

wintering that many are experiencing now, and I tried every place and manner of wintering that looked reasonable, to add to their comfort, and, as a rule, when they came out of winter quarters the loss would be from 30 to 75 per cent. For a long term of years I have wintered bees without loss, and fully 80 per cent. came out as good as when they were placed in winter quarters. If you ask where I winter my bees, my answer would be, in a warm, damp cellar. Why I prefer a warm cellar is because a warm atmosphere is a natural element of the honey-bee; and why I prefer a damp atmosphere is because bees are more quiet and healthier than in a warm, dry atmosphere for so long a time as 170 days without water.

In a warm cellar, where the temperature is from 60° to 90°, there is no discharge from the bees while in the cellar, unless it be in a dry state; and if bees have to be fed for winter, it can be done the last thing before placing them in, and then the bee-keeper knows just what the bees have, and no harm will be done because their feed is not sealed. The hives should be packed in a solid body when kept in a high temperature, and piled one on top of the other, three or four deep, with no upward ventilation. In this way of packing if some of the bees get uneasy and leave their hive, they are quite sure to enter some other hive, and no harm is done.

In wintering in a warm cellar, bees require all the combs that they occupy in the summer, and they will be all over the combs and do not cluster. The cellar must be closed, with no currents of air either hot or cold passing through it to arouse the bees. It is necessary to have a small ventilator from the top of the room for constant draft; a 3-inch pipe is sufficient for 200 colonies. A fire should be kept in the room above the bees whenever the mercury goes below zero.

Much is said about moisture in hives, and all manner of ways are tried to get rid of it. A warm atmosphere disposes of all moisture that arises from the bees, without any absorbents. Every colony should have plenty of feed to carry them through our longest winters, before they are placed in, so that their owner will have no excuse to go near them until spring. They will use more feed in a warm room than in a cool one.

The time to place bees in the cellar is before cold weather arrives—about the middle of November, as a rule. I use caps taken from the hives for stands to set the brood-chambers on, so that each tier of three or four hives rests on the one cap. The caps should be placed close together, and when all are in they form a floor to the cellar, and yet each stand is separate so that here is no jarring when handling in taking them

out. The bottom tier of hives should be raised off the bottom boards about half an inch at one end of the hive, while all the rest should be left just as they come from the yard, with a good cloth and sound top-board well glued in every hive. When all are in, close the cellar and let them entirely alone until there is something for them to do in the spring. About the time that willow begins to bloom is early enough in my locality.

The above plan of wintering bees is no theory, but is one that is practiced by scores of beekeepers in Northern New York, and invariably without loss in winter.

I have been as brief as possible in giving my mode of wintering, and will only add further that this plan is given for wintering large lots of bees. Where but few bees are kept where I live, they have no trouble in wintering them in any cellar where vegetables will keep without freezing.

What I claim for this plan of wintering is this: 1. It is the safest plan. 2. It is the cheapest. 3. It requires far less labor than any plan yet recommended.

Mr. C. R. Isham asked if Mr. Barber wintered his bees upon natural stores.

Ira Barber—Yes.

C. R. Isham—Do you leave the pollen in?

Ira Barber—Yes.

J. B. Hall endorsed the views and practices of Mr. Barber from his own experience. He accidentally discovered that bees will winter well in a high temperature. He had 48 colonies in a small bed-room off the kitchen. While he was absent a warm spell came in winter. He feared the loss of his bees. When he came home they were roaring loudly. He gave them up for lost in his own mind. But they wintered safely, and came out strong in the spring with plenty of brood in the hives.

Martin Emigh—I endorse Mr. Barber's paper, except the dampness.

C. P. Dadant—We have wintered bees in two cellars—one wet, the other dry, and the bees wintered better in the dry one.

Ira Barber—In a damp cellar the temperature must be higher than in a dry cellar. I have wintered bees successfully in a temperature of from 60° to 90°.

Dr. A. B. Mason—I agree with Mr. Barber except that I would take away the pollen. I do not say that the bees cannot be wintered well with pollen in the hives, but if they have no pollen they can have no diarrhoea.

C. F. Muth asked if he understood Mr. Hall correctly yesterday, that his honey harvest closed about July 20, and that last year he did not put his bees out until May 2. If so, how did