

In order to meet the requirements of a healthy bee hive, in outdoor wintering, I would briefly suggest the following: 1st, a sufficient quantity of honey to meet the demands of the colony until the bloom of the following spring. This honey store should be so distributed that the combs upon which the bees are clustered will contain honey enough to feed the colony during the cold weather, reserving the side stores for breeding in the spring. Never put empty comb in the centre of the hive after the honey season has closed. 2nd, the cover of the hive should be a solid board, sealed tight by the bees, and this covered to the depth of ten or twelve inches with some heat-retaining substance, in order that the top of the hive may be kept warm; protection to the other parts of the hive is also absolutely necessary, at least in the North-Western States. I have followed the discussion in "Gleanings" concerning sealed covers, with considerable interest, and am not surprised that success has not attended some of those who have tried them. The reason is quite plain to my mind. Too much emphasis has been placed on one part of the method, that is the sealed cover, ignoring to a great degree the deep covering above, a most essential adjunct. In some regions, as Central Ohio, Indiana, Pennsylvania, etc., the depth of covering indicated may not be necessary, but in colder climates the sealed cover will be a failure without it. Space does not permit of my explaining in full all the details of my method of wintering. In my work "The Winter Problem in Bee-keeping," I have stated these at length. Nor do I consider that all bee-keepers should understand what conditions are necessary and then provide for these in any manner convenient to his or her situation and surroundings. Since publishing "The Winter Problem," I have found by setting, that an empty space below the hive is a valuable adjunct in wintering out of doors, not to let the foul air settle at the bottom, as was, first, claimed, but for the following reasons: 1st. It is an absolute safeguard against the entrance of the hive becoming choked when covered with snow. 2nd. The bottom of the hive is, in winter, the coldest; this space lifts the cluster above the cold boards. 3rd. Bees are not apt to fly out on cold sunny days if the lower edge of the comb is three or more inches from the bottom board. The strength of the colony is thus conserved, and early breeding encouraged.

In conclusion let me say, that winter losses are not caused by poor honey, by fruit juice, by pollen, or by bacteria, it is simply a case of *protection* and *food*.

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**Manure for Pear Orchard.**—Hitherto I have always used stable manure in my pear orchard. This year I submitted a good dressing of steamed bone and muriate of potash. The effect on the quality of certain varieties was quite marked: Rostiezer, Gifford, Bartlett, Bosc and Lawrence were greatly improved. The Tyson, Sheldon, Anjou and Winter Nelis were but slightly affected in respect to quality. The Anjou, however, whether for this or some other cause, keeps much better than ever before.—Gardening.