



Beekeeping in Africa: Installation of bee hives (with particular focus on the top bar hive)

Source	FAO
Keywords	Beekeeping, beehives, baits, hives
Country of first practice	Africa
ID and publishing year	7291 and 2011
Sustainable Development Goals	No poverty, decent work and economic growth, industry, innovation and infrastructure

Summary

This technology describes step by step how to install a top bar hive, including advantages and disadvantages of installing hives on a stand or hanging them.

Description

1. Preparing the top bar hive for installation

Once the beehives and the site have been acquired, the hives must be installed. Before this is done, they must be prepared so that bees will occupy them.

1. Clean the beehive: be sure it contains no dirt, cobwebs, spiders or insect which might arrest any scout bee visiting the installed beehive in the near future.
2. Bait the beehive with any of the following materials: a little raw beeswax, dry cassava flour, a sweet syrup such as palm wine or molasses, granulated sugar, sweet-scented lavender, limes, cow-dung, intestinal waste, lemon grass or even, in very dry areas, a dish of water.

1.1 How to bait

- The best bait is beeswax, which can quickly attract a swarm of bees. Beeswax is the most reliable bait, because it retains its properties for a long time. All other baits cannot last long in the hive and must be replenished or replaced when the old supply is exhausted or destroyed.

- A small cake of beeswax rubbed against the inner walls of the hive can encourage bees to visit the hive. It is also important to rub wax against the tip of the v-shaped or ridged portion of the wooden starter top-bars.
Beeswax rubbed against those areas of the top-bar will guide the bees to build their combs along it. Otherwise, the bees may build comb across the top-bars, creating a serious problem which is difficult to correct and makes brood-nest control impossible.
- Sweet juices and syrup can be used to bait bees. They can be put in a jam jar or any container inside the hive. Twigs or sticks must be provided as landing boards so that the insects can safely take the syrup without being drowned. Special care must be taken to restrain other insects from visiting the syrup.
- Granulated sugar may be sprinkled on the floor of the hive.
- Spray or sprinkle a few drops of lavender in the hive. The smell will attract honeybees to visit the beehive.
- Lemon grass can be rubbed on the inner sides of the hive.
- In the northern savannah where beekeeping is a traditional occupation, dried cow-dung is usually



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burned to glaze the inside of the clay-pot hive. This is said to attract bees. Bees always visit fresh cow-dung to obtain water during dry periods of the day.

- Water cannot be used as a bait in cities and towns where water for human consumption is abundant. But in the dry savannah villages where water is scarce, it can work.

After baiting the hive and treating the top bars, the top bars must be neatly arranged, leaving no gaps in between them. Check whether the top bars fit the hive body.

Do not leave any gaps anywhere, because they will cause problems when the colony is being moved. Let the bees use only the entrance if possible.

1.2 How to treat grooved top bars

The groove in grooved top bars should be filled with wax. First, melt down the wax completely. With a wooden stick, bring some wax into the grooves of the topbars and let dry.

2. Installation of beehives

A hive can be suspended, for example between two trees or from sturdy branches of big trees. It can also be installed on a platform or a rock.

This is a decision that must be made by the individual beekeeper. Advantages and disadvantages of the two methods are set out here below.

2.1 Hanging beehives: advantages and disadvantages

2.1.1 Advantages

- It is cheaper to hang a beehive than to install it on a platform.
- The lizard, an important hive predator, does not seem to pose a serious danger.

- Cattle and other grazing animals cannot tip the hive over.
- Running water cannot carry the beehive away.
- It is easier to prevent ants from reaching the hive than when it is installed on a stand.
- A thief seldom steals a top-bar hive in a tree, especially when it contains honey, because it is not easy to remove the suspension wires if they are properly attached.

2.1.2 Disadvantages

- A suspended hive can swing. The bees become alert and are prepared to pounce on the beekeeper if they find him.
- Honey-harvesting and brood-nest control are difficult to execute during the day.
- It is not easy to change the location of the hive. When removing it from the tree, the least false movement may result in tipping it over and jarring the whole contents. Sometimes the only way to remove it from the tree is to cut the suspension wires.

2.2 Installing a hive on a stand: advantages and disadvantages

2.2.1 Advantages

- It is easier to place the hive on the stand and remove it.
- It is easy to move both hive and stand to another spot.
- The beehive does not swing about even if the beekeeper is working.
- Honey collection and brood-nest control can easily be carried out.

2.2.2 Disadvantages

- Grazing animals can knock the hive over.
- The legs of the stand can easily be used by lizards to reach the hive unless they are protected by lizard guards.



- It is more expensive and tedious to make a reliable stand than to buy a metallic wire for hanging a hive.
- Easy movement facilitates easy stealing. The thief has no time to waste.

Figure 1. Installation of bee hives (with particular focus on the top bar hive)



2.3 How to install a hive

To hang a hive in a tree, select a suitable branch and test its strength. Remember that the hive can weigh as much as 60 kg when full with honey.

Inspect the tree to be sure it is ant-free. If it contains ants, avoid it. Use the suspension wire to hang the hive as shown in Figure 2. The hive should tilt slightly, with the entrance down, so that rain entering the hive can trickle out.

It should be parallel with and at least one metre above the ground. Study Figure 2; only hive (A) is correctly installed.

It is hanging from two strong and sturdy branches, and each of the four suspension wires is attached separately. Hive (B) is nicely hung parallel to the ground, but the wires on each side are joined and hang from only two points on the same branch. The other subsidiary branches were ignored.

In a strong wind, hive (A) will never tip over, but hive (B) will dangle and tip over, and all the contents may be lost. Further,

the top cover of the hive should always be unobstructed to facilitate its removal and replacement. The stand for hive (C) has no lizard guards.

Figure 2. Installation of bee hives (with particular focus on the top bar hive)



3. Further reading

- For more information on Beekeeping see the TECA category Beekeeping
- See also the technology: Beekeeping. How to make a topbar hive (KTBH model)

4. Related/Associated Technologies

- Beekeeping in Africa. Site selection for bee hives: TECA ID 7323
- Beekeeping in Africa. Colonization of a bee hive: TECA ID 7324
- Beekeeping in Africa. Colony management I. Examining the colony and controlling swarming: TECA ID 7328
- Beekeeping in Africa. Colony management II. Dividing, uniting and feeding a colony: TECA ID 7326
- Beekeeping in Africa. Colony management III. Record keeping and nest control: TECA ID 7327
- Beekeeping in Africa. Honey harvesting: TECA ID 7329
- Beekeeping in Africa. Honey and bee wax extraction: TECA ID 7330
- Beekeeping in Africa. Using bees for pollination: TECA ID 7331
- Beekeeping in Africa. Responding to



common bee diseases: TECA ID 7332

- Beekeeping in Africa. Choosing and rearing a queen: TECA ID 7333

5. Objectives fulfilled by the project

- Resource use efficiency; and
- Pro-poor efficiency.