

drops of water collected on the comb and had begun to mold. The comb stored in the pantry and in the laboratory, at the end of the period of exposure, was in first-class condition.

This investigation, therefore, covering two years' work, emphatically points to the desirability of storing honey—both comb and extracted—in a warm, dry atmosphere, such as may be obtained in an upstairs pantry or room. Deterioration is sure to follow exposure in a damp atmosphere, and for this reason the cellar, no matter how dry it may appear, is not a good place in which to keep honey.

#### Honey Vinegar.

It frequently happens that there is more or less honey on hand which, from one reason or another, is not saleable. A considerable amount of honey can also be counted upon from the washings of the cappings, etc. All this may be put to profitable use by conversion into vinegar, and it was with the object of obtaining information as to the strength of the solution or amount of honey per gallon that could be most satisfactorily used, that the following preliminary experiments were made:

Six solutions of honey were prepared, varying in strength from 1 lb. honey in 1 gallon of water to 6 lbs. honey in 1 gallon of water. These were placed in six 11-2-gallon, wide-mouth glass jars about 6 inches in diameter, each jar receiving one gallon of honey solution. They were then "seeded," or inoculated with a little of the mother vinegar plant and the jars covered with cheesecloth.

A temperature of 80 degrees F., or thereabout, is usually held to be most favorable for the fermentation, but this, at the time of the experiment (October), unfortunately, could not be obtained. The jars were, therefore, filled with well-ripened honey. Unfortunately the amount of honey in each case

stored near the hot-water coils in the upper story of the laboratory building, the thermometer ranging from 60 degrees F. to 70 degrees F., but usually from 65 degrees F. to 70 degrees F.

The acidity of the various solutions has been determined three times, to date, viz., at the commencement of the experiment, Oct. 20, and on the 29th, October, and on the 30th of November.

Though undoubtedly the temperature was too low for the most rapid conversion, the results plainly indicate that, as regards the strength of the honey solution, the fermentation is restarted, when the strength of the solution exceeds three lbs. per gallon. As far as the work has gone the strongest vinegar was produced from the two pounds per gallon solution, and the probability is that when the experiment is completed it will be shown that the most economical strength of the honey solution will lie between 1 pound and three pounds per gallon.

From time to time these solutions will be examined for acetic acid, and I trust to be in a position before the next annual convention to speak more authoritatively on this subject.

#### Aphidian Honey.

Two small samples of the so-called honey dew or Aphidian honey have been received by me quite recently, from Mr. J. L. Byer of Markham, Ont., and Mr. Robert E. Marshall of Hamilton. Mr. Byer writes: "This honey was gathered from the basswood and elm leaves during the latter part of July and the early days of August." Mr. Marshall states: "It was gathered during August from oak and hickory leaves." Both samples possessed a peculiar and somewhat bitter taste, though the flavor to the palate first was slightly smoky. They appeared to be somewhat thinner than natural, was too small for any extended research, but determinations of the