

the latitude where used. Enough must be used so that the bees can keep the interior warm, else moisture and frost will accumulate, to be followed, in many instances, by the old, old, sickening story, so well known by northern bee-keepers. But for the fact that any increase in the amount of material increases the size and bulk of the hive itself, I should say it was practically impossible to use too much. In my hives in Iowa I used four and a half inches of fine timothy chaff or fine sawdust, but am satisfied that six inches would have been better—enough better to have paid for increasing the size of the hive. For coarser kinds of chaff, an increased amount would be necessary. This is also a point, or condition, the non-observance of which has cost many failures. I know one style of hive, sent out by a prominent manufacturer, that has only two inches of space for chaff. Whoever uses such a hive invites failure.

7. Bees ought to be closed down on as few frames as possible, leaving only room enough for ample stores. The less space there is enclosed by the outer packing, and the nearer the bees fill this space, the less will the cold be able to penetrate it. I used to cut my strong colonies down to the equivalent of eight L. combs each, and from that down to five, according to their strength. This is a more important point than in cellar wintering, because all the air in the cellar can be and must be kept much warmer than the air surrounding hives out of doors.

There are other conditions not so absolutely necessary as the foregoing, but which are of help. I prefer a hive large enough, or at least tall enough, to allow empty space between the packing and the cover. The bees seem to winter better than when the cover rests upon the packing. I consider winter passages through the combs a requisite to success in out-door wintering.

How far dampness causes disease, has been a much discussed question. A few years ago, in an article on this subject, I said: "Show me a practical method of preventing dampness in hives, and I will have no more fears of unsuccessful wintering." The statement is true, but instead of dampness being the prime cause, as I then thought, it is only the effect of other causes. The value of any kind of packing is not so much in its power to absorb moisture as in its power of keeping out cold, then the bees can keep the interior of the hive too warm for the moisture to condense in it, or even in the packing itself to any great extent. This is the real underlying principle of all successful wintering, either in

doors or out, to keep the condition such that the natural heat of the bees will expel all moisture from the hive, and as much as possible from everything around it; and to the greater extent this is accomplished, the more perfect will be the success. If a certain amount of material will accomplish this in southern Indiana, a much larger amount would be necessary in northern Michigan. The proper amount of material to be used varies with the kind used and the locality where used; but too little has been used in a hundred instances where too much has been used in one. I doubt if the latter mistake has ever been made.

*To be Continued.*

### A Home Market.

THE bee papers, and many bee keepers, have advertised for years to sell our honey in the home market. This is a question, however, that has two sides to it. We find our home market fairly glutted with honey from the small producers, at a very low figure. Of course much of it is not in very good shape, but all the same we are expected to compete in prices with it. This we prefer not to do, as we put our goods up in the neatest possible manner, and we can as well send it to some market where the crop is short, and realize considerably more for it. Now what is the use in trying to retain a "home market" for our honey when we can do better by sending it to some reliable commission house. If our goods are all right they are usually soon disposed of, and we have found commission men as prompt in making returns as other dealers. Then, too, many of our home dealers expect us to wait on them for the pay till the honey is sold, and we have known such in the meantime to fail and not pay at all. Again some dealers will expect to pay only in trade, at their own prices, which is not always very satisfactory. Then, again, some are inclined to kick when we come to settle, because some other "honey man" has been around selling for less, or the party has heard of us selling some inferior grade for less. Now when we send to some good house in a city where honey is wanted we avoid all this; get our money in a bunch, and perhaps find that we have realized considerably more than if we had forced it on glutted home market. Another nuisance is peddling honey from the house. Many bee-keepers put up signs at their front gates "Honey for Sale" to attract any chance passers. We used to do this, but stopped it some years ago. We found that all kinds of people would stop, inspect the honey, waste an hour or so of our valuable time and