



# Honey bees –Getting started

In order to get started for beekeeping of honey bees, you will need the following materials:

## For the bees

### Essentials for 1 hive (Figure 1):

- A bottom board
- 1 four-sided, box without bottom. Additional boxes, usually of shorter height, can be added if bees are expected to produce plenty of honey.
- Frames in which the bees construct beeswax combs (Figure 2). The frames rest on ledges cut into the top of the boxes.
- Foundation: Sheets of embossed beeswax or plastic attached in the frames to provide the bees with the midribs for their new combs.
- A top (cover).

### Optional:

- Queen excluder: wire or plastic screen between boxes that allows worker bees to move, but keeps the queen and brood in the lower boxes.
- Entrance reducers: wooden or plastic blocks that partially close hive entrances to prevent robbing or entrance of mice.
- Robbing screens. Wire screen placed to allow ventilation and entry and exit of hive bees, while excluding or limiting entry of the robbing bees.
- Division or follower boards: frame-shaped dividers used to confine bees to a specific portion of a hive.
- Feeder to provide sugar syrup when needed.

## For the beekeeper (Figure 2)

### Essentials:

- Veil, to protect the eyes and head from stings.
- Hive tool to break apart the boxes and frames which will be glued together by plant resins that bees collect.
- Smoker, to keep guard bees calm and to stop the defense message (alarm pheromone) reaching the soldier bees.

### Recommended for new beekeepers:

- Elbow-length gloves.
- Coveralls, to keep wax and honey off our bodies, and as an added layer of protection against bees.
- Boots to protect ankles.

## Colony alternatives

- **Swarm** (Figure 3). Collecting a swarm is possible, but it is advisable to re-queen after a while to reduce the chance of swarming again.
- **"Packages"** are wooden and wire screen boxes containing a caged queen and 1 or 1.5 kg of bulk bees (about 6,600 bees per kg). The feeder can is removed from the package, the bees are bounced and shaken into a hive, the queen is released from her cage on to a comb deep in the hive, and the hive is closed up. It is good idea to feed sugar syrup to the new colony.
- **"Nuclei"** includes 3 to 5 frames of bees with brood and a queen that are put into hives.
- **Full sized colony**, and all the equipment.



**Figure 1. Beehive** (Source: <http://extension.missouri.edu>)



**Figure 2.** Afghan beekeeper holding a frame (Source: *Rural Development Network Afghanistan*).



**Figure 3.** Bee swarm (Source: <http://beebiology.ucdavis.edu>, photo by Kathy Keatley Garvey, edu).

Prepared by James Hill, Maria Paz Santibanez and Mark Bell 2012

Reference: "Starting a Small Beekeeping Operation" by Eric Mussen 1994, <http://sfp.ucdavis.edu>; "Getting Started in Beekeeping" by Eric Mussen 2010, <http://beebiology.ucdavis.edu>

For more information visit: <http://jp.ucdavis.edu> -Copyright © UC Regents Davis campus, 2012. All Rights Reserved.