

Monitor and maintain a honey bee hive

Overview

This standard covers the monitoring and maintenance of a honey bee hive.

The aim is to ensure the maintenance of the hive to produce a strong healthy colony of bees for the production of honey.

This standard is suitable for those involved in monitoring and maintaining a honey bee hive.

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Performance criteria

You must be able to:

1. assess the risks associated with the activity to be carried out
2. wear suitable clothing and personal protective equipment (PPE)
3. identify whether the conditions are appropriate for the honey bee hive to be opened
4. use **beekeeping equipment** to open the hive safely
5. identify the normal appearance of **brood** comb
6. identify different types of **adult bees** within the colony
7. identify the contents of the **cell** within a comb
8. identify the **brood**
9. check for the presence of **pests, diseases and disorders** and take appropriate action if they are detected
10. perform maintenance activities at the correct times and in accordance with relevant legislation and codes of practice
11. reassemble the hive according to specifications
12. maintain communication with colleagues and others involved in, or affected by, the activity
13. maintain good **hygiene practices** and bio-security
14. carry out all work in accordance with relevant environmental and health and safety legislation, beekeeping legislation, risk assessment requirements and codes of practice
15. maintain records of beekeeping activities

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Knowledge and understanding

You need to know and understand:

1. how to identify hazards and assess risks
2. the type of clothing and personal protective equipment (PPE) suitable for **beekeeping activities**
3. the **beekeeping equipment** required and how to use it safely and correctly for **beekeeping activities**
4. the different components of a honey bee hive and how they are assembled and used
5. how to manage changes in seasons, geographic locations, weather conditions, the timing of the flowering of forage plants and sources of undesirable nectar
6. how to manipulate bees to enable the opening of the hive for maintenance
7. the process involved in breeding honey bees
8. how bees respond to perfume and other scents
9. the benefits of using supers when required
10. the different adult bees within the colony and their specific job
11. the stages in the life cycle of a honey bee
12. the elementary anatomy and biology of a honey bee
13. how the bees' behaviour can help to regulate the environment within the colony
14. how plants and bees are mutually beneficial to each other
15. how bees collect pollen, nectar and water and their uses in the hive
16. how honey is made and why you get different types of honey
17. the **communication methods used by bees**
18. the nutritional value of honey to the honey bee colony
19. the correct time to remove honey from the colony
20. the importance of preventing robbing and how it affects the colony
21. the conditions leading to a swarm and the danger it presents
22. how a swarm and a nucleus can be turned into a productive colony
23. the reasons for comb renewal
24. the importance of reviewing the age of the existing queen and planning for a replacement
25. the advantages of marking and clipping queens
26. the potential impact of **pests, diseases and disorders** on bee health, the management of the colony and the economic effects

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27. where to find information on **pests, diseases and disorders** affecting honey bee colonies, including which are notifiable, and the action to take if they are detected
28. the correct procedures to take in the event of an **emergency**
29. the importance of maintaining communication with those involved in, or affected by, the activity
30. the importance of maintaining good **hygiene practices** and bio-security and the methods for achieving this
31. your responsibilities under relevant environmental and health and safety legislation, beekeeping legislation and codes of practice
32. the need for relevant insurance
33. the role of professional organisations and associations
34. the records that need to be kept and the importance of completing them

Glossary

Adult bees:

- worker
- drone
- queen

Beekeeping activities:

- use of a smoker
- assembly of a hive
- removal of hive parts (roof, crown board, suppers, brood combs)
- collection of honey
- packaging
- food labelling
- cleaning hive components

Beekeeping equipment:

- hive
- smoker
- fuel
- personal protective equipment
- hive tool
- queen excluder
- feeder

Brood:

- eggs
- larva
- sealed brood in combs

Cell: hexagonal section of a honey comb, storing pollen, nectar and honey

Communication methods used by bees:

- e.g. food sharing
- dancing
- scenting
- vibration

Emergency:

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- unhealthy brood
- sting
- swarm

Hygiene practices:

- protective clothing
- hand washing
- personal illness
- cuts and wounds

Pests, diseases and disorders:

- small hive beetle
- tropilaelaps
- varroa mite
- wax moth
- tracheal mites
- Asian hornet
- nosema
- varroosis
- American foul brood
- European foul brood
- sac brood
- bald brood
- drone brood
- chalk brood
- amoeba
- starved colony
- chilled or overheated colony
- plant poisoning
- pesticide poisoning

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