

experiment all of about equal strength and all in Langstroth hives weighing on an average $57\frac{1}{2}$ pounds each. The wooden covers were removed from the hives and replaced with propolis quilts, the bottom of each hive was loosened from the brood-chamber and a block two inches square was placed at each corner between the bottom board and the brood chamber, insuring free ventilation from the bottom of each hive. The cellar was kept at a very even temperature of 44-48 degrees. The bees could be seen hanging below the frames in a quiet cluster all winter. They were all examined once each week and at no time did there appear to be any sign of uneasiness from the extra moisture. There were scarcely any dead bees on any of the bottom boards, nor any sign of dysentery, and all came out in excellent condition. The colonies were set out on their summer stands on March 20th, the day being fine and warm. All began flying at once. The average weight of the six colonies when set on their summer stands was $44\frac{1}{4}$ pounds each. During the days intervening from March 20th to April 3rd the weather was cool and no flying took place up to the later date. At this period there was but one good, bright, warm day (April 5th) and the bees had to content themselves to remain indoors until April 22nd, when the weather turned quite warm. The bees then built up very rapidly, and were in excellent condition for the honey flow.

A second experiment was tried adding more moisture. Six colonies were selected for this experiment, all about equal strength and all in Langstroth hives, weighing on an average 58 3-4 pounds each. The wooden covers were removed from the hives and the sealed propolis quilts left on. The bottom-board of each hive being loosened from the brood chamber and a block 2 in. square placed at each corner between

the bottom-board and the brood chamber, insuring free ventilation from the bottom of each hive. Seven pails of water were then put on the floor in such a way that the six hives were resting on the edges of the pails allowing the full surface of the water to be exposed. In addition to the pails of water six inches of sand was spread on the cellar floor between the pails and covering six inches of the floor outside of the pails. There was also a large cotton sheet spread over the six hives. The sand and sheet were kept thoroughly saturated with water once each week during the winter. The cellar was kept at a very even temperature of 44 to 48 degrees, and was well ventilated during the whole winter. The bees in this test were more uneasy than in the experiment first described, where no sand or cotton covering was used, having to keep up fanning for ventilation. There were also considerable more dead bees on the bottom boards and several had drops of water along the entrance, but there was no sign of dysentery. On March 20th, the day being fine, the colonies were removed to the bee-yard, where all began flying at once. The average weight of the colonies when set on their summer stands was $44\frac{1}{4}$ pounds each. From March 20th, to April 22nd, the bees had but one good flight. After April 22nd the weather became considerably warmer and they began building up rapidly, and they were in excellent condition for the clover bloom.

The average strength of the six colonies that had the extra moisture was not as great as in the former test, but as soon as they got fine weather they gained rapidly. Care was taken to see that the colonies in both tests had plenty of unsealed stores before fruit bloom, and between fruit and clover bloom. This was done by uncapping one side of a frame of honey nearest to the brood for food and providing

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