The Ever-Busy Honey Bee

Its Value as a Honey Maker as Well as in Pollinization of Orchards, Clover and Buckwheat.

C. F. Hodge, Professor of Social Biology, University of Oregon, Eugene, contributes a valuable and interesting article on the honey bee as a factor in farm conservation.

BEES are valuable for the honey crop, but may be even more so for their work in pollenation of orchards, clover, alfalfa and buckwheat. Few farmers realize the value of the honey crop. For Washington, Oregon and probably the greater part of California not 10 per cent of the nectar is gathered. Bowsfield says: "I have a yard of bees which worked in a faild of buckwheat containing about ten acres. No other buckwheat was within reach of them. They brought in over $200 worth of buckwheat honey from this small field. This is an average of over $20 per acre. I have, during an exceptional year, secured a yield treble the above from buckwheat."

He also speaks of securing $480 worth of basswood honey from a grove of less than ten acres. These are crops which ought not to be allowed to go to waste.

Some of the larger factors in the problem of honey production are indicated by figures from the thirteenth census as follows:

Bees and Honey Production in Pacific States.

	Population.	Area, Sq. M.	No. Hives.	Val. of pr'd'ct.	Lbs. Honey.	Lbs. Wax.
Washington	1,141,990	66,880	33,840	$ 66,391	503,580	4,038
Oregon	672,765	94,560	47,285	94,510	839,981	8,383
California	3,377,549	155,980	201,023	865,367	10,264,715	126,445

The average honey production per hive is 15 pounds in Washington, 18 pounds in Oregon and 51 pounds in California, which means that modern, scientific methods of bee culture have been somewhat developed in California, and not, probably, that nectar resources are necessarily so different.

Different Colors.

Different plants naturally produce nectars of different colors, flavors and qualities and upon these inherent differences depend the characters of the various kinds of honey. Apple blossom honey, in regions where the apple blossom is fragrant and secretes nectar in quantity, the writer considers the most delicious of all honeys. Along with the craze for appearances generally the water-white honey of the linden, or basswood, and the white sage, of Southern California, have been, in the past, accorded the place of honor. However most people do not eat honey with their eyes and we are beginning to appreciate stirling qualities of flavor and aroma in even a dark honey.

Probably white clover yields more honey, the country over, than any other plant, and the honey is a bright amber of excellent quality. The other clovers, alsike, sweet, red and alfalfa along with the related peas, vetches and locusts all yield honey abundantly and of the same general type. Then there are a long list of trees, peach, plum, prune, cherry, apricot, almond, tulip, cider maple (the maple trees in early April were fairly "roaring" with bees at Forest Grove this spring) and some others; another list of flowering shrubs and vines, raspberries, huckleberries and blueberries, rhododendrons, azaleas, manzanitas, laurels, currants, ampelopsis and grape furnish nectars.

Important Crops.

Several important crop plants, cotton, corn, rape, melons, cucumbers, squashes and pumpkins, and even onions, and finally the longest list of all, the weeds and wild flowers, the mints and balms, sorrels, docks, dandelion, the sunflowers, asters and goldenrods, and a host of others—all are conspiring to yield a succession of nectars for the bees. A country does not need to be conspicuously flowery to be a rich paradise for these industrious purveyors of nature's most delicious sweets and danger of overstocking is generally more imaginary than real. To study and learn and know the honey plants of a region and have the bees ready to save these crops is certainly a most fascinating problem for any farmer's family, or for a neighborhood grange.

A bee is a fuzzy little brush on wings, and, watch in hand, to observe one and the efficiency of little things in nature. I will not tell any of the figures I have, because I want everyone who reads this to go out into garden, orchard and field and get this revelation straight from nature for himself.

Pollenization by Bees.

It is commonly said that no stone fruit—cherry, prune, peach—will "set" at all unless insect pollenized. Just what insects we have in any locality to do this is a study by itself. In most localities very few insects of any kind are active during this early bloom. All the native American bees, wasps and hornets are solitary, wintering over only the fertile queens. With the honey bee we have a social colony of from 10,000 to 50,000 active workers ready to swarm out into the early spring orchard bloom. The experiment has often been tried of tying netting over a branch of a fruit tree during the entire period of bloom and then comparing the number of fruits set on this branch with similar branches of the same tree. It is commonly found that there is no set on the covered branch in the case of any stone fruit.

With the pome fruits, apples and pears, the case is somewhat different. A few apples apparently yield as well without cross-pollenation as with it. Most apples are improved by fertilization with some other variety. Pears depend much more on insect fertilization a minute yields a marvelous lesson in count how many blossoms she visits in and are likely to be small, shriveled and woody, unless seeds are forming within. It has been claimed that bees carry the germs of fire blight to the pear blossoms; and the experiment was tried on a large scale in Colorado of removing all the bees from a pear raising locality. The result was that the blight was not appreciably decreased, the crop was practically worthless and the bees had to be brought back.

Effects of Stormy Weather.

Cold and stormy weather during fruit bloom is often supposed to be the cause of orchards not setting well. This may be, however, in the main an indirect cause, the weather preventing the bees from working freely. In such seasons it has been observed that an oval area in an orchard immediately surrounding a hive, and with the long diameter down the wind from it, has secured a good set of fruit. Considerable observation of the prune orchards in Oregon the present spring has suggested strongly that we may have here, at least, a partial reason for the failure of the crop of Italian prunes. Careful attention to this point throughout the prune districts this season may shed much valuable light on this problem.

Hunter, in Kansas, demonstrated an increase of over 66 per cent in the seed crop of alfalfa from a field near which honey bees were kept as compared with a field 25 miles distant from the nearest apiary. Later observations carried on by a number of Experiment Stations for the past eight years, while showing that they are of some importance, indicate that bees are not as effective pollenizers of alfalfa as they were formerly supposed to be. There is a similar problem in connection with the raising of red clover seed. After years of selection and breeding, it is confidently claimed that we have at last secured a long-tongued strain of honey bees which work on red clover. Has their presence increased the yield of clover seed anywhere in the Pacific Northwest?

With the enormous production of cheap sugar in recent years the fine industry of beekeeping has tended to fall into neglect. It is to be hoped that some of the above suggestions may bring about a revival of interest in what has been aptly called "the poetry of farming."

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