



UNIVERSITY OF ILLINOIS
EXTENSION

Illinois Migrant Council

PREPARING A NEW GENERATION OF ILLINOIS FRUIT AND VEGETABLE FARMERS

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<http://www.newillinoisfarmers.org>



Beekeeping Basics for Fruit and Vegetable Producers

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Honey bees are the primary pollinators for horticultural crops

Except for small areas (<1/3 acre) or those adjacent to a large area of uncultivated ground you will need honey bees...

If you want better fruits than these strawberries.



Advantages of Honey Bees

There are lots of informational resources available about how to manage honey bees.

There are 22 beekeeping associations in Illinois where one can receive assistance and mentoring.

Honey bees can be kept almost anywhere on a few square yards; they are compatible with horticulture crops and can be kept in yards with poultry.



What about native species such as the Blue Orchard Bee?

This bee actually has more diseases than honey bees and requires specialized management.

Native species can supplement honey bees if you provide appropriate nesting areas and a variety of nectar sources for them.



Bumble bee hives also can be purchased.

However, the colonies last only 8 to 10 weeks and they are implicated in spreading diseases to native bumble bees.

Bumblebee Hive - Class C
Covers up to 5,000 Square Feet
SKU: 1530003 \$109.97

Bumblebee Hive - Class A
Covers 10,000 - 15,000 Square Feet
SKU: 1530001 \$249.95



You may already have feral or domestic honey bee colonies nearby.

If you see honey bees on flowers on your property or nearby, that is most likely the case.



In many cases your choices are to rent colonies or to manage your own.

The subject of renting honey bee colonies was covered in a previous presentation.

This presentation will focus on **very basic** considerations in acquiring and managing your own colonies.



Advantages of having your own honey bee colonies

- You won't have to find colonies to rent – which sometimes is not that easy.
- You can control the timing of pollination
- You can sell your own honey along with your fruits and/or vegetables.
- Adding locally-produced honey can attract new customers.



Potential disadvantages of having your own honey bee colonies

- You will have initial expenses, about \$350 for the first hive, less for additional ones.
- You will need to learn new management skills.



Colonies also may die and need replacement @ \$80-100 per colony

However, one also can divide another, populous colony; and sometimes find swarms or do “cut-outs” from buildings or trees



[cornell.apiculture.image](#)



[stclairbeekeepers.com](#)

Other cost saving measures

You can buy colonies for less than \$300 each.

HOWEVER – make sure they have been inspected and are healthy (IL Department of Agriculture Bees and Apiary Program

[\(http://www.agr.state.il.us/programs/bees/\)](http://www.agr.state.il.us/programs/bees/)).

Never buy used, empty hives, etc – deadly disease spores can persist in them for years.

You can make your own hives, although it is usually not cost effective.



More cost and grief saving measures

Join your local beekeeping association as well as the Illinois State Beekeeping Association

Find at least one mentor – stay clear of those who are overly opinionated or need to show how much they know.



How many colonies to start with?

If feasible, it's a good idea to start with two colonies.

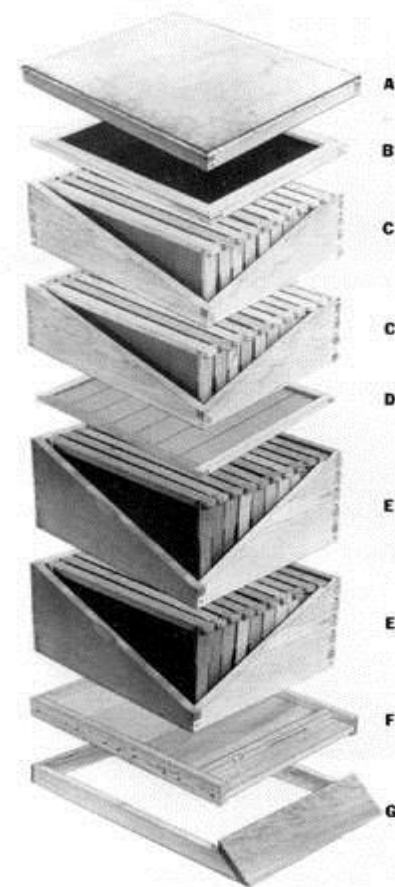
This allows you to compare them, which is especially useful if one colony has problems, for example a failing queen.

Then too, with queen problems, one can partially remedy the situation by moving frames of young larvae over to the apparently queenless colony, while waiting to receive another queen

Equipment you will need for one hive:

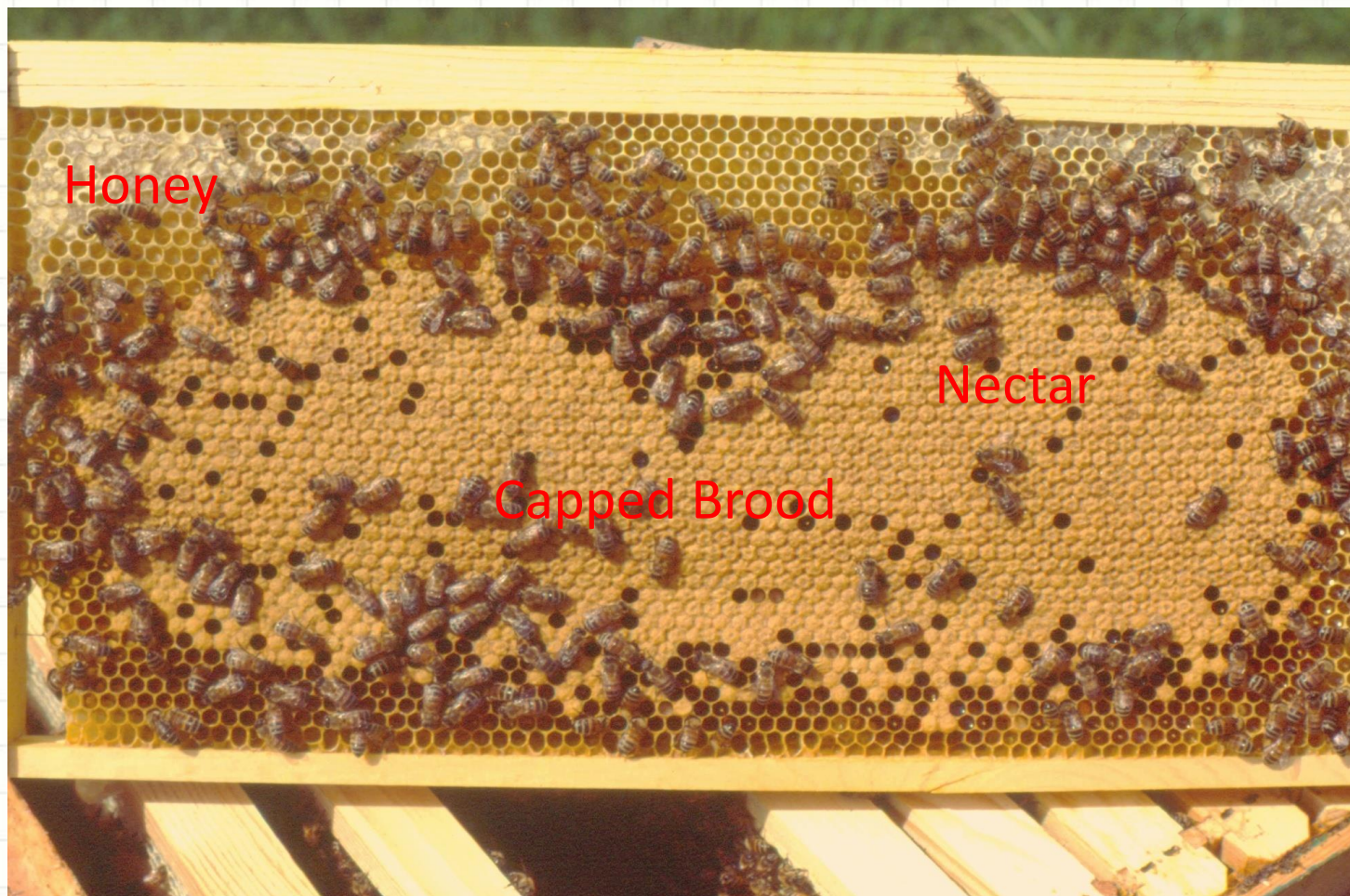
- A. Outer cover
- B. Inner cover
- C. 2 medium honey supers
- (D. Queen excluder - optional)
- E. 2 deep hive bodies
- F. Bottom board

Also 20 deep and 20 medium frames and wax foundation for each frame (pictured in the hive bodies). Frames hold the combs that bees build from the wax foundation



<http://www.ent.uga.edu/bees>

Deep Frame of Capped Brood



Additional Supplies Needed

Smoker

Hive tool

Hat and veil

Gloves

Bee suit -- not necessary
unless you are afraid of
bees.



<http://www.ent.uga.edu/bees>

How about the bees?

Beginners usually start with a package of bees which contains 2 or 3 lbs of young bees and a young queen in a small, separate cage.

In many cases these can be ordered through local beekeeping associations – a service to their members.



Hiving package bees.



Another, often better option is to buy a nucleus (nuc) colony.

A nuc is a small, 4 or 5 frame colony with a laying queen and combs with larvae and pupae as well as ones with honey and pollen.

Beekeepers in your area may have nucs, or you can find a list of those selling nucs on the website of the Illinois Queen Initiative (illinoisqueeninitiative.com).



bestbeekeeping.com



Who's who in the colony?

Honey bee colonies consist of up to 60,000 female worker bees;

Hundreds of drones (male bees) during the growing season;

One queen -- normally -- the mother of all the bees in the colony.

In this photo the queen is on the left with a numbered disk on her back, a drone is in the middle and a worker on the right.

Can you find another drone?



About stinging:

What to do to avoid being stung:

Wear protective clothing – start with gloves; always use a veil

Use a smoker; keep it lit

Open hives in warmer weather whenever possible: 75-95° F
(55-65° OK for brief glances at top of frames)

Use slow movements- no jerking or slapping at bees

Take extra care around hive; don't stand in bee flight path

Don't remove veil too soon after opening a hive

Keep gentle bee stock

Scrape sting out promptly if stung!



Normal Reaction

Pain, and later, itching at sting site

Redness at sting site

Swelling – often relatively large for those rarely stung - doesn't mean you're allergic.

These reactions are normal the first few times you get stung.

After a few stings these symptoms are uncommon.

Getting stung now and then
is part of beekeeping.

skinsight.com



Allergic Reaction

Widespread, rapid swelling

Itching elsewhere on body

Swelling inside the throat

Disorientation feeling

Loss of consciousness

Those who experience these symptoms should
seek immediate medical attention!

As you can see, beekeeping is not for everyone.

You will need to make a commitment of time and money and be willing to be stung at times.

If after viewing this presentation you are still interested in beekeeping, plan to attend a meeting of your local association.

Get to know several beekeepers in your area. Ask if you may visit their bee yards and look over their shoulders.

Most beekeepers are eager to share their knowledge and love of bees.



Find a mentor, maybe two.



Keys to Successful Beekeeping

In order to understand proper colony management, one needs to learn a good deal about honey bee biology and behavior.

This necessitates reading as well as observation and learning from one or more mentors.

Many of the beekeeping associations offer classes for beginners; the U. of Illinois also offers one at the Urbana-Champaign campus.

(<http://www.life.illinois.edu/entomology/bee-course-html>)



If you have questions ...

- University of Illinois Extension Local Food Systems and Small Farms team
 - <http://web.extension.illinois.edu/smallfarm/>
- USDA's Start2Farm site
 - <http://www.start2farm.gov/>