

New Zealand growers are not, I should imagine, ignorant of a fact of so much importance to their success, but I think it well to quote the paragraph.

"At the Waerenga Government Experimental Station there is a young orchard of about 40 acres, and as there is no shelter for "wild" bees less than nearly six miles distant, I have suggested that fifty colonies of bees should be established near by for cross-fertilising purposes."

I may also quote the following authorities: Professor L. O. Howard, Chief of the Division of Entomology, Department of Agriculture, United States of America, in his introduction to Bulletin No. 1 on "The Honey-Bee," third edition, issued in 1899, says of bees and bee-culture:

"This branch of agricultural industry does not impoverish the soil in the least, but, on the contrary, results in better seed and fruit crops. The total money gain to the country from the prosecution of this industry would undoubtedly be placed at several times the amount given in a table above (20,000,000) were we only able to estimate in dollars and cents the result of the work of bees in cross-fertilising the blossoms of fruit-crops. In support of this it is only necessary to refer to the fact that the recent investigations of another Division of this Department have shown that certain varieties of pear are nearly or quite sterile unless bees bring pollen from other distinct varieties for their complete cross-fertilization.

Professor Baily, Horticulturist of Cornell University, says:

Bees are much more efficient agents of pollination than wind in our fruits, and their absence is always deleterious.

Mr. C. A. Green, writing to *The Fruit-Grower* published in Rochester, N. Y., said:

"It has now become demonstrated that many kinds of fruits, if not all kinds, are greatly benefited by bees, and that a large portion of our fruit—such as the

apple, pear, and particularly the plum—would be barren were it not for the helpful work of the honey-bee. Professor Waite, of the Agricultural Department, Washington, covered the blossoms of pears, apples and plums with netting, excluding the bees, and found that such protected blossoms of many varieties yielded no fruit. In some varieties there was no exception to this rule, and he was convinced that large orchards of Bartlett (William's Bon Chretien) pears, planted distant from other varieties, would be utterly barren if it were not for the work of the bees, and even then they could not be profitably grown unless every third or fourth row was planted to Clapp's Favorite, or some other variety capable of fertilizing the blossoms of the Bartlett. In other words, he found that the Bartlett pear could no more fertilise its own blossoms than can the Crescent Strawberry.

And again, Professor Waite, when speaking of insect-visits to pear-flowers, says:

"The common honey-bee is the most regular, important and abundant visitor, and probably does more good than any other species;" And sums up as follows: "Plant mixed orchards, or, at least, avoid solid blocks of one variety. Be sure there are sufficient bees in the neighborhood to visit the blossoms properly. When feasible, endeavour to favour insect-visits by selecting sheltered situations, or by planting windbreaks."

The editor of *The Rural New Yorker* says:

"In those great greenhouses near Boston, where early cucumbers are grown, it is always necessary to have one or two hives of bees inside to fertilize the flowers. No bees, no cucumbers! unless men go around with a brush and dust the pollen from one flower to another."

Spraying Fruit Trees While in Blossom.

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