

as a division board to divide or contract the hive when it is desired to contract or narrow the space occupied by the bees. However, in the division board feeder there should be an abundance of large pieces of cork, or a sheet of cloth extending downward from the top bar to keep the bees from drowning, as they really will drown in this, especially when syrup is poured into the box when bees are feeding in it. Of course, in their feeding for winter supplies or to stimulate brood rearing it is always an easy method to put the food into some vessel and set it on top of the frames in an empty super, and cover this vessel with sticks, placing a cloth on this or over it to retain the heat while the bees come up to feed. However, on the surface of this liquid there should be large pieces of cork, straws or sticks to keep the bees from sinking into it and drowning.

Nothing pays the bee-keeper like sending the bees through the winter in fine condition. Supplies fed this fall may not all be taken up now, but if they are needed they will be there ready to prevent actual loss. If not needed they will not be lost, but will be preserved ready for future use, and, consequently, be only a means of insurance against want. It is far better to overfeed them, as there is really no loss from abundant feeding. It must be remembered, however, that it is illegal to feed sugar to bees and have them put this into combs and sell the substance as honey. The only use of sugar for feeding is to stimulate brood rearing or for supplies needed as food for wintering.

Pure granulated sugar syrup is fully as good for winter as the honey, and is really better than dark or poor honey, and it is far superior to the "honey dew honey." It is a matter of economy to remove the best nectar honey from the hive and sell it or use it for the table, and feed the bees sugar syrup honey in return. It is probable that for wintering

the bees one could safely have twenty per cent. of the honey dew honey in their food, but when there is too much of this last-named substance the bees will need extra opportunities for flights.

#### 6. Improper Protection of Bees for Winter.

If the hives be poor and loose or too large for the number of bees they contain, or if the walls be thin so that the heat will readily escape and the cold penetrate, or if the hives stand in exposed places, or foolishly be opened after the bees become quiet, or if from some other cause the bees be improperly protected from cold during the winter time, or even if not prepared for the winter in proper time and season, they are liable to suffer considerably, or all die, even though other conditions mentioned above may be favorable. We have seen bees starve to death in the midst of plenty during the winter time, because they became so cold that they could not move from one comb to another, or even from one cell to another. This is due to leaving them in a single-walled hive, unprotected by outer coverings, on their summer stands, and without proper provision for closing or protecting their entrances. If double walled hives be used, bees do not need to be put in a cellar. If, however, they be in single-walled hives, they should either be placed in a cellar during the winter, or around each hive there should be an outer box with a space of at least three or four inches from the hive, filled with chaff or leaves, or some other protecting substance, which will keep water and wind from the hives on all sides, including the bottom, as well as the top, and prevent the bees from suffering from sudden changes of temperature during the winter. Extreme warm spells are liable to be even more disastrous to the bees than extreme cold. The protection thus given, by making an extra wall of packing entirely around the hive on all sides, will help to preserve a

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