

in July they are in a starving condition from the system we have adopted. You must be careful, therefore, that you do not take it all away. Leave the unfinished case or lower case on to prevent starvation. Another way is with the double cases; you noticed in the spring we raised one up; the brood case became a surplus case; the honey, in that case is unfit for market; it is only fit for feeding back to the bees again. Now is the time to use that honey. If you are in a place where you have a honey flow during August, have buckwheat, and so on, after these cases are all off there is no harm in simply adding another case and letting them fill it up. They may gather sufficient stores to run them through the winter. If they don't you can feed them later on. I prefer myself for wintering one case, but I very often use two. When September comes, if your colony is weak, confine it to one; if there is a good strong colony it will do no harm if you leave it on but for myself I would prefer keeping it as a surplus case.

The next is the preparation for winter. If I have any uniting to do I do it in July just as soon as the honey flow is over, at once. Don't wait. I simply do it by piling one hive on top of the other. I don't care whether the bees fight each other or not, it is brood I am after, not bees. I don't pick the strongest colonies to keep through the winter, but I pick colonies with the best blood. The old bees are of no particular use to you at that time of the year, but the brood is. The brood hatches and gives you your colony.

Now it is the middle of September, and we will say you are ready for the winter. Here is your hive, a double case one. That hive in order to go through the winter must not weigh less than fifty pounds in all, if it weighs more than that it is better.

Mr. Hall—Nothing less than 56.

Mr. Hoshal—I often winter on 50, but I prefer 55 or 60. With the single case they must not weigh less than 40 lbs, and as much more, as you can make them. I have a pair of platform scales that I put on a wheelbarrow and take out to the yard. I come to this hive and put it on the scales and see what it weighs. I take my pencil and mark it on the hive, and so go over the whole yard. Now a single case, with bees, combs and all, weighs 25 pounds. Everything over that is honey. If they are lacking in stores, and we haven't the combs of filled honey to give them, it becomes necessary to feed them, and for that purpose we use a feeder like the following. The feed we use is syrup made from granulated sugar and water, one pound of granulated sugar and one quart of water, and bring them to a boil. Here is a board with a hole in it and a block to cover it. We take off the cover of the hive and put on the board. My feeder is made with a little piece of perforated tin on the top of a Gem jar. The jar is inverted over the hole. You perhaps may think this water in the jar will run out when inverted, but it will not. An important part of fall manipulation is the supplying of abundant stores and giving it in time.

Now the preparation for wintering outside. We come back to the wintering case. It fits the stand upon which the hive rests. Place the bottom board, pick up the hive and put it upon it, and pack underneath. That done, we put on a bridge, keeping the entrance from being closed, and the case slipped over. Snugly pack it all around the sides. You will notice that this hive cover has a hole in it. Here is another arrangement that has a hole through it and a piece of screen over one end. This tube is placed so that the opening in it comes over the opening in the cover, and the end communicates with an opening in the side of the case.