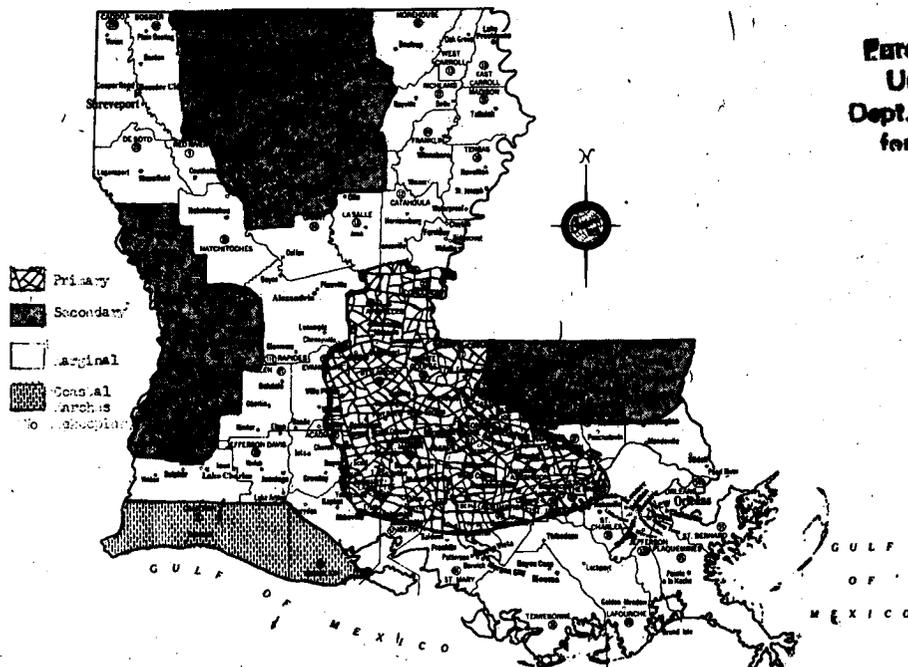


Beekeeping in Louisiana

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Climate

THE SOUTHERN part of Louisiana is subtropical, humid, and with prevailing winds from a southerly direction. This region is subject to torrential rains, especially when hurricanes or tropical storms come in from the Gulf. The Lake Charles Weather Bureau recorded about 16 inches of rainfall in 24 hours in the 1940's. Downpours of an inch or two an hour are relatively common. Eleven inches of rain in 11 hours was reported for Baton Rouge in April '67. Winter months have mostly mild temperatures. Minimum temperatures drop into the 20's only 5 to 10 times during the average winter, but in 1962 at Baton Rouge the minimum dropped to 12°F. Palms, citrus and camphor trees were killed. Ice was thick enough on ponds and small lakes to allow skating; an unheard of event! Relatively high temperatures in the winter are not an unmixed blessing; bees tend to wear themselves out searching for pollen and nectar. Scale colonies lose less weight when temperatures are low enough to keep bees within the hives.

Northern Louisiana has a more continental type climate. It is colder in winter, warmer in summer and has slightly less rainfall than southern Louisiana. Because most of the State lies between 30 and 33° north latitude, the hours of daylight are longer in the

winter and shorter in the summer than for those states farther north. The accompanying map shows that beekeeping is relatively unimportant in the northern part of the State, though there are a few commercial beekeepers in the Monroe, Ouachita Parish, area.

Probably our frequent daytime rain showers, cloudy days, and high relative humidity account, at least in part, for the small daily gains of bee colonies (Oertel, 1971). It has been shown that over a period of years in South Louisiana higher than normal honey crops were associated with smaller than normal rainfall in April, May and June. The hours of daylight during the major nectar flow are less than in the northern tier of States. In Louisiana we have approximately 13-14 hours of daylight in April, May and June in contrast to 15 hours a day in June and July in the northern States.

Agriculture

In common with the general trend in other States the number of farms in Louisiana has decreased while the size of farms has increased (Oertel 1966). Many small dairy farmers have gone out of business. Thousands of acres of rather poorly drained timber land has been cleared and used for growing soybeans. There has been a tendency for the acreage in corn, cotton, oats and pasture to decrease while soybean acre-

age² has expanded rapidly. Our major sources of farm income are from: soybeans, rice, cotton, sugarcane for sugar, sweet potatoes, livestock, hay, and poultry. Some income is derived from: pecans, corn, fruit and vegetables, hogs, sheep, sorghum grains, wheat, oats, and Irish potatoes. Corn and soybeans are grown in nearly every parish of the State, but only about 100,000 acres in corn in contrast to the large acreage in soybeans. Rice is grown chiefly in southwestern Louisiana, sugarcane in south-central, and cotton chiefly in the Red River valley and in the northeastern part of the State.

Beekeeping History

According to Oertel (1945), the first report of honeybees and honey in Louisiana was by Dunbar in 1817. Dunbar stated that early settlers in what is now La Salle Parish took honey from bee trees. Probably swarms had moved westward from colonies in the Natchez district in Mississippi. Claiborn said that honeybees were common in that area in 1770-1775.

Probably the first, at least the best known, commercial beekeeper in Louisiana was Paul C. Viallon, Bayou Goula, Iberville Parish. He was active in the 1870's and 1880's. He manufac-

² Acres devoted to soybeans were estimated at 50,000 in 1952 to nearly 2,000,000 in '75.

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tured bee supplies; sold beekeeping equipment, colonies, nuclei and queen bees from stock imported from Italy. I tried to learn what became of the Viallon business but was unable to do so. The Walter T. Kelley Company started operations in 1924 at Houma, Terrebonne Parish, but moved the plant to Kentucky in order to have a more central location. The Kelley Company still has its package bee and queen rearing operation in Louisiana. The only commercial honey packing operation that I know of in the State is owned and operated by the Bessonnet Bee Company, Donaldsonville, in connection with their beekeeping outfit.

State and federally sponsored apicultural programs began in 1921. From 1921 to 1940, E. C. Davis was the State Extension Specialist in Apiculture. He did a great deal to bring beekeeping to the attention of the young people in 4-H work. When he retired the position was not continued. The Southern States Bee Culture Field Laboratory was established at the Louisiana State University, Baton Rouge, by the United States Department of Agriculture, July 1, 1928. Its purpose is to solve beekeeping problems of the several southern States. It is now known as the Bee Breeding and Stock Center Laboratory, John R. Harbo in charge.³

The Louisiana State University offered its first course in beekeeping in 1923. Student interest declined in the late 1930's so the courses were discontinued during World War II and have not been reinstated.

Pollination

Honeybees are important pollinating agents in California and Florida, but of minor value in Louisiana at this time. We grow relatively few acres of crops that may require pollination: cucumber (1,000 acres), squash (700 acres), pumpkin (100 acres), watermelon (3,500 acres), peach (2,000 acres), and white clover seed (3,000 acres). A small area of citrus trees is found south of New Orleans. Dewberries and blackberries, which grow wild over much of the State, are not grown commercially, as far as I know. To summarize—not much fruit is grown on a commercial scale. White clover seed production used to be more important. There were 10,000 to 20,000 acres in 1942 to 1948, but the 1972 report listed only 3,000 acres. Many colonies of bees were used for pollinating purposes during the former period.

Honey Production

Soybeans are reported to be a source of nectar in Richland, Franklin and Tensas Parishes. Perhaps they yield nectar in other parishes. More field

observations are urgently needed to establish the value of this widely grown crop to Louisiana beekeepers. Unfortunately the application of pesticides to soybeans can cause heavy bee kills.

Cotton produces considerable nectar, but honeybees and the pesticides used to control cotton pests are not compatible. Probably this is why there are few or no commercial beekeepers in the Red River valley nor in the Delta section of northeast Louisiana.

I believe that the period from about 1920 to 1960 can be considered to have been the best one for Louisiana beekeepers, as a whole. Except for a few years in the early 1930's, prices of package bees, queen bees and honey were relatively favorable. The number of colonies was estimated at over 100 thousand in the early 1950's and only 30 thousand in 1972. There were from 20 to 30 sellers of package bees and queens. Some days entire express cars of package bees were shipped out of Avoyelles Parish with additional hundreds of packages shipped from Baton Rouge, Donaldsonville, and other rail points. Unfortunately, there were no long time statistics for then and only partial ones for now. For a description of the present day package bee and queen industry see Roberts and Stanger (1969).

Beekeeping — Present

White clover grows to some extent in nearly all sections of Louisiana. It grows best on the alluvial soils in the Red, Mississippi, and Atchafalaya River basins. These soils contain fairly large amounts of calcium and potash. Daily gains in weight in a white clover area—near Baton Rouge—tended to be small, from 1 to 4 pounds. The nectar flow lasted about four months, so if the colonies were strong and the weather favorable a satisfactory surplus was usually obtained.

The following summation gives the essential data from the colonies on scales: average monthly net gains for 7 colonies on scales—near Baton Rouge, from 1942 to 1966, in pounds:

April	May	June	July
67	74.5	40	23

extreme annual net gains—28 pounds in 1959, 313 pounds in 1960. The colonies always lost weight in January, February, August, September, November, and December. Colonies had net gains in October in 7 years, losses the other years. Colonies always lost weight early in March, but usually gained enough later in the month to record a net gain. The colonies always had net gains in April, May and June and nearly always in July.

Nectar and Pollen Plants

Here is a short list of plant species that yield nectar: widely distributed —

white clover, willow, blackberry, rattan vine, vervain, peppervine, goldenrod and aster; localized — wild grape, holly, tupelo, Persian clover, vetch, Chinese tallow tree, thorny locust, palmetto, eardrop vine, soybean and boneset.

Those species that provide pollen are: elm, willow, maple, pine, oak, yellow top, white clover, oak, blackberry, corn, partridge pea, ragweed, wild sunflower, crownbeard, goldenrod, and boneset. Fruit trees (pear, plum, apples) grown in backyards and mustard and turnip blossoms in home gardens provide nectar and pollen.

During the past few years there has been a surge of interest in natural foods and a concern with the environment. As a result, there are quite a few new hobbyists who wish to have a few hives of bees. It is anyone's guess how long the interest will last. These people mostly live in the cities. Probably production per colony will be small and some colonies will die of neglect. All beekeepers can expect some problems; greater wax moths, American foulbrood, poor queens, weak colonies and lack of winter stores. Pesticides will probably kill colonies, especially in rural areas. There is a shortage of pollen in the summer and fall so colonies will not build up to desirable strength for winter. A cheap, practicable pollen substitute would be of benefit if used by Louisiana beekeepers.

Avoyelles Parish is the center of beekeeping in Louisiana. This has been true since World War I and perhaps before that. More beekeepers with 100 or more colonies operate there than in any other parish. Some of them sell package bees and queens in addition to producing honey. Even in Avoyelles Parish some of the commercial beekeepers supplement their income with other work. Migratory beekeeping within the State is not generally practiced. A few beemen in the State have apiaries in Louisiana and in northern States. It is my impression that there are fewer commercial beekeepers now than, say 10 or 15 years ago. A probable reason is that our petrochemical plants offer steady employment at attractive pay.

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³ I am indebted to the Agricultural Research Service for use of the Laboratory facilities.