Farm Production & Practice

Ministry of Agriculture and Fisheries

Honey Bees Swarms and Feral Colonies

Eradication

Feral or wild colonies of bees are a threat to established beekeeping, because they cannot be inspected for serious diseases such as American foulbrood. Any infections will remain undetected and may spread to established bee hives.

'Wild' or feral colonies of bees are colonies of ordinary honey bees that have become established in a place other than a standard beehive. They are not necessarily wild in temperament. Regulation hives which have been abandoned by beekeepers also present a threat to established beekeeping.

All such colonies, feral or abandoned, may harbour a disease known as American foulbrood (AFB) or American brood disease (see FPP 124). A diseased colony will eventually die, allowing neighbouring colonies to rob the honey from the dead hive and so contract the infection too. Infected colonies must be burnt to prevent spread of the disease and serious financial loss to beekeepers.

Swarms

Honey bee colonies reproduce and disperse by swarming. Swarms are particularly common in spring, although they may also be found later. After leaving the hive a swarm usually settles temporarily while scout bees search for a permanent home. It is much easier to deal with the bees at this stage than later when they have become an established colony.

If a swarm is noticed, prompt action is necessary to ensure it is collected before it moves on. Names of beekeepers willing to collect bee swarms may be obtained from the local beekeepers' association, MAF, or the local council office. MAF does not remove swarms.

If no-one is willing or able to collect the swarm, it should be destroyed. The best method is to spray the clustering bees at night with a liquid insecticide solution. For the best material to use, see under "Insecticides" at the end of this AgLink. Pest destruction firms may do this work for a fee.

Established Colonies

It is much harder to collect or destroy an established colony than it is to deal with a swarm in the open. Even if access can be gained to such a colony, it is messy and difficult to remove the wax and honey. If any of this is left behind, another swarm will most likely inhabit the same spot next year.

Feral colonies are a real menace to beekeeping because of the risk that they harbour American foulbrood. The bees can also create a nuisance by stinging passers-by, and if the colony becomes established in a house the interior house linings may be damaged.

A long-established nest can be destroyed at any time, although the best period is August–September. At this time bee numbers and stored honey are at a minimum, so the risk of poisoning other hives is reduced.

Destroying Feral Colonies

The Apiaries Act 1969 makes property owners or occupiers responsible for destruction of feral colonies on their property. However, legal action against those who fail to comply with this is rare, and it is recognised that advice on destroying the colony may be needed.

Beekeepers should be prepared to destroy feral colonies as part of their effort in controlling AFB. Some commercial pest destruction firms will carry out this work for a fee, but MAF does not destroy feral colonies unless they are suspected of habouring AFB.

There are several methods of destroying feral bee colonies, and the most suitable depends on the location of the colony.

Fig. 1: A feral bee colony in an exposed position.

Accessible colonies: Several simple methods are useful for destroying any exposed colonies or those which can be exposed fairly easily (fig. 1). People attempting this job should be equipped with a pair of overalls, gloves, and a bee veil.

Honey and wax can be salvaged from a colony only if it is not infected with AFB or contaminated with insecticides. The combs should be placed in a sealed container as soon as they are removed.

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Information Services, MAF, Private Bag, Wellington, N.Z.

There are several methods of destroying exposed colonies using insecticides. Do the work when bees are not flying, either in the evening or when it is raining.

- The colony can be sprayed thoroughly with an insecticide solution; use any garden insecticide such as carbaryl, dichlorvos, maldison, or lindane. Some aerosol sprays are useful, such as the home garden products that contain synthetic pyrethroids and the residual fly killers. Ordinary fly sprays are usually ineffective because of their short period of activitiy.

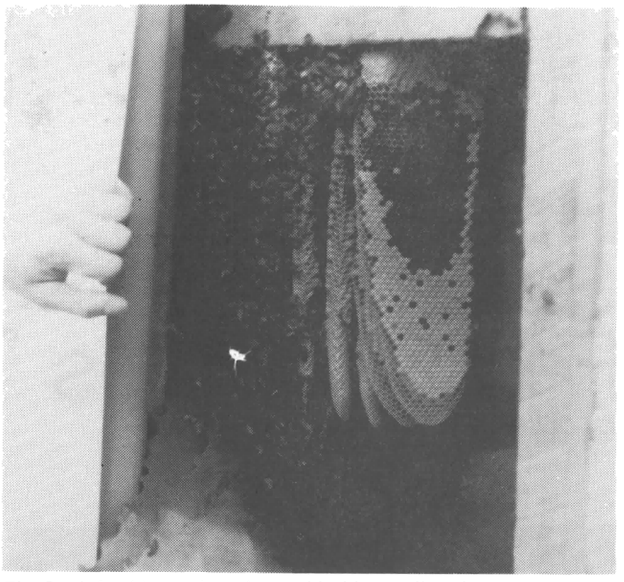

Fig. 2: A feral bee colony located inside a wall cavity, exposed by removing the cladding.

- An alternative to spraying the colony is to use a "borer bomb", which contains lindane powder and releases toxic fumes when ignited. Place the bomb in a tin to reduce the fire risk, and put it as close as possible to the bee colony before igniting.

- Bees that are in a cavity can also be killed by dusting them and the cavity with an insecticide powder. As soon as the bees are dead remove them with the combs, and burn them. Scrape the cavity clean, wash it with a strong-smelling disinfectant such as Jeyes fluid (to discourage other swarms from becoming established), and dust with insecticide powder. The hole should then be closed up and any gaps plugged with fibreglass house insulation, pieces of fleece, putty, or plaster. Do not use newspaper or pieces of rag.

  If insecticides are used to destroy a colony, honey and wax must not be salvaged for any purpose because of the risk of contamination.

If a colony is found to be infected with AFB (see FPP 124), then it must be destroyed and strict hygiene precautions taken. Dig a hole at least 0.5 m deep and big enough to take all the combs and dead bees. Start a fire in the bottom and add all the combs and bees, taking care not to extinguish the fire with honey. If necessary keep the fire going by adding wood, and only fill in the hole when the fire is completely burnt out.

Any nest cavity must be completely cleaned out and blocked up as described above. Any implements used in the operation should be scorched and washed in methylated spirits and all clothing worn should be thoroughly washed in hot water. As AFB is a notifiable disease, report any occurences to MAF immediately.

Inaccessible colonies: The exact position of a feral colony can usually be detected by feeling the colony's warmth or listening for a buzzing sound through the wall. If the colony cannot be exposed, there are several ways of getting insecticides into the cavity to kill the bees:

- Bees can be forced to walk through insecticide powder. Pack a 100 mm length of hose with powdered insecticide, and tap it until the powder has compacted to one side. Then fit the hose in the nest entrance so the bees will have to walk over the insecticide while getting into the colony. Other entrances should be blocked.

- Pour several tablespoons of concentrated liquid insecticide into the nest, or paint it around the entrance so the bees must walk over it to reach the nest. Be sure to block all other entrances.

- Blow insecticide powder into the nest cavity. Pack one end of a suitable length of garden hose with about 50 g (2 tablespoons) of insecticide. Place the end with the powder into the nest entrance, the other end in the mouth, and then blow sharply.

- If the nest is close to the entrance hole, cut sections off a yellow dichlorvos pest strip and insert them into the hole. The strip slowly releases insecticide fumes that will eventually destroy the bees.

- Make an applicator for use with a borer bomb, using a can with a removable lid such as a milk powder or baking powder tin (fig. 3). Fit a length of pipe into the lid, making the joint tight to prevent wastage of insecticide smoke. Use the older rubberised type of hose or a length of metal piping, as plastic hose pipes can melt. Tape a wooden handle to the can.

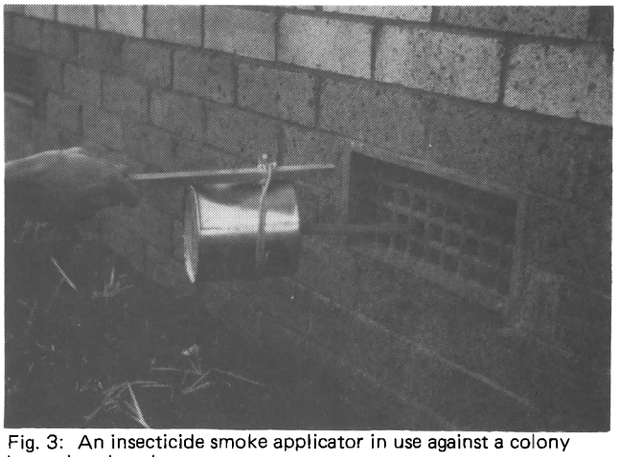

Fig. 3: An insecticide smoke applicator in use against a colony located under a house.

  Place a smoke generator into the can, light it, tightly replace the lid and put the nozzle into the entrance hole. Hold the apparatus by the wooden handle as the tin will become very hot.

  Where the nest itself is some distance from the entrance hole, bore a hole through the wall near the nest, taking care that structural timbers are not between the nest and the hole. Plug the hole with newspaper or grass immediately the drill is withdrawn, to prevent bees escaping. Light the smoke generator, remove the plug, and insert the nozzle of the applicator. Use this method in the evening.

- Feral colonies in hollow trees can be destroyed by burning. The fire can be started with diesel, and the wax will keep the fire going until the nest is completely burnt. Extra holes may have to be drilled in the tree to provide a good draught for the fire. Normal fire safety precautions should be observed.

- The above methods of using insecticides can also be used for colonies in trees. If this is done the cavity must be securely closed up to prevent robbing of the honey contaminated with insecticide by bees from other hives.

No matter which method is used, remember to block up all entrances to the nest cavity once the bees are dead. If this is not done, another swarm will almost certainly

establish itself in the same place next year. It also prevents other bees getting in and robbing honey which may be contaminated with insecticides or AFB.

Insecticides

Powders: Carbaryl, maldison (Malathion), and lindane are available in powdered form at most hardware or garden shops. Many of the flea powders on the market for treating dogs, pigs, and cattle contain enough insecticide to be effective. The multi-purpose insecticide/fungicide preparations used for spraying fruit trees may also be suitable.

Liquids: Most powdered insecticides can be made up into solutions. Some insecticides can be purchased as a liquid concentrate, e.g. maldison (Malathion), dichlorvos, lindane, and pyrethroids (e.g. permethrin, bioresmethrin, fenvalerate).

Smoke generators: Borer bombs can be bought from hardware stores.

Pest strips: Dichlorvos (Vapona) strips are available from hardware or grocery stores, and some service stations.

Aerosols: Many home garden aerosol insecticides and residual insect sprays are useful for killing bees. Ordinary fly sprays are usually ineffective.

Disclaimer

Use of trade names does not imply recommendation by MAF or endorsement over other products not mentioned.

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