Bee Keeping Technique for Honey Production

Technique definition
Honey production using improved bees hives.

Purpose
Income generation through sale of honey produced.

Bee hives commonly use in Kenya
Beekeeping in Kenya is mainly undertaken using three types of hives, namely; traditional (log hives), Kenya Top Bar Hive (KTBH) and Langstroth hive.

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Log hive hang on a Tamarind tree</td>
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Branded Kenya Top Bar Hives</td>
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Branded Langstroth bee hive</td>
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Langstroth bee hive with two boxes (supers). Top box open to reveal framed bars</td>
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Procedure for honey production in bee hives
To maximize honey production, the following procedure is recommended;

- Select a site with trees/shrubs that that produce flowers for nectar production. The site should be protected from strong sun and winds, and accessible.
- Place bee hives on the trees or on already prepared stand. Where stands are used they should be at least 1 metre above the ground.
- Attract colonization by placing bee bait such as bee wax or honey, or scented plant materials that attract bees into the hive.

Apiary site set on raised platform

Kenya topbar hive hang on a tree

A beekeeper inspects a hive before setting it on a site

A beekeeper cleans and scents bee hive using locally available shrubs

- For Langstroth hives, attach the queen excluder placed between the brood chamber and the super after colonization of the hive.
- If hives are not near a water source, provide water for the bees.
- Monitor the hive from time to time until the honey matures.
- Inspect for, and manage any intruders such ants, beetles, spiders or honey badgers. These can be managed by greasing the suspension wires, physical removal, or use of wasp trap.
- Prepare the harvesting equipment that include; smoker, knife, and container in which to put the honey combs.
- Put on appropriate harvesting gear which may include an overall, a hat with hanging face veil, gloves when harvesting honey.

Modern smoker

Traditional smoker

- Harvest by removing mature combs only, which are capped or partly capped.
- Remove the combs from bars leaving about 2 cm for the bees to start building on again.
- Place the combs in the extractor e.g. centrifugal extractor.
- Ensure clean extraction equipment and environment.
- Extract the honey.
- Refine honey at a temperature of 40°C for honey and 50°C for water in the centrifuge.
- Sieve the honey.
- Measure the water content by using refractometer.
- Package honey in appropriate containers for use and/or sale.

Advantages of bee keeping

- Promotes use of non-timber forest products.
- Promotes tree planting as bee forage.
- Improves crop and tree pollination, thus playing a big role in improving crop yields and biodiversity conservation.
- Is relatively cheap and not competitive with other farming activities in terms of resource needs.
- Requires little land to undertake.
- Has low labour requirement.
- Honey is a source of food.
- Other by-products such as bee wax, bee venom, and royal jelly can be harvested boosting income for bee keepers. Some of these products have therapeutic value.

Disadvantages

- High cost of honey processing equipment.
- Langstroth bee hives are expensive.
- Modern hives requires technical skills to manage.

Dos

- Follow the prescribed procedure.
- Maintain the appropriate temperature during honey extraction to avoid loss of enzymes within the honey.
- Maintain the required moisture content of honey.
- Enhance technical skills for better management.

Don’ts

- Do not attach the queen excluder before colonization.
- Do not harvest honey from the side of the queen.

Recommendations

- There is need to explore development of other bee-related products such as; bee wax, pollen, propolis, bee venom, and royal jelly.
- Promote the technology to the community living adjacent natural forest to encourage forest conservation.

- Where communities may not afford modern honey production and processing equipment, opportunities for credit facilities may be sort for purchasing processing machines and beehives.

Honey processing equipment


Processed honey packaged in labeled containers

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