

pound of honey to two pounds of sugar it assists in preventing granulation. A large colony would require one brood chamber sealed. Where you use two it gives the bees more space below, and gives them an opportunity to work in any direction from the centre of the brood chamber, the frames of the upper and lower being sufficiently far apart to admit of the free passage of the bees to any part of the hive. You should not wait until cold nights before you commence feeding—the latter part of August or first of September at the latest. One important point in feeding is to feed as rapidly as the bees will take it up until they have sufficient. Feeders that hold from ten to twenty pounds and enable a strong colony to all work at it so they may store it in one night are the kind we prefer.

WILL some one kindly tell me the cause of bees clustering on the outside of the hive box. I am a new beginner, so do not understand much about them. Thought perhaps they were going to swarm out. It is now about 12 days since they first came out. One side of hive is nearly covered.

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They cluster out from various causes. When there is no room in the hive for them to store honey in, even although there is plenty of honey in the flowers, they will cluster out on the hive, and wait until they get ready to swarm; but it is no indication that they intend to swarm when they do so—as we have known bees to remain clustered on the outside of the hive for days, when there was no honey in the flowers, and it was so warm that if all of them remained in the hives the combs would melt down. There is an innate principle in bees which teaches them that the temperature of the hive should not be above a certain point; and in order to keep it cool, well ventilated and healthy, bees stay at the entrance and fan with their wings, thus driving the air in, others stationing themselves about the inside of the hive, carrying the current of air to various points. There is usually in any strong colony quite an army of bees employed for ventilation. It is not good management to have a lot of bees hanging outside of the hive except in very extreme cases. A shade board preventing the sun

from shining directly on the hive is a good thing to use. Give plenty of room to allow the bees to work to their best capacity, instead of idling away their time during the honey flow. One very important point in bee-keeping is, to have them all gathering honey when there is any to be had; and in order to do this they must have sufficient room in the hive to store it. Second, third, or even fourth storeys should be added rather than allow bees to cluster on the outside of the hive until they get ready to swarm.

Preservation of Combs for Future Use.

FOR COMPETITION IN C.B.J.

BUT little need be said on this subject to let the reader understand the precautions necessary in storing combs so as to keep properly, and to be of use later on.

All honey should be extracted and the combs placed in supers over strong colonies to be licked off. A good time to do this will be before the clover yields freely. They should be given to the bees in the evening, and will most likely be ready for removal next morning. They can then be placed well apart in empty hives; for instance, hives containing nine or ten combs where the bees are at work on them should have at least two less when stored for preservation, or in other words, the further you leave them apart the safer, and should not if possible be nearer each other than one inch.

Hives containing said combs want to be kept in a cool dry room, where neither light nor air will harm them—in fact they are the better if the latter, but keep all doors and windows screened, especially at night, and should there not be hive storage enough the construction of a rack to place the overplus in should give the apiarist of any ability but little thought.

Would not advise keeping combs with much pollen in, as moths will breed in them more readily than in clean comb; but suppose they should escape destruction in that way, you will find that after a while said pollen will either ferment and protrude from the cells or dry into a crisp. In either case it is unfit for use, and when given to the bees the little laborers will throw out all they can, and what they cannot remove will be waxed over to insure the non-destruction of honey or pollen which may be afterwards placed in such cells. By all means, break up those combs of that nature—wash well in warmish water, and render into wax which will keep as long and perhaps longer than you wish.

D. CHALMERS.

Poole, June 8th, '92.