

# Bee Diseases and their Management



## Dysentery

(This is not a notifiable disease)

Dysentery in honeybees is not so much a disease but a condition. It can develop as a result of other ailments such as Nosema, or through feeding on fermenting honey, or not being able to perform 'cleansing flights' to void their bowels.

### Recognition:



Tell-tale signs of soiled frames and combs, and at the entrance and on the front of the hive affected. There may also be dead bees lying outside the hive entrance.

Winter dysentery problems can increase if there are periods of more than two or three weeks with temperatures below 10 degrees Celsius

Dysentery is more commonly a condition resulting from a combination of long periods without cleansing flights (generally due to cold weather) and food stores containing a high proportion of indigestible matter. As a bee's gut becomes engorged with feces, the bee voids within the hive. When enough bees do this the hive population rapidly collapses and death of the colony results. Dark honeys and honeydews have greater quantities of indigestible matter.

Occasional warm days during winter are critical for honeybee survival. When cleansing flights are few, bees will often be forced out at times when the temperature is barely adequate for their wing muscles to function, and large quantities of bees may be seen dead in the snow around the hives. Colonies that are found dead in spring from dysentery will have the tell-tale feces smeared over the frames and other hive parts. In very cold areas where no cleansing flights are possible during the coldest spells of winter, it is possible to replace all honey from the hives with a high fructose corn syrup which has nearly no indigestible matter thereby reducing the need for 'cleansing flights'.

### Vectors

Prolonged periods of cold weather (more than 2 weeks at less than 10 C) hindering 'cleansing flights'.

- Old fermenting honey stores in hive.
- Where Nosema is suspected as the cause - spores can exist in beekeeping equipment, honey, wax, etc. and will spread quickly during normal hive / colony manipulations.
- Beekeepers - Transferring contaminated equipment / material between hives, colonies and apiary sites.
- Crushed Bees - Bees will clean up any crushed bees during normal house keeping activities and can pick up and spread spores quickly through the colony.
- Robbing - Colonies weakened by other ailments will fall prey to robbing, transferring spores to other colonies and apiaries.
- Drifting - As with Robbing will transfer spores to other colonies.
- Swarming - Swarms can carry the spores with them to new sites where the disease will spread once new brood is produced.

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## Effects on *Apis mellifera* colonies

Colonies showing signs of dysentery may die out if left un-treated

## How to Manage Dysentery

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### Detection

**Hive Examination** - Examination of hive fronts, entrances, combs and frames and floor debris is required, especially in winter and spring months.

### Monitoring

Vigilance is important with all honeybee diseases. Check all apiaries and colonies regularly for health and suspect any colonies that are not thriving where there is no already known reason. Ensure appropriate feeding prior to and during winter months. Colonies that die out should be examined thoroughly and sealed to prevent robbing and spread of any diseases present.

### Controls

There is no specific treatment recommended for dysentery. The condition can effect normally healthy colonies as well as weakened colonies. Prevention is the best method of controlling this disease by maintaining healthy, strong and vigorous colonies that display good hygienic traits. Good husbandry and apiary management contributes greatly to overall colony behaviour and health, thereby avoiding the conditions in which dysentery can occur.

**Note: Presently there is no medical treatment for dysentery**

### Apiary Housekeeping:

- Always maintain a high level of hygiene in all your beekeeping practices
- Carry out methodical health inspections on a regular basis, checking for brood disease particularly in spring and autumn.
- Never transfer combs between colonies without checking for brood diseases
- Systematically replace old brood combs in your hives melting down the old comb to maintain clean and healthy brood.
- Never bring colonies or equipment into your apiary without establishing their origin, condition, and disease status.
- Sterilise any second-hand equipment or hive components before introducing them into your apiary.
- Discourage drifting and robbing in the apiary.
- Suspect stray swarm health until you know otherwise.
- Report any incidence of disease or suspicious conditions immediately to your Local Association.