeeper or new from a bee supply dealer. When obtaining used equipment check the condition of the equipment carefully and have it examined for possibility of disease by the Apiary Inspection Service. New bee equipment can be purchased from a national bee supply manufacturer, large mail order firms or from local bee supply dealers in most larger communities. Starter outfits are available as well; the complete equipment as listed above costs \$250 or more.

Although factory-made equipment is ordinarily the most satisfactory, some persons prefer to construct their own hives. If you do this, it is a good plan to purchase or borrow a complete factory-made hive to use as a model. Be sure to reproduce all dimensions exactly; otherwise, the bees will build comb where it is not desired and your equipment may not be interchangeable.

STARTING WITH BEES

There are several methods of getting started:

1. Buy an established colony with all equipment from a local beekeeper. (It should be inspected by your State Apiary Inspector for bee diseases before purchase.)
2. Buy new (or used) equipment, and have a local beekeeper install in it either a swarm or a nucleus (3 frames with adhering bees). Alternately capture a swarm yourself and install it.
3. Buy new equipment and install in it a 3-lb package of bees with queen, purchased from a southern package bee producer.

Method #1 is by far the best for the individuals with some experience, as he/she can get advice from the seller, and the colony will be well established. Also, the established colony can make a surplus crop the first year of ownership. Methods #2 and #3 require some prior knowledge of how to install the live bees. It is not difficult and information on proper procedures is readily available. In Methods #2 and #3, a honey crop should not be expected the first year, although some surplus for harvest is possible.

WHEN TO START

The best time to start beekeeping is when the apple trees are in bloom in your locality. Don't buy bees late in the summer or fall unless you are prepared to give them special attention. Bee colonies started on new equipment have little chance of getting through winter if not started before June 15. The earlier the better. If a colony does not survive its first winter, try again. The second attempt frequently will be more successful.

TYPE OF HONEY TO PRODUCE

Honey bees will visit the most attractive flowers they can find. It is not possible to direct them to, or away from, specific flowers or areas. Colonies can be moved to take better advantage of crops. Each area of the state will have one or

more dominant floral sources that will give honey produced in that section its distinctive smell, taste and color. Check with local beekeepers to determine the type of honey produced in your area.

To harvest the honey, the beekeeper can leave it in the comb or extract it to produce the liquid honey. Some beginners attempt to produce honey in the comb. A light foundation is needed in the frames in the super. The ripened honey is simply cut and put in plastic boxes or jars for use. Special supers can be purchased to have the bees store honey in one pound wooden boxes (comb honey) or 12 oz plastic rings (cobana honey). Liquid honey is produced by separating honey from the comb by crushing and letting the honey drain or by use of an extractor. Extractors are an additional cost (\$200-400); some beekeepers rent extractors to beginners. An extractor spins the honey from the comb so the comb can be reused. The liquid honey is filtered through cheesecloth to remove pieces of wax and impurities. For several reasons it is easier to produce liquid honey versus honey in the comb.

WHAT TO EXPECT

No return on the project should be expected the first year from package bees, swarms or nuclei. However, if established colonies are purchased, a crop may be realized the first season. With experience, a colony should produce about 40 to 50 pounds of surplus honey. Production depends on a number of factors, not the least of which is the abundance of nectar-secreting plants. Some areas are better than others. Colonies can be kept anywhere and produce a surplus honey crop.

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Keeping honey bees can be fun, rewarding and healthful. It is suggested you start small and expand as conditions permit. The most skillful beekeepers understand bee biology and adapt natural biology to their circumstances. One can, with a little patience and practice, have fun in the process.

MAAREC, the Mid-Atlantic Apiculture Research and Extension Consortium, is an official activity of five land grant universities and the U. S. Department of Agriculture. The following are cooperating members:

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Participants in MAAREC also include state beekeeper associations, and State Departments of Agriculture from Delaware, Maryland, New Jersey, Pennsylvania and West Virginia.

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