

Wintering of Bees and Care of Stored Bee Combs

Seasonal Notes for the Domestic Beekeeper

HAVING REMOVED the last of the surplus honey stored by the bees during the honey season, beekeepers should now turn their attention to doing something for the bees to ensure their comfort and survival until next season. This article, contributed by the Horticulture Division, describes the fundamentals of successful wintering of bees and care of stored bee combs.

UNFORTUNATELY many beekeepers fail to give their bees proper attention at the close of the honey season, which often results in preventable loss of bee stocks and apiary equipment, which are costly to replace in time for the following season's operations.

The chief requirements for successful wintering of bees are disease-free colonies strong in young bees, close-fitting, rain-proof hives, adequate supplies of food, and protection from prevailing winds. Failure to fulfil any of these conditions is fatal to safe wintering of bees.

Food Requirements

Strong colonies headed by good queens housed under dry conditions and provided with adequate stores of honey and pollen are capable of surviving the most severe winters in any part of New Zealand without attention during winter. Some beekeepers fail to appreciate the value of stored pollen to their bees, especially when plant life is dormant.

Though nectar is the principal source of carbohydrate in the food of the honey bee, pollen is the source of all other food required by the bee for growth and reproduction within the hive. Pollen contains carbohydrates and fats in addition to other elements, but its most important constituent is protein. It is important, therefore, not to strip a hive of pollen in autumn and attempt to carry bees over to the next season on combs of honey alone.

In autumn it is best under New Zealand conditions to remove surplus honey stored above the second hive box only. Thus it is possible to leave each colony one super of fully capped combs of honey in addition to any honey and pollen stored along the upper and outer edges of combs in the brood nest below, which provides an extra margin of safety in food supplies.

All supers and bee combs above the second box should now be removed from the hives until they are required again next season. Special care should be taken to protect the combs against wax moth.

Wet Bee Combs

The safe storage of bee combs is a problem to beekeepers who have no special, bee-proof store room.

Wet combs, after extraction of the honey, may be placed back on the hive over the hive mat, with one corner of the mat turned back to allow the bees access to the wet combs so that they can clean them. The combs may then be removed for storage after a few days. In autumn no attempt should be made to place wet combs to be cleaned back on the hives in daytime. The work should be done in late evening as quietly and quickly

as possible to prevent undue disturbance of the bees. It is also advisable for any beekeeper situated in a closely settled area to wash the outsides of the supers clean of all traces of liquid honey before placing them out in the apiary; otherwise robbing and general disturbance of the bees may occur.

Control of Wax Moths

Precautions against wax moth damage should begin this month. Careless beekeeping methods may encourage wax moths to breed, and where hives are neglected and become weak in bees they are soon invaded by these pests, especially in the warmer parts of New Zealand. The moths also attack bee combs in storage, and unless such combs are adequately protected, much damage and loss may occur. Because of the feeding habits of wax moth larvae, it is good practice to sort combs for winter storage into three classes. Empty brood combs, combs containing pollen, and new empty combs should be spaced widely—not more than 8 combs to each box—and kept in separate stacks with a sheet of newspaper between each box and the next.

Domestic beekeepers are not usually able to store bee combs in a special moth-proof room, but if the above precautions are taken and the combs are kept in tight-fitting boxes stored in a cool place, a minimum of damage will be done by moths. Another method is to place tight-fitting hive boxes containing the combs in a cool, airy place with a fine-mesh wire



A domestic apiary in a well-sheltered, sunny, and airy position.

gauze cover at top and bottom of each stack to allow a free circulation of cool air between the combs at all times. If stacks are in the open, the top of each should be covered sufficiently to keep the combs dry.

Complete protection of bee combs may be provided by the use of certain chemicals, particulars of which may be obtained from local apiary instructors of the Department of Agriculture.

Protection from Winds

When hives are in exposed positions cold, penetrating winds enter hive entrances and all openings caused by ill-fitting or badly constructed appliances.

A site exposed to sunlight and sheltered from prevailing winds is the most economical protection that can be given to colonies of bees. Where winters close in comparatively early it is also advisable to reduce each hive entrance to about 5/16 in. by 3 in. with an entrance cleat or block after the bottom board has been cleaned thoroughly of all debris. This allows any dead bees to be removed rapidly and thus keeps dampness and formation of mould on combs to a minimum.

If apiaries are given the treatment already described and each colony has a good queen and goes into winter quarters fairly strong in young bees, hives should require no further attention until early spring.