

of the inventions used by the larger men. The back yarder is constantly studying the bees, as they are his hobby and he often stumbles onto some excellent appliances.

There is one thing he should never overlook if he is a town beekeeper, and that is, to be in good standing with his neighbors. The best way to do this is to sweeten them. When the honey is taken off, give nearby neighbors a generous sample, and always send the finest you have. This will sweeten their disposition towards the bees, and will make them good boosters for your product.

When the man with a few bees gets a good crop, it frequently happens that he becomes afraid of not being able to sell out, and cuts the price, or does not keep posted on the market and sells his goods too cheap. A man told me only a few days ago of buying three hundred as nice sections as he had seen, at 20c and at the time the market was \$8.00 per case, or 33 $\frac{1}{2}$ c. Now this man not only lost the difference but spoiled the market.

Make preparation in the winter for the coming season. Don't be afraid of having a few more supplies than you would ordinarily need. They will not spoil, and if the honey flow is good, you will need them, and if you did not have them on hand, perhaps you would lose more honey than would have paid for the extra supplies, or perhaps the bees will swarm for lack of room. It is a great annoyance to be short. I know, for I have experienced it. Usually at such times when you send a rush order to the supply house, the goods come in bad order, are delayed in transit, or the order is mixed up, so that you can't use them, and then you are liable to say things which I will omit.

The things that I have referred to in this paper are things that most men know, but don't think about, and I am merely calling your attention to them as an evangelist calls attention to your sins, so that you may be benefited in the future.

STATE OF IOWA  
1920

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REPORT OF THE  
**STATE APIARIST**

FOR

The Year Ending December 31, 1920

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Also Report of the Convention of the Iowa Beekeepers' Association  
in Council Bluffs, November, 1920

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F. B. PADDOCK, State Apiarist  
Ames, Iowa

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Published by  
THE STATE OF IOWA  
Des Moines

#### LETTER OF TRANSMITTAL

HON. N. E. KENDALL, *Governor*:

Sir: In accordance with law, I herewith transmit to you my second annual report as state apiarist.

F. B. PADDOCK, *State Apiarist*.

Ames, Iowa, December, 1920.

#### STATE APIARIST'S REPORT

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It will be noted that during the first half of this year the project work was being conducted in thirty-one counties and during the last half in nineteen counties. There are three major reasons for this apparent decrease in the project work. First, there were too many counties for our present force to do the work justice to any county; second, in a few instances new agents did not undertake the work, and third, in some local support did not warrant further effort.

As a result of the work done in the state during the fiscal year of 1919 and 1920 it was found that the most difficult problems confronting the beekeepers are swarm control, wintering and disease. These problems are made more difficult to deal with on account of poor and inefficient equipment and the lack of knowledge of bee behavior. Another condition which was found to exist is poor stock. This, of course, goes hand in hand with poor equipment because it is not practical to introduce young queens of a good strain in hives when the frames are immovable.

The introduction of Italian queens is made possible by the use of a straight comb obtained from full sheets of foundation. This is important, as Italian bees are more productive and resist European foul brood to a much greater extent than the black or hybrid variety. A good queen may frequently make the difference between no surplus honey and a crop of a hundred pounds from an individual colony. Honey crops vary greatly with the care given the bees and the season. With good management the average yield per colony for a series of years in many parts of Iowa is one hundred pounds extracted honey. The reports obtained from beekeepers visited which were giving their bees very little care show that they very seldom average more than 25 pounds to the colony and very frequently much less. A liberal estimate would be an average of 20 pounds of honey to the colony for a series of years. This means that it is possible to increase the production per colony 80 pounds.



Organization has come to mean more to producers during the last five years, and this period has seen some changes in the viewpoint of many concerning organization. The foundation of an industry is organization. Formerly a state association of beekeepers was considered sufficient for the promotion and protection of the industry. Now the need for local organization has been seen in most every section of the state. The association is the final step in the "get-together" of any group of individuals with a common interest. A few of the advantages of the local organization discount is available, concerted action can be taken on bee diseases; the honey market can be stabilized and underselling, the suicide of marketing, can be eliminated, and large lots of honey can be prepared for outside market.

As an adjunct to the project work it seemed advisable to establish demonstration apiaries in several counties. These were started for the most part in counties where the project work was being conducted and also where there was a county association. In this way the work received the united support of the local agencies.

The object of this work was to put into local practice the theory which is given with the project work. If the principles given in the lectures can be put into operation their results will be much more effectively impressed on the local beekeepers. If the work which we give will not do better than local methods we want to know it as much as anyone. On the other hand, we want to be able to actually prove that the work given in the project work will do better than local practices.

At present demonstration apiaries are under way in Chickasaw, Emmet, Hardin, Johnson, Mills, Pocahontas, Pottawattamie, Scott and Van Buren. It is yet too early to give definite results of the work of these apiaries. However, we are pleased with the progress of the work and not only will the work be conducted in the counties named above but more counties will be included in this work the coming year.

The bee disease control work is conducted on a basis of educational effort among the beekeepers. Whenever disease is a menace to honey production it has been our aim to arrange through the county agent for demonstrations. For the most part this method of procedure is fruitful of results. Usually the work is conducted only where the full support of a county beekeepers' association can be secured. Work of an intensive nature was conducted again in Johnson county this year.

This summer forty-four beekeepers were visited in Johnson county. It was found that twelve of them who had American foul brood last year had successfully treated their colonies. Just previous to the visit the letter was sent to all those to be visited stating that if they felt that they were unable to carry out the treatment themselves, if supplies were on hand, the specialist would treat at least one colony in order to demonstrate the method. The result was that eleven more apiaries were cleaned up. Eight other apiaries were visited where American foul brood is still present. Of these most of the owners have had previous experience in treating the disease, and with the exception of possibly three the disease should be successfully treated. One of these men is very indifferent and the other two are somewhat careless.

Generally speaking the beekeepers were very pleased over the results of their work and our endeavor. Some new cases of disease were noted during the work this year, but this was due to more extensive work. The co-operation of the local association in every detail has been absolutely essential.

In Johnson county there developed a few cases which were beyond the possibility of educational effort. Such parties were far more than indifferent; they were defiant and threatening. Close co-operation of the local association with legal authority combined with careful procedure made it possible to inspect the bees in accordance with the provisions of the law. Legal notices were served, as provided in the law, but the cases are still pending. Whether it will be possible to settle these cases outside of court cannot be definitely stated at this time.

There has been a greatly increased demand for inspection work this summer. It cannot be said whether this demand comes from a more thorough appreciation of the ravages of the disease or that the disease is actually more prevalent. More likely the educational campaign is showing results in the form of these desires to have suspected disease investigation. Under the law no inspection can be made which has not been requested by one or more beekeepers. This feature has its advantages and its disadvantages.

The results of this inspection work may be summed up briefly. American foul brood is very prevalent and widespread over the state. Our present organization is not in a position to handle all of the necessary work, and the present law is hardly adequate to meet all emergencies.



Feeling that many people in Iowa are keeping bees who find it impossible to attend any of the courses given at the college, the correspondence course work has continued during this year. We felt that such beekeepers desire more definite information of a reliable nature concerning the problems enabling the beekeepers to become familiar enough with the work to keep bees better and produce more honey at a less expense.

There are now enrolled for the beginners' correspondence course in beekeeping 130 students. Of these 99 are from Iowa and 31 are from other states as follows: Alabama, Connecticut, Colorado, Kansas, Idaho, Illinois, Maryland, Montana, Missouri, Michigan, New Jersey, New York, New Mexico, North Dakota, Oregon, Pennsylvania, South Dakota and Washington.

Believing that there was a demand for available information of more than a practical nature regarding beekeeping, an advanced corresponding course was offered. This was given primarily for these students who have completed the beginners' course during the previous two years. We found many beekeepers who are able to produce honey profitably who are not satisfied with knowing only the first facts of beekeeping.

There are now enrolled in the advanced correspondence course in beekeeping 39 students. Of these 29 are residents of Iowa and 10 are from other states as follows: Idaho, Illinois, Indiana, Montana, Nebraska, Ohio and South Dakota. Four students have completed the course and the certificate has been awarded.

Bulletins for beekeepers have been presented to farmers generally as a parallel to their problems.

The contact which we have been able to make with the beekeepers of the state is exceedingly gratifying. We have been told time and again what the publication meant to this and to that beekeeper. A suggestion here or there has been of real value to a beekeeper. Many say that they read eagerly as soon as it comes in the mail. As a more definite example I might mention the "Better Queens" campaign which was launched through the bulletin entirely. We called attention to the fact that the most essential factor to successful beekeeping was most sadly lacking in this state. We asked the beekeepers to replace the scrub queen and join the ranks of honey producers. We have been told by many that their first order for good queens resulted from reading the bulletin. This campaign has grown until the county beekeepers' associations of four counties

are to place an association order for queens with reliable queen breeders. This effort will be pushed vigorously during the coming year.

Plans were fully completed to hold a short course for beekeepers during the farm and home week, February 9-14, 1920. This work was to have been given in co-operation with the Bureau of Entomology, United States Department of Agriculture. Beekeeping has made such rapid advances during the last five years that beekeepers must make an effort to keep abreast of the times. Even those who are fortunate enough to have the time and inclination to follow improved methods closely by reading find a great benefit in being able to attend school.

This school was postponed with the general program of the farm and home week. Later it was decided advisable to abandon the program for this year. The demand is such in this state that a school of a similar nature will be given next year.

At the last meeting the policy was inaugurated to permanently have the state apiarist the secretary-treasurer of the association. This action will be mutually beneficial. As a result of personal effort an affiliation has been granted the beekeepers' association by the State Horticultural Society. This is to be considered as a very big step forward and will result in much good for the beekeepers' industry of the state. Plans are now well perfected whereby the beekeeping industry will be well represented at the Midwest Horticultural Exposition held this year at Council Bluffs in November. The exposition has made a grant for cash premiums for honey exhibits, which are supplemented by special premiums.

By invitation the writer attended the meeting of the Illinois Beekeepers' Association held at Springfield in December, 1919. A paper on the value of research in apiculture was delivered at the meeting. The expenses of the trip were paid by the Illinois Beekeepers' Association. Under the same arrangement the writer attended the meeting of the Nebraska Honey Producers' Association held at Lincoln in February, 1920. A series of three papers were given here: "Co-operation and Organization," "Marketing Problems" and the "Need of Research in Apiculture." Owing to financial arrangements it was impossible to accept the invitation of the Wisconsin and Indiana Beekeepers' Associations.

In December the writer attended the meeting of the American Association of Economic Entomologists held in St. Louis. The



travel expenses of the trip were paid by the college. The writer was elected fourth vice-president and chairman of the section on apiculture.

Mr. Atkins attended the meeting of the National Beekeepers' Association held in Buffalo in March. The customary expense arrangement was made by the college for the trip.

Following is a summary of the work to November 1, 1920, as required by section 2, chapter 289, Thirty-seventh General Assembly:

Number of apiaries visited .....	118
Number of demonstrations held .....	24
Number of lectures given .....	43
Number of apiaries examined on request .....	94

OFFICERS OF THE IOWA BEEKEEPERS' ASSOCIATION FOR THE  
YEAR 1921,

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STATE OF IOWA  
1919

REPORT OF THE

# DAIRY AND FOOD COMMISSIONER

FOR THE

YEAR ENDING OCTOBER 31, 1919

W. B. BARNEY

STATE DAIRY AND FOOD COMMISSIONER  
DES MOINES, IOWA

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