

gathered, as other conditions would influence the result; but it may be of interest to know that the honey season was exceedingly poor, and on July 23rd No. 1 had gathered (allowing 25 pounds per hive for comb and bees,) 33 pounds of honey, stored in the body of the hive, and 17½ pounds stored in the sections. No. 4 had stored 14 pounds in the body of the hive but had no surplus; in fact, on none of the others were surplus receptacles put, as only strong colonies gathered any surplus in the apiary.

The second clamp wintered much better, but did not reach anything like a desirable standard for wintering. On April 18th the facts were as follows:

No. 11, XXXX; No. 12, XXX; No. 13, XX; No. 14, XXX; No. 15, Dead; No. 16, XXX; No. 17, XXXX; No. 18, XX; No. 19, XX; No. 20, XXX.

On April 26th No. 20 was dead, making two dead in the clamp. Another examination was made June 1st, with the following results:

No. 11, XXX; No. 12, XXXX; No. 13, XX; No. 14, XXX; No. 16, XXX; No. 17, XXX; No. 18, XXX; No. 20, XXX.

Number of hive.	Number of combs with bees.	Amount of brood Langstroth frames.
No. 11 .....	6	5
No. 12 .....	8	7½
No. 13 .....	3	7½
No. 14 .....	6	5
No. 16 .....	5	3½
No. 18 .....	8	7
No. 20 .....	6	5

The remainder of the apiary (73 colonies), with the exception of one colony, was wintered in the cellar, and owing to the severity of the winter, it was a difficult matter to keep the atmosphere pure and the temperature high enough, hence the loss was a little higher than usual. Only three, however, died, which is much more satisfactory showing than in either of the clamps wintered outside. Regarding the latter, I may say that I am inclined to the belief that the bees packed with the paper had not sufficient ventilation at the entrance, and the paper packing prevented upward ventilation. In the second clamp some upward ventilation was possible. I do not know of any other way of accounting for the results.

During the winter of 1895 and '96, the experiment will be repeated, with this important difference, that passages will be allowed through the combs, to enable the bees to contract and expand the cluster, according to temperature, yet without having

to break the cluster, which is a very important advantage.

#### FEEDING OF BEES.

In an experiment in feeding bees sugar syrup for winter stores, the "Boardman" Entrance Feeder was used. It is an air feeder in which the bees have ready and continuous access to the syrup and at the same time find it impossible to daub themselves with the liquid. By this arrangement some waste is avoided. In our experiment, the bees had a continuous supply of syrup; and, so far as we are aware, the conditions under which the syrup was stored, were the best. The stores supplied were made of two parts best granulated sugar to one part (by measure) of water. The water was first brought to a boil; then the sugar was poured in and the mixture stirred until the sugar had dissolved and mixture had come to a boil. It was supplied to the bees a little above blood heat. In looking at the table, we notice that there is a considerable difference between the first weight of the hive, plus the syrup, and the actual weight six days after the last syrup was stored. The difference in weights may be attributed to evaporation, the consumption of stores which goes on all the time under natural conditions, and the increased consumption likely to go on whenever the bees are under the excitement or stimulus of storing and for some time thereafter. The colony weighing 33 pounds was not strong enough, and it will be noticed that in this case there was the greatest waste.

Number of Colonies.	Weight in pounds.	Pounds of syrup supplied	Weight six days after last syrup was fed.	No. of pounds gained by said feeding	Difference between first weight, plus syrup supplied and the actual gain in pounds	Percentage of loss
1...	36	27	51½	15½	11½	.63
1...	37	10	41½	4½	5½	.26
1...	34	18½	47	11½	7	.26
1...	33	14	37	4	10	.71

The above experiment indicates:

(1) That there is a greater difference between the weight of stores supplied to the bees in the feeders, and the increase in weight of the hive. There is a loss which cannot be explained in any satisfactory way.

(2) That it will not pay to extract the honey with a view to making a profit, and supply the bees with sugar syrup for winter

(3) That when feeding has to be resorted