



REPUBLIC OF KENYA



KALRO
Kenya Agricultural & Livestock
Research Organization



NAVCDP
NATIONAL AGRICULTURAL VALUE CHAIN
DEVELOPMENT PROJECT

TYPES OF BEE HIVES



Type of bee hives

A bee hive is a structure that houses bee colonies. The following hives are the most commonly used in Kenya and beekeepers can adopt any depending on the availability and preference.

1. The Complete Log hive

This is the traditional hive used for ages by our forefathers. It is made by using relatively aged tree trunk and creating a hollow where bees are expected to dwell. Both ends of the hollow are covered with piece of wood, made to uniformly fit the hollow size. Bee-sized holes are drilled on one side for bee entry and exit. This is the side which will host the queen and brood and is not opened unless for inspection. Most of the time harvesting of honey comb is done from the side without honey bee entry holes. The bees will construct honey combs in regular half circles, slanting half circles or along the length of the roof. This hive is known to produce 8-12 kg of honey per harvest.



Complete log hive: (Source: ABIRI Team)

Complete log hives are the most common and abundant in the country and occur in so many different forms and shapes based on the community and artisans. The form and shape also depend on the available material for making the hive.



A complete log hive insulated using a metal material. The photo was taken in Eburu, Nakuru county. The place experiences cold weather. (Source: M Kasina)

Complete log hives come in varying sizes and are rarely uniform due to trunk size. Therefore honey harvesting is not uniform. The 8-12 kg is an average as most of them will fall into the category.

2. Kapkuikui Super Log Hive

The Tugen community in Baringo county have a traditional log hive which is always cut into two equal halves on the long side. The preference is attributed to easy harvesting and hive handling. The Kapkuikui superlog hive is a modification of this traditional Baringo log hive as it has an addition of a queen excluder to enhance quality honey harvesting.



Kapkuikui super log hive. (Source: ABIRI Team)

How to make Kapkuikui Super Log Hive

Step 1: A hollow wooden log is split lengthwise into two

Step 2: The two ends are fitted with wooden cylindrical covers

Step 3: The internal framework has wax rings that offers a foundation from where the bees start constructing honey combs.

Step 4: Fix the queen excluder wire mesh about 30 cm (1 foot) from the entrance hall.

To make bees construct their combs in the regular half circles, wax is introduced. Hives occupancy is dependent on area and placement to trap the swarming bees. This hive can produce up to 15 kg of honey per season.

3. Kenya Top Bar Hive (KTBH):

This hive was designed by Agriculture Research Division, Ministry of Agriculture, Kenya to manage honey badgers, extreme weather conditions and for increased honey yields. There are two types: original type and improved type (with queen excluder). The improved type has enhanced honey quality and ease of harvesting. Occupancy is usually dependent on the area and placement. It can give about 15 kg of honey per harvest.

KTBH has undergone many forms of modifications by farmers and artisans; the main reason is lack of regulations to monitor use and specification.



The KTBH. (Source: ABIRI Team)



A modified KTBH. There exists a myriad of KTBH modified by beekeepers across the country. Their effectiveness is not studied yet. This hive was observed in Eburu, Nakuru county. (Source: M Kasina)

4. Single Box Hive

This hive is constructed in semblance to the KTBH. The difference is that the single box hive does not slant on the sides. It has been introduced as part of many modifications that beekeepers continue to implement at local level. Data on its performance is scanty because it is not well adopted. Its bars are similar to those of KTBH as they also do not have frames. The single box hive does not have an additional box on top of it. Modifications exist where a queen excluder is included.



The Single box hive (Source. ABIRI Team)

5. Barred-Box Hive

This hive takes the form of a box with two or more chambers. The base chamber is the brood chamber where bees have entries into the hive and queen settles to lay eggs and support colony development. A queen excluder has been devised to prevent the queen ascending to top chambers. The top chambers are used by bees to store honey and thus are the harvested areas. The top chambers are also called ‘super hives’ and can be increased to 2 or 3 as the population of worker bees increases.

There are diverse modifications of this hive by farmers and artisans.



A modified Barred box hive by a farmer in Eburu, Nakuru county. (Source: M. Kasina)

6. Framed-bar box hives

There are various types of box hives with framed bars. In Kenya, they are all commonly known as Langstroth hive. However, this is just one of the many types. It is a domestication of a technology developed in western countries. It comprises two (2) or more boxes placed on top of each other. The lower box (the brood chamber) is for bee production while the rest of boxes (supers) are for honey production. Between the lower and super box (the super), a queen excluder is placed to prevent the queen from moving to the supers. Honey production is 10kg per harvest from the super chamber. There exist diverse modifications in the market.



Framed-bar box hive held in place by a hive stand. (Source: ABIRI Team)

Conclusion

Hive is the most important startup for beekeeping and the key house structure for bees. It is, therefore, necessary for the beekeeper to be keen on the choice of hive to acquire. It is recommended that you research well on the choice of your hive types before acquiring. It is even better if you could participate in its construction.

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