

mail him a small piece of comb (two inches square), containing the diseased brood. The brood or young bees may die from other causes than foul brood, but the bee-keeper may well be suspicious of this disease in his hives if he sees dead brood scattered in unsealed cells. By knowing the disease and what to do for it, he will be able to overcome it. Directions for treatment will be sent free from this office or from the office of Dr. E. F. Phillips, in charge of Apiculture, Bureau of Entomology, U. S. Department of Agriculture, Washington, D.C.

If bee diseases be present in the hive or colony, it is important to treat them in such way as to remove the disease before the bees become quiet for the winter. The earlier such treatment be given in the fall, the better will be the results. Diseased colonies gradually decline and fail to produce enough young bees to keep the colony strong, and are, of course, most liable to die out entirely during the critical period of the winter season. Where the loss of bees is from this cause, it is easy to determine it by submitting samples of the brood in the comb as directed above, and then giving proper treatment, as will be described in printed instructions sent to those desiring them.

2. Queenlessness.

Bees may die during the winter time for the reason that they are queenless, and may have been so for some time, and practically all the bees in the colony are old bees, which would most naturally be likely to die at this time. While it is not true that a queenless colony always dies during the winter time, it is true that one without a queen, however, strong it may be, at some time in the summer or fall, is much more liable to die from some one cause or another, than is one which is queen right. All bee-keepers well know how ready the bees are to learn when a colony is queenless and rob it of its stores, especially at a time when sup-

plies from blossoms become scarce, and thus by robbing it, cause its destruction in starvation to death. Every hive should be examined at this time of year to be sure that it contains a good vigorous queen, and if not, it should be re-queened immediately by a new young queen, such as can be purchased for not over one dollar from the many queen breeders advertising in the reliable bee journals.

3. Not Enough Young Queens.

The Golden Rule for the bee-keeper should be, "Keep all colonies strong." This can be done only by continuing the rearing of brood of young bees during most of the year. Those colonies that live in a region where there is no flow of nectar during the late summer and fall are liable to go into winter strong in old bees, if any, but deficient in young bees. These will not winter nearly as well as those which have many young bees at the end of fall. It is the young bees which are more liable to live and remain vigorous during the winter time, and which come forth in the spring able to build up the colony and make it produce early and abundant stores.

In localities where there is a fair fall flow of nectar from asters, goldenrod, yellow flowers or lindens, and especially from buckwheat or some other nectar-yielding plant, the colonies build up strongly by rearing considerable brood in the fall, and also lay in sufficient amount of stores for the winter, and thus go into winter in an ideal condition in regard to the abundance of young bees and stores. In such localities fall feeding is not necessary neither for the purpose of rearing brood, nor for that of supplying winter stores. However, in many regions there is but little fall flow of nectar, and consequently brood rearing has practically ceased before this time, and colonies will be obliged to go into winter with the greater number of their bees at an advanced age rather than young. These

are not wintering turns in next spring the hive where there is necessary in a month Feeding.

There are many bees, food for well fed and into induce the former may be successful each color food that entire need in the second), it is a time an artificially from nature ing for brood early in the time in the should be quantity, of thin or each even that nectar is three-fourths evaporated one-quarter ening it is

In feeding it is by a syrup, so that when feeding a suitable food for by measuring this in not warmer blood temperature put it into the hives