

THE NECTAR FLOW AT STILLWATER DURING 1938 AS INDICATED BY A SCALE COLONY OF BEES

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It should be stated at the outset that this study was based entirely on the records which were obtained from the daily weighings at dusk of a colony of bees. The weights obtained in this manner, therefore, actually include more than just the daily increase of weight due to the nectar brought into the hive by the bees. They include, in addition to the nectar, the pollen and propolis brought in daily, the daily secretion of wax and the increase in weight due to the natural increase in the bee population of the colony itself. Since, however, these things and the activities of the colony are so closely associated with nectar flow, a fairly good picture of the nectar flow may be obtained from such records.

The main nectar flow for 1938 did not begin until the middle of June which according to available records was later in the season than in previous years. During the latter part of May the scale colony brought in a small surplus, which was again consumed during the first two weeks in June. It was, therefore, not until June 14 that this colony began to gain almost daily. This late beginning of the nectar flow was, however, more than offset by its long duration. In the past, the observations have been that the main nectar flow is over by the middle of July. This past season, however, it not only extended throughout the entire month of July but continued through August and into September, the last gain in weight recorded on September 10.

This long continuous nectar flow seems to be somewhat of a record for the Stillwater area. Past observations again have shown that the period of time over which nectar was produced was not so continuous. In general, there has been observed a spring flow which came in June and was over by the middle of July. Then, if the season was favorable a second or fall nectar flow came which began usually about the middle of September. As will be seen from the chart, no such two distinct nectar flows occurred during the past seasons. It will also be noted further that July and August, the months during which in the past little or no nectar has been produced, proved to be the heaviest months of production during the 1938 season.

An interesting fact which came up during the course of this study is that rains apparently were the sole cause of the colony failing to gain and actually to lose weight during certain days. It is generally believed that heavy rains will wash the nectar out of the blossoms. The present data, as shown in the accompanying chart do, however, not always show this to be the case. A mere trace of rain on June 15 and July 16 was apparently sufficient cause for a greater loss in the nectar flow than was a two-inch rain on July 29. Still another instance which might be pointed out on the effect of rain and nectar production occurred on August 11 and 12. It will be noted that on August 12 the gain in weight was two pounds and seven ounces. On that same day in the afternoon there was a rainfall to the extent of .55 inches. As a result of this the colony not only failed to gain but actually lost five ounces in weight. It will also be noted in this instance that the loss in weight came not on the day on which it rained but the following day. This was the case not only in this instance but also on May 15 and 16, June 15, July 15 and August 12.

The nectar that was brought in and recorded in the hive came from several plants. They are listed in order of appearance. Locust, false indigo, hoar-hound, yellow sweet clover and vetch. Next came alfalfa, white sweet clover, horsemint and china berry. Cotton was in blossom by July 25 and the bees were working it quite regularly. In general, it would be safe to say that the greater portion of the nectar coming to the hive during June and the first two weeks of July came from sweet clover and alfalfa while during the last two weeks of July and the month of August it came from alfalfa and cotton.