COLONY INSPECTION IN BEEKEEPING

KALRO
Kenya Agricultural & Livestock Research Organization

NAVCDP
NATIONAL AGRICULTURAL VALUE CHAIN DEVELOPMENT PROJECT

Introduction

Bee colony inspection is a fundamental practice for beekeepers to ensure the health, productivity, and sustainability of their colonies. Regular inspections allow beekeepers to monitor the condition of the hive, identify potential issues early, and take appropriate actions to maintain strong and thriving bee colonies.

Beekeepers are encouraged to follow the described procedures below to ensure they successfully carry out a thorough bee colony inspection.

1. Preparation

- Gather necessary equipment: beekeeping suit, veil, gloves, smoker, hive tool, inspection checklist, boots and any additional tools required.
- Choose a time when bees are less active, preferably during mid-morning or mid-afternoon
- Ensure that the smoker is properly lit and ready for use
- Ensure that all other equipment are clean, in good condition, and readily accessible.

Preparation before approaching the hive. Photo: ABIRI Team

2. Approach the Hive

- Approach the hive calmly and quietly, avoiding sudden movements or loud noises that may agitate the bees.
- Be mindful of bee flight paths and avoid standing directly in front of the hive entrance.

Approaching the hive. Photo: ABIRI Team

3. Use of Smoker

- Use the smoker to gently puff smoke at the hive entrance and around the hive

A smoker. Photo courtesy of ABIRI team

to calm the bees and reduce defensive behaviour.

- Do not over-smoke the hive, as excessive smoke can stress the bees.
- Do not use toxic material when creating the smoke. Smoke can also affect the quality of honey.
- Do not allow smoker to spark/ flame. This is to avoid accidents eg killing bees
- Avoid the rubber or plastics to create smoke.
- Smoke from pesticidal plants such as marigold, tagets and tithonia can be toxic to bees.
- Do not use petroleum based products.

4. Opening the Hive

- Remove the outer cover of the hive carefully, using the hive tool to break any propolis seals.
- Lift each hive body or super using proper lifting techniques to avoid injuring yourself or crushing bees.
- Work slowly and methodically to maintain hive integrity and minimize disturbance to the bees.

5. Frame/bar Inspection

- Remove individual frames/bars from the hive body or super, starting from the outer edges and progressing towards the centre.
- Inspect each frame/bar for the presence of eggs, larvae, capped brood, pollen, and honey stores.
- Look for signs of disease, pests (such as Varroa mites), and abnormalities in brood pattern or behaviour.
- Locate the queen if possible, observing her size, behaviour, and egg-laying pattern.
- Take note of the overall population size and activity level of the colony.

Opening of hives. Photo: ABIRI Team

Inspection of the hives. Photo: ABIRI Team

6. Assessing Hive Health

- Evaluate the condition of the comb for cleanliness, uniformity, and structural integrity.
- Check for signs of queen cells, swarming behaviour, or other indicators of colony health and stability.
- Assess the quantity and distribution of honey and pollen stores within the hive.

7. Addressing Issues noted during inspection

- Take appropriate action to address any issues or concerns identified during the inspection.
- Manage pests and diseases according to established beekeeping practices and guidelines.
- Consider implementing management strategies such as re-queening, adding or removing frames, or providing supplemental feeding as needed.

Assessing the combs. Photo: ABIRI Team

8. Closing the Hive

- Carefully reassemble the hive components in the reverse order of removal, ensuring that frames are properly spaced and aligned.

- Replace the outer cover securely to protect the hive from weather and predators.
- Allow the bees some time to reorient to the hive before leaving the area.

9. Record Keeping

- Keep detailed records of each colony inspection, including date, observations, interventions, and outcomes.
- Use a standardized inspection checklist or journal to track hive performance and trends over time.
- Review inspection records regularly to inform future management decisions and identify patterns or recurring issues.

Conclusion

Regular colony inspections are essential for beekeepers to monitor the health and productivity of their bee colonies. By following this procedure and conducting thorough inspections, beekeepers can proactively manage their colonies and contribute to the sustainability of bee populations and pollination services. Remember to approach hive inspections with patience, attentiveness, and respect for the bees' well-being.

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