

DEPARTMENT OF AGRICULTURE HORTICULTURE DIVISION

The first consideration of the beekeeper is to maintain healthy stocks of bees for the economic production of honey and beeswax. Unfortunately honey bees are subject to a number of diseases and pests, including those which attack the brood and those which affect the adult bee. However, American foulbrood (*Bacillus larvae*) which was introduced into New Zealand with imported bees many years ago, is the most serious disease of bees in New Zealand.

Until recently beekeepers have been allowed to treat infected colonies under certain circumstances, but experience has shown that the shaking method of treatment to clear disease from infected apiaries has not been successful in eradicating the trouble. In future, beekeepers will be required to destroy the contents of diseased hives found by Apiary Inspectors and to sterilise thoroughly any remaining hive equipment by approved methods, as indicated in the last issue of this journal.

Eradication of Foulbrood

The measures that are necessary to eradicate foulbrood are set out here for the guidance of beekeepers, who should make periodical inspection of their hives during the breeding season and deal promptly with any brood troubles found.

Destruction of Diseased Bees

The safest time of the day to destroy diseased hives of bees is in the late evening or during wet weather when there is no likelihood of bees flying during the day.

The most common method of killing bees preparatory to burning hives is to gas them with calcium cyanide. One or two tablespoons of the powder should be scattered inside the hive on the floor board or spread quickly on a piece of damp cardboard and pushed into the hive entrance. The beekeeper must stand on the windward side and should not allow the powder to come in contact with his fingers or body.

Another method is to lift the hive cover, drop the powder between the combs, and replace the cover immediately. In a very short time the bees will all be dead.

Calcium cyanide is a deadly poison and is used at the operator's own risk. Distributors of the chemical supply full directions for its use under all circumstances, with each package. These should be read carefully and followed meticulously.

Burning Diseased Bees and Combs

The first step in burning diseased hives is to dig a hole about 3ft or more in diameter (according to the amount of material to be dealt with) and 1ft to 2ft deep close to the affected hives. Part of the hole should be made deep enough to take any liquid honey that may escape the fire and to allow the honey to be buried finally well below digging or ploughing level.

Two iron bars, old pipes, or heavy timber placed across the top of the hole are helpful in keeping the fire from collapsing and allowing any honey that escapes to run away without choking the fire.

Place a liberal amount of dry twigs or any fine dry wood in and above the hole to give the fire a good start. Carry the diseased hives to the pit, taking care not to spill any of the contents on the ground. If a hole (approximately 18in. deep) is made large enough to allow ample ventilation the fire may be started on the bottom at one end. The dead bees should be shaken on to the stack together with the hive mats and any worthless woodware. The fire should then be started and frames free of honey stacked in the centre, as they will burn easily. When the fire has a good hold add additional combs containing any brood and honey around the edges of the fire, which should be kept well ventilated, and allow any melting material to run to the deepest part of the pit.

When all the material is burnt the surface of the ground around the pit

to a depth of 1 to 2in. should be removed with a spade and thrown into the pit to avoid the danger of leaving any dead bees or other infected material accidentally dropped while burning the frames and combs. The pit should then be refilled with earth, and all salvaged hive equipment removed immediately to a safe place for sterilising.

Disinfection of Hive Parts and Appliances

All salvaged material taken from diseased colonies should be sterilised as soon as possible after the destruction of the bees and combs. Any brace combs or propolis and refuse from the bottom boards should be scraped off and carefully collected and burnt.

Metal rebates attached to the hive boxes should be removed and sterilised or burnt.

The interior surfaces of hive boxes, lids, and bottom boards should be scorched with a painter's blow lamp. Scorching should be thorough but not to the extent of charring the wood-ware. Special care should be taken to see that all cracks and corners are scorched by the flame, as otherwise the treatment may not be successful.

Boiling Equipment in Wood Oil

Wood oil is a light oil with a low boiling point. If heated to the stage at which vapour begins to come off, it will be at a temperature of approximately 212 degrees F. At this temperature it can be used to sterilise equipment, which should be immersed in it for a minimum of 15 minutes. Where oils are used it is preferable that operations should be performed outside and care should be taken to select a container which will allow plenty of room for the expansion of the oil when heated, so that it will not spill and be ignited by the fire.

Boiling equipment in paraffin wax is effective, but is tricky. Details of this method may be obtained from Apiary Instructors.

Queen excluders and feeders which cannot be treated with a blowlamp should be boiled for 15 minutes in a caustic solution ($\frac{1}{2}$ lb. of caustic to 10 gallons of water), but the operator should take care not to get the solution on his face or hands. Where there is no beeswax or propolis adhering to the equipment a weaker solution (4oz. of caustic to 10 gallons of water) should be used.

If a hive tool has been used in the operations, it should be well sterilised by the fire before being used again.

The Apiaries Diseases Order, 1950

Under the Apiaries Diseases Order, 1950, which came into force early in October, the disease and pest affecting bees known as *Nosema Apis* and the bee louse (*Braula coeca*) are declared to be diseases within the meaning of the Apiaries Act, 1927.

The former is a parasitic spore forming disease which affects adult bees. *Braula coeca* is a well known pest of the honey bee in some European countries and has spread to the U.S.A. and Tasmania.

The above-mentioned order enables the Department to deal effectively with any imported package bees on arrival which are found to be affected with these troubles, for the protection of the beekeeping industry in New Zealand.

Apiary Inspection Districts

The Cook County previously included in the Hastings Apiary Inspection district has been transferred to the Tauranga Apiary Inspection district.

Beekeepers residing in the Cook County should now send all beekeeping correspondence to the Apiary Instructor, Department of Agriculture, Tauranga.

This change has been made for more convenient working of the areas mentioned. T. S. WINTER, Superintendent, Beekeeping Industry.

HONEY FOR EXPORT

UNIFORM GRADING SYSTEM

WELLINGTON, August 24.

Uniform procedure for the grading of honey for export is provided by the Honey Export Regulations, gazetted to-night. The honey must be graded for flavour, colour and condition, and the grading certificate, in addition to showing the colour, class of honey and points allotted for each quality, must include a general description of the source, flavour and condition. Certificates will not be issued for honey grading below 70 per cent for flavour, 25 per cent for colour or 85 per cent for condition.

—“Otago Daily Times.”