BEES

SPRING MANAGEMENT

THE care given to bees in the fall is for the purpose of preserving the life of the colonies until the bees can resume their normal activities of brood-rearing and nectar-gathering the following spring. The object of spring management, however, is to bring the colonies back to maximum producing strength in time for the main honey flow.

Springtime is undoubtedly the most critical period of the beekeeper's year, because it is then that the bees of the colony are weak in numbers and vitality, and their food supply usually near to exhaustion. Furthermore, it is during this period, and often under very trying weather conditions, that the colony must make its greatest effort in brood-rearing, otherwise it may fail to become a profitable producer during the summer months.

During the spring and early summer four things are essential to the up-building of a colony:—

1. A prolific queen; all that cannot be classed as such should be replaced at once.

2. An adequate supply of food; each colony should have at least fifteen pounds of stores up to the time the bees can gather sufficient for their needs from the fields.

3. Protection during the treacherous and changeable weather of spring; especially protection from cold, driving winds.

l by Authority of Hon. J. G. Gardiner, Minister of Agriculture, Ottawa, 1940

4. Space for maximum brood production and the storage of any surplus food that may be gathered.

The beekeeper is responsible for supplying these needs, to neglect any one of them will result in less than maximum crops.

If the bees were well prepared for the winter they should need no attention during late winter or early spring. It is advisable, however, to examine the entrances of all outside-wintered colonies to see that none of them are blocked with dead bees, otherwise those still living may perish of suffocation. If on the other hand, there is the slighest danger of any colony running short of stores, a superficial examination should be made and food given where necessary. Combs of honey saved from the previous year's crop are extremely valuable in such an emergency. If none are available, sugar syrup made of equal parts sugar and water, is a good substitute.

Moving Bees from Winter Storage

Bees wintered outside in packing cases can take flight whenever weather conditions are suitable; therefore, they may stay in their cases until the latter interfere with the manipulations of the colonies.

Cellar-wintered bees, however, cannot take flight until they are returned to their summer stands. As a rule, these bees should be taken out when the first willows begin to yield pollen. In most parts of Canada, this is usually about the middle of April. If one has the opportunity of watching outside-wintered bees, the first appearance of pollen-laden bees is the cue for taking out cellar-wintered bees. Sometimes the cellar-wintered bees become excessively restless because of dysentery or some other cause—when this occurs it is advisable to bring them out earlier than usual, otherwise they may die in large numbers. As the bees are usually removed from the cellar before all danger of cold weather is past, they should receive some protection from extreme changes in temperature, especially should they be protected from cold driving winds. If the apiary is not protected by natural windbreaks, a slatted board fence about six or seven feet high is a good substitute. It is also wise to reduce all hive entrances to about one inch in length in order to conserve the heat of the colonies and to reduce the danger of robbing.

Examination of Colonies

On the first bright, warm day when the bees are flying freely, examine each colony to see that it contains an adequate supply of food, and that it is headed by a vigorous queen. Make this examination as brief as possible to avoid chilling the brood through keeping the colony open too long.

Each colony should have at least fifteen pounds of food at this time, any having less than this amount must be given honey or syrup. Combs of honey may be moved from colonies having an excess to those having too little, *but never do this unless it is absolutely certain that the apiary is free from disease.* The amount of stores present may often be estimated with a fair degree of accuracy by lifting the colony.

It is not always necessary to see the queen, and certainly inadvisable to keep the colony open too long to search closely for her. If the bees appear quiet and contented when the colony is opened, it is a fair indication that a queen is present. The appearance of eggs in the combs will usually prove it.

A compact brood nest indicates a good queen, while a patchy brood nest usually denotes a weak and failing queen. Sometimes a colony may be headed by a virgin queen, but she will be exposed by her brood. The capped brood of a mated queen is comparatively flat (worker brood), but if the cappings are raised like bullets (drone brood), it is the work of a virgin queen.

If one has a large number of colonies to examine, and there is a danger of the bright, warm weather lasting only for a short period, it is advisable to make the survey of all colonies as quickly as possible, marking such colonies as need food and correction for future attention. Much of the latter work can be done during weather unfit for the examination of colonies.

Give all colonies that need feeding a liberal supply of honey or sugar syrup. If honey from disease-free colonies is not available, give the bees syrup made of equal parts granulated sugar and water. The honey pail feeder is the best, but if one has any other kind on hand, they may be used. Avoid leaky feeders or the spilling of syrup about the apiary, otherwise, a bad case of robbing may be started.

Replace all drone-producing and failing queens immediately. This is an emergency where the practice of wintering-over surplus queens proves valuable, for without them, one has to send south for new queens. If one has wintered a large number of colonies and has no spare queens of one's own, it is a good plan to order a number early, even before one's losses are known. Should these queens not be actually needed to replace others, they may be saved by establishing them in nuclei.

Unite all weak and queenless colonies. It is more profitable to buy package bees and establish them as separate colonies, than it is to nurse along weak colonies.

Having attended to the needs of all colonies, the latter should require no further attention for the next two or three weeks when a second survey should be made. At this examination see that the bees still have plenty of food, that the queens are expanding their brood nests in a normal manner, and that there is sufficient room for brood and stores. At this time, all combs containing brood should be examined carefully for disease.

Healthy, uncapped larvæ are plump, pearly white in colour and they lie curled up at the base of the cell. The cappings over healthy, sealed brood are flat or slightly convex and of the same colour as the surrounding comb. Discoloured larvæ, dark, sunken or perforated cappings should be regarded with suspicion. If one is not well acquainted with the symptoms of disease, one should send a sample of any suspicious brood to the Bee Division, Central Experimental Farm, Ottawa, Canada, or to the Provincial Apiarist for diagnosis.

From now on, all colonies should be watched closely, for as the weather becomes warmer and the supply of nectar and pollen more plentiful, the colonies will build up rapidly. A single ten framed Langstroth hive is not large enough for a good queen, therefore, as soon as any colony shows signs of becoming crowded with bees, a second brood chamber must be given above the original, without a queen excluder between them.

In districts where dandelion and fruit bloom is plentiful, it will be necessary to add a super to take care of any surplus nectar that may be gathered. A queen excluder should be used beneath this super. Strong colonies may make preparations for swarming during this flow, but such attempts are easily controlled by keeping the colony supplied with plenty of space for brood and nectar, and by pinching out any active queen cells that may be started.

There is often a period of dearth between this early flow and the main flow from the clovers, and it is well to watch the colonies, especially the strong one, to make sure that they do not suffer from a shortage of food, as any such shortage will result in curtailed brood production.

Bees require water in fairly large quantities during spring and early summer. If there is none available within easy reach of the apiary, a supply should be provided in some sheltered place within the apiary.

Summary

As the object of all spring management is to assist the bees to build up the colonies to maximum strength, certain facts should be borne in mind in order to achieve this object most efficiently. These may be summarized as follows:—

1. Every colony must be headed by a good queen.
2. The bees must have an adequate supply of food.
3. The colonies must be protected from cold and wind.
4. The bees must have enough room for brood and stores.
5. They require a plentiful supply of water within easy reach.
6. Do not examine the colonies without having a definite purpose in view, and even then be as brief as possible.
7. Do not place too much reliance on the early sources of nectar. They are too often not sufficient for the needs of the colony.
8. Watch for disease and destroy any colony found infected with American Foulbrood immediately. Notify your Provincial Apiarist whenever disease is found.

For information on package bees and their management, write the Publicity and Extension Division, Department of Agriculture, Ottawa.

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OTTAWA: Printed by J. O. PATENAUDE, I.S.O., Printer to the King's Most Excellent Majesty, 1940.