


From the Farmer and Dairyman.

ON THE SCALES.

TESTING THE STORING QUALITIES OF THE BEES
FOR YEARS.

 I HAVE had one of the best colonies in my apiary on a scale during the last six years, and in 1886 I marked down the amount gained for the day every night, and also kept a close watch on the amount of surplus honey stored, and from this I found that when bees gain from one to three pounds, about one-quarter of the gain is stored as surplus honey, and when the gain is from three to eight pounds, about one-half is stored as surplus honey, and from the record kept for this season, about two-thirds was stored as surplus honey. These experiments were all made for extracted honey.

But it seems to me that the rearing of brood would not have anything to do with the gain of a colony of bees, for if the bees did not feed the brood it would not gain in weight, and if they take the feed from within the hive, it would not get any heavier on account of the brood; but it would make a difference in the amount of surplus honey stored, and when bees gain from 10 to 16 pounds per day they will lose from three to five pounds during the night, and should the next two or three days be cool or rainy, so that the bees could not fly, the bees would lose about three pounds in the first 24 hours, two pounds in the second, one pound in the third and one-half pound in the fourth day.

This loss is caused by the evaporation of the honey, and I think it is nearly as great when bees gather honey as it is when they do not, so that this would make the actual weight carried in by the bees during the day from three to five pounds more than the scales would show by weighing the hive in the morning and again in the evening, and I believe that when bees gain at such rates the old ones wear out as fast as the young ones come on, for they fill up the brood-combs with honey as fast as the young bees hatch, so that the queen will not be able to find any empty cells to put any eggs in, especially when running for comb honey.

I believe there were one-fourth less flying, or working bees in my apiary, at the close of the honey season than there were when I first put the scales under the hive on July 28, and three-fourths less brood.

I think that it is a great help to have a hive placed on a scale during the honey season, for you can tell just what your bees are doing, and how fast you will have to get your sections ready to put on, how much more room they need, etc., from two to five days sooner than you would if


you had no scales, and these few days would amount to several hundred pounds of honey for each day in an apiary of from 50 to 100 hives.

D. KAUFFMAN.

From Farm Stock and Home.

VENTILATION.

WHILE SUCH IS NECESSARY, IT MUST NOT BE
MUCH.

 GREAT deal has been said about bees wintering without upward ventilation, and quite a number of bee-keepers claim that they winter better without any upward ventilation, saying: Bees in their natural state—in the trees of the forest—have no ventilation and winter well, and seem to do much better than those having the best of ventilation. We have found many swarms in the last thirty years in many kinds of trees, and in nearly every instance we found, either above or on the sides of the swarm, rotten wood which the perspiration of the bees could pass into, acting the same as upward ventilation. Some parties claim that they winter bees safely without upward ventilation, and that it is the proper way. If they will invert their hives and pour water into them, it will run out, therefore they are not air-tight, for where water will run through air will escape.

It is true, if bees are kept in a perfectly dry place and at a temperature of from 45° to 50°, they require much less ventilation than they would if kept in a damp, cold place. If bees are kept where it is continually freezing, and there is no place in the hive for the escapement of the perspiration that passes from the bees, it will commence to freeze on the outside of the hive, and if it continues cold you will find your bees dead, and ice formed all around the cluster of bees. Had there been a small opening at the top, or near the top of the hive, for the air to escape, nothing of the kind would have happened.

It only needs a very little upward ventilation for bees; a good many bee-keepers give altogether too much. They need all the heat in the winter and spring months that can be obtained. Give only what will be necessary to let the perspiration out, so that the hive will not become damp on the inside. It is a good plan to leave the bottom-board off, or raise it up on blocks one inch, when wintering, especially in cellars; as the foul air always settles, and if there is any dampness in the winter depository it will prevent the combs from moulding.

The heat and circulation of the cluster of bees render the combs dry for some distance around the cluster, but there is not enough of this circulation of air, nor force to drive it to all parts of