



## KENYA AGRICULTURAL AND LIVESTOCK RESEARCH ORGANIZATION

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### FACTSHEET FOR TECHNOLOGY INNOVATORS WORKING WITH SMALL HOLDER

#### FARMERS IN KENYA

#### HONEY PRODUCTS



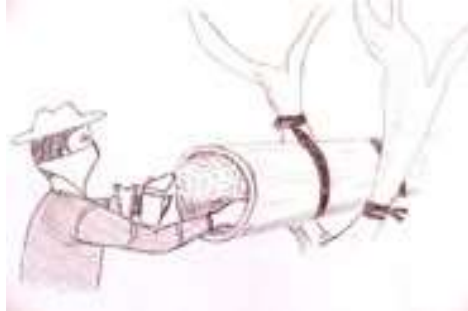
#### INTRODUCTION

- Honey is the sweet, viscous juice usually collected in the largest quantities from the beehive. It is found in cells of the honeybee comb.
- Mature (ripe) honey is usually found in sealed combs and can be stored for a long time, unsealed honey is not mature (unripe) and therefore ferments shortly after it is harvested.
- Honey is used as food, medicine (constipation, duodenal ulcers, liver problems, burns, etc) and as ingredients in medicine (added in cough syrups), food (confectionary industry), making beverages and cosmetic creams.

#### HONEY HARVESTING

- Harvesting equipment should be clean and dry.
- Honey containers should not have any residual smell.
- Chemicals (synthetic or natural) should not be used to drive bees away during harvesting.
- Dress appropriately.
- Excessive smoking should be avoided. This may give honey a 'smoky' flavor or smell.
- Smoke materials that produce a lot of soot (eg dry grass) should not be used during harvesting.
- All bees should be carefully brushed from the harvested honey combs.

- Brood should never be harvested.
- Only ripe or capped honey should be harvested.
- Honey capping is usually white (propolis is not added to the wax); while capped brood is usually brown (because propolis is added to the wax).
- Do not mix old honey combs (dark in colour) with new honey combs (white in colour).



Beekeeper harvesting honey



Capped honey in frame hive. Honey cappings are white



Nicely capped honey in a bucket



Comb of capped honey (middle) and capped brood (both sides).

Notice the difference in colour (white and brown).

## TYPES OF HONEY

- **Crude honey**
  - This is a mixture of ripe and unripe honey.
- **Semi-refined honey**
  - This is generally the liquid honey that remains when you skim wax off the top of crude honey.
- **Refined honey**

- Refined honey is clean. You strain it to remove all particles of beeswax and other materials. Remember: refined honey is unchanged, it is only strained. Nothing else is added so it is still the pure honey that bees made in the hive.
- **Chunk honey.**
  - Whole combs of capped honey can be harvested carefully from the beehive. You can cut up pieces of the comb and put them into jars of liquid honey. This gives the consumer a feeling that the honey is real and not adulterated with sugar. Chunk honey can fetch a higher price than refined honey.
- **Comb honey**
  - Honeycombs of capped honey that have a nice white capping can be cut up, placed on small trays, and covered with cling film.
  - These are very marketable in Kenya and command a very high price in the market.
  - This product is priced per gram.

## POST-HARVEST HANDLING

### Storage

- Honey should be stored in dark, cool and dry places. Do not expose your honey to too much heat and sunlight.
- Honey should be stored in containers with tightly-fitting lids to avoid contamination and absorption of moisture.
- Food grade plastic or stainless steel containers should be used for honey storage. Honey is acidic and reacts with other metals causing rusting of the containers.
- Honey should not be stored in the same area with other agricultural inputs (fertilizers, chemicals, treated cereals etc).



Honey stored in tightly closed buckets on timber pallets



Honey should NOT be stored in metallic containers

## VALUE ADDITION/PROCESSING

### Honey Processing

#### 1. Simple straining

- Method is appropriate for freshly harvested honey from log and KTB hives.
- Uncap the honey by breaking it into small pieces.
- Fold the straining material twice (to form 2 layers).

- Tie the straining material over the mouth of a container (eg bucket).
- Use a wide-mouthed container to collect the strained honey.
- Pour the honey combs on the straining material.
- Cover the honey with another bucket (inserted to cover the honey). Bucket should be clean and dry.
- Placing the container in the sun makes the process quicker.
- Allow the honey to settle overnight.
- Remove the scum from the surface of the honey using a clean dry spoon.



### Using honey sieves

- Same as above method, but uses honey sieves instead of cloth/nylon.



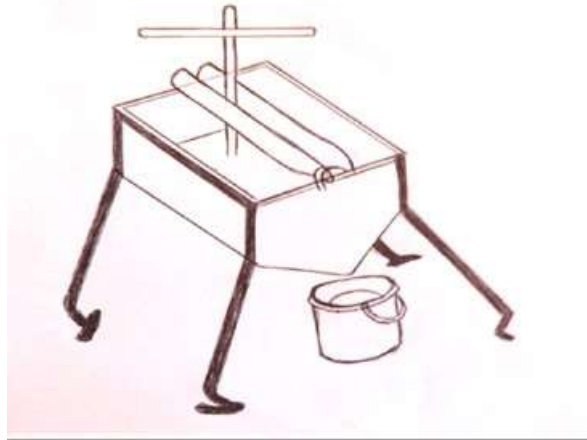
Plastic honey sieves: blue and red



An improvised honey sieve

### 3. Using a honey press

- Used to extract honey from log and KTB hives.
- Honey combs are cut into small pieces.
- Placed into the press, with the press handle adjusted to 'top.'
- The press handles is pushed downwards in a screw-like manner, and this movement 'squeezes' honey out of the comb.
- Honey drips into a collecting container beneath the press.



An illustration of the honey press

### Using honey extractors

- Used to extract honey from frame hives (and even from Log and KTB hives).
- Harvested honey frames are de-capped/uncapped.
- Placed in the extractor. Extractor is spun until all honey is extracted on the outer face of the comb.
- Combs position is reversed (face that faced inwards now faces outwards).
- Extractor is spun until all honey is extracted.
- Both sides of the comb must be extracted.
- Honey is collected into a container during harvesting through the honey gate.





Uncapping honey frames



Placing uncapped honey frames in an extractor



Extracted honey going through a sieve into a bucket

### Changes That Occur In Honey During Storage

a). **Fermentation:** honey turning into beer. Likely to happen if honey is:

- Left uncovered and absorbs moisture from the surrounding.
- Honey is harvested unripe or uncapped.

b). **Granulation:** also known as crystallization (honey forms crystals) It is a natural process due to glucose sugar. It is NOT an indication of honey spoilage.

### HONEY PACKAGING

- Honey can be packed in different quantities targeting different market niches.
- Common packaging quantities available in the market are:
  - 1kg
  - 500 grams
  - 350 grams

- 20 grams.
- The package should have a label which should clearly show the following:
- Real name of product
- Brand name
- Nutritional content
- Certification mark
- Name and address of the packer
- Net weight
- Expiry date
- The label should be:
- Attractive to the targeted customers
- Not conceal the product
- Unique and innovative

Note: Avoid crowding the label, Use attractive colors, Use attractive and relevant graphics.

## MARKETING

- It is important for a beekeeper to identify, harvest, grade and handle excellent quality honey for marketing.
- Good honey quality is critical to meet market requirement purposes.
- The quality of honey can be judged from its cleanliness, taste, smell, colour and moisture content
- Strong marketing skills are also required

## REFERENCES

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