

STATE OF IOWA  
1917

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REPORT OF THE  
**STATE APIARIST**

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For the Year 1917

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Also Report of the Annual Convention of the Iowa  
Beekeepers Association at Des Moines,  
December 4 and 5, 1917

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F. ERIC MILLEN  
State Apiarist  
IOWA STATE COLLEGE, AMES

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Published By  
THE STATE OF IOWA  
Des Moines



An Apsay in the Pine Woods of Ambrose.

## LETTER OF TRANSMITTAL

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Ames, Iowa, February 19, 1918.

HON. WILLIAM L. HARDING, *Governor.*

SIR: I have the honor to transmit herewith my annual report as State Apiarist, as required by law, together with a report of the convention of the Iowa Beekeeper's Association.

F ERIC MILLEN,  
*State Apiarist.*

## STATE APIARIST'S REPORT

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The present law, creating the office of State Apiarist, at the Iowa State College of Agriculture and Mechanic Arts was passed by the Thirty-seventh General Assembly and came into effect July 1, 1917. Previous to this time the office of State Inspector of Apiaries had been held for the past six years by Mr. Frank C. Pellett, Atlantic, Iowa. Press of private business caused Mr. Pellett to resign his position, and the work is now carried out under the direction of the officials at Ames.

During the summer of 1917 the calls for the service of the State Apiarist were fewer than for years past, due to the fact that Mr. Pellett had made public his pending resignation and his successor had not been named. To care for these special calls Messrs. H. R. Werner, D. A. Davis and myself, of the Iowa State College, Ames, were appointed deputy inspectors.

I received my appointment as State Apiarist on September 1, 1917.

Following the dictates of the present law, wherein actual inspection is only given on request, we are making arrangements for a large number of winter meetings, dealing with the care and management of bees and other phases of practical beekeeping. During the spring and summer a large number of field meets will be held and in this way we expect to meet and benefit a much larger number of beekeepers than could possibly be done on inspection work alone.

To aid beekeepers in securing as large a crop of honey as possible and at the same time conserve much of the nectar which would otherwise be wasted, we have prepared a correspondence course in beekeeping. In this course, the subject of beekeeping is dealt with in a practical way and all phases of management are discussed.

May 13 to 18, 1918, we are holding a one week's short course in beekeeping at the Iowa State College, Ames, and from requests already received there should be a good enrollment.

With few exceptions last season was not a good honey year, the southern part of the state suffered worse than the northern part, and good crops of honey were the exception. Conditions last season brought about more robbing than in normal years and evidence has already been received, which indicates considerable spread of disease, in those sections where foulbrood already existed.

Owing to the short crop of honey, bees in many sections of the state went into winter quarters very light in stores, and the winter loss will probably be heavier than the normal seasons. Directions, for the care of starving colonies, will be mailed to all beekeepers on our list, early in the spring and beekeepers should save many colonies that would otherwise starve.

All prospects point to a more normal season for 1918, and except in those localities where the honey producing flora did not get a good growth in 1917, normal to good crops are expected.

During the short time I have been out on extension work, meeting with the Iowa beekeepers, I have been impressed with the good work of my predecessor, Mr. Frank C. Pellett. The missionary work which he has organized and carried out has made it comparatively easy for a new man to come in and continue the work. The beekeepers have shown their appreciation of his work by electing Mr. Pellett a life member of the State Association.

My personal thanks are due Mr. Pellett for giving me much information about beekeeping conditions in the state, without such aid it would have taken considerable time to learn of these different conditions.

Following is a summary of the work up to November 1, 1917:

- Number of apiaries visited: 106.
- Number of demonstrations held: 3.
- Number of lectures given:
- Number of examinations on request: 33.

Following is the foulbrood law as passed by the last legislative assembly:

#### CHAPTER 289, THIRTY-SEVENTH GENERAL ASSEMBLY.

*Be it Enacted by the General Assembly of the State of Iowa:*

Section 1. That the state board of education is authorized and directed to appoint a state apiarist, who shall work in connection and under the supervision of the director of agricultural extension and the professor of

entomology of the Iowa State College of agriculture and mechanic arts, the term of said state apiarist to commence on the first day of July, 1917, and continue during the pleasure of said state board of education.

Sec. 2. It shall be the duty of the said apiarist to give lectures and demonstrations in the state of Iowa on the production of honey, the care of the apiary, the marketing of honey, and upon other kindred subjects relative to the care of the bees and the profitable production of honey. Upon the written request of one or more beekeeper in any county of the state, said apiarist shall examine the bees in that locality suspected of being affected with foulbrood or any other contagious or infectious disease common to bees. If upon examination the said apiarist finds said bees to be diseased, he shall furnish the owner or person in charge of said apiary with full written instructions as to the nature of the disease and the best methods of treating same, which information shall be furnished without cost to the owner.

Said apiarist shall also make an annual report to the governor, stating the number of apiaries visited, number of demonstrations held, number of lectures given, the number of examinations made upon the request of the beekeeper together with such other matters of general interest concerning the business of beekeeping as in his judgment shall be of value to the public.

Sec. 3. Anyone who knowingly sells, barter, or gives away, moves or allows to be moved, a diseased colony or colonies of bees, without the consent of the state apiarist, or exposes any infected honey or infected appliances to the bees, or who wilfully fails or neglects to give proper treatment to diseased colonies, shall be deemed guilty of misdemeanor and upon conviction thereof, before any justice of the peace of the county, shall be fined not exceeding the sum of fifty (\$50.00) dollars or imprisonment in the county jail not exceeding thirty days.

Sec. 4. There is hereby appropriated out of the general funds of the state treasury not otherwise appropriated the sum of fifteen hundred dollars (\$1,500.00) annually to carry out the provisions of this act.

Sec. 5. That sections twenty-five hundred seventy-five-a fifty-three (2575-a53), to twenty-five hundred seventy-five-a sixty-two (2575-a62), supplement to the code, 1913, and all other acts or parts of acts in connection herewith are hereby repealed.



B. T. BLEASDALE, President  
Des Moines



H. E. ROTH, Vice-President  
Denver



E. A. DAVIS, Director  
Ames



B. A. ALDRICH, Director  
Sutherland

## IOWA BEEKEEPERS ASSOCIATION

### Report of the Sixth Annual Convention, held in Des Moines, December 4, 5, 1917.

The sixth annual convention of the Iowa Beekeepers' Association was held in the rooms of the Chamber of Commerce, Des Moines, on Tuesday and Wednesday, December 4 and 5, 1917. President B. T. Bleasdale occupied the chair throughout the sessions. The following committees were appointed:

Resolutions—A. D. Beckhart, C. W. Price, G. E. Brown.

Auditing—C. P. McKinnon, L. W. Elmore, G. W. Fehleisen.

State Fair—Bert Brown, J. H. Schlenker.

Interstate Fair—W. P. Southworth, B. A. Aldrich, M. J. Beals, C. L. Pinney.

Nominations—Frank C. Pellett, Frank Stacy, J. W. Tinsley.

Legislation—Frank C. Pellett, and F. C. Stanton.

The following officers were elected for 1918:

President, F. Eric Millen, Ames.

Vice-President, W. S. Walker, Iowa Falls.

Secretary-Treasurer, H. B. Miller, Marshalltown.

Directors: Mrs. Clara Noel, Oskaloosa; Rev. A. D. Beckhart, Atlantic; C. H. True, Edgewood.

#### PRESIDENT'S ADDRESS.

B. T. BLEASDALE, DES MOINES.

The year that has gone since our last meeting has been an eventful one, so far as Iowa beekeepers are concerned, and yet it must be said it has been an unusual one from the standpoint of honey production. It has been unusual from the fact that when we let our observation pass with the point of the compass to all parts of the state, it is doubtful whether the year in its cycle has ever had a parallel.

If we draw a line across the state from the Mississippi valley in the east to the Missouri valley in the west parallel with the



main line of the Chicago and Northwestern Railroad, and use it for a dividing line, we can almost say that it forms the boundary between feast and famine. There are possibly a few places where the first line trenches could be crowded north at one point, and crowded south at another; still there are few places south of this line where anything like a profitable crop was obtained, and upon the other hand, but few places north of this line where the crop was much if any below a normal average crop, and one apiarist reports an average of 150 pounds comb honey with an increase of 200%. Another apiarist reports 240 pounds extracted honey per colony, spring count, but I did not inquire as to increase. So in this respect the year was unusual.

It was an eventful year because our legislature was by hard and persistent effort prevailed upon to change our bee inspection law from the old system under which Mr. Pellett was state apiarist, and with the workings of which you are all familiar, to an entirely new plan fashioned somewhat after the system in use in one or two of the eastern states and in the Province of Ontario in Canada. But I will not go into detail as to just how this new system is to be put into operation, because our new state apiarist, Professor Millen, is to discuss this matter in his address to us at this convention. I do want to take occasion to announce that Mr. Millen has the foundation laid for a great work at our state college, and it is going to be well worth one's time to visit him there, and if possible attend the short courses in apiculture. We have the stock phrase in the state, "of all that is good, Iowa affords the best" and we will soon be able to apply this phrase to our apicultural department at the college at Ames.

Our secretary has proposed that a program committee be appointed at this meeting to assist the secretary in arranging the programs hereafter, and since our state apiarist is more vitally concerned in the matter of convention programs, than any other single individual can be, I would advocate that hereafter our secretary and state apiarist constitute the program committee.

The matter of obtaining an appropriation from the state legislature, as is now given to the state horticultural society, the state Buttermakers' Association, and to one or two other organizations, to enable us to put on a hive products exhibit here in the capital city has been suggested. This would enable us to offer suitable prizes to apiarists and to manufacturers of bee supplies, to at

least partially remunerate them for the time and necessary expense of bringing their products here, and would stimulate an interest hitherto unknown in the minds of the general public that would revert to the financial good of the state in general and to the beekeeping interests in particular.

To do this we must appoint a committee to handle this matter at the state house. However, since the legislature does not assemble again until January, 1919, there is little that can be done for another year, and I mention it at this time, only that we may have time to give the matter thought during the year, and in that way be better prepared to give it definite consideration at our 1918 meeting.

After all that has been said by our federal government to stimulate production in every line of industry, and to conserve the products of our farms and factories, it would hardly seem necessary to give this matter consideration to an assembly of intelligent Iowa beekeepers, but in view of the fact that in all southern Iowa the honey crop was so poor this year, and the fact that it has been almost impossible to obtain sugar in sufficient quantities to feed bees to any extent, I am concerned lest many beekeepers in the southern part of the state try to winter bees without sufficient stores, and thereby suffer heavy winter losses. I want to urge every one who knows his bees to be light in stores to go home and supply extra protection or carry their bees into the cellar and in this way winter every colony possible, for without doubt the demand for honey next year will be even greater than confronts us now. The present price can almost be depended upon, and perhaps even better prices obtained, so let's do our very best to produce every ounce of the precious nectar we possibly can next year, and thus relieve the shortage of sugar.

It has been gratifying to notice that in many of the recipes published of late in some of the better magazines, a very large percentage require honey in place of sugar, and this can only result in benefit to not only honey producers in a financial way, but to the general health of all who use it in this way.

## SECRETARY-TREASURER'S REPORT.

HAMLIN B. MILLER, MARSHALLTOWN.

The past year has been a decidedly discouraging one for the average Iowa beekeeper, in fact the whole United States was spotted with the same ailment.

We have 278 paid-up members to December 1st. About a dozen or more paid-up new members for 1918. This is more than four times our membership three years ago. Why can't we make it 500 members the coming year?

There never was a time so propitious for establishing honey prices on a firm and paying basis as at the present. The association should have a standing committee composed of men efficient in business sagacity to establish a honey price basis in Iowa and with the co-operation of neighboring states with committees of similar caliber, be able to act together within reason for the good of all beekeepers.

Every man who thinks anything at all of his bees should belong to the state association. Even though he does not attend the annual meetings, he is assisting in a real way to make it easy for beekeepers in general to achieve lasting and profitable results.

Do not expect the Iowa Beekeepers' association to be a cure-all for your troubles. Do not imagine the association is wholly dependent on you and your fifty cents alone for its existence. It is true you may be the link on the end of the chain, but the balance remains in one piece. You had better hang on though and help hold the next link that would adjoin you. Remember the old saying, "We had better hang together, than all be hanged together." Remit your dues at the first of the year and you won't think of quitting every time a hive of bees goes "punk," or the season did not turn out exactly right. Remember a gambler always puts down his money in advance. Pay up your dues in January (those of you here, do it today) and then you will not think you are paid a year in advance when you pay it the following December.

We should have a definite date set for our annual meeting. One that will fit in with a chain of meetings, accommodating those prominent in the bee world, who could not otherwise be present at our annual gatherings.

You unwittingly, at times, impose unnecessary burdens on your

Secretary causing needless work and worry. For instance, this year, it was almost next to impossible to construct a program for this annual meeting. I wanted to have our program in the bee journals of November. Nearly every one excused himself in some manner, or did not deign to answer my request in any manner. Not until after the middle of November could I print our program as it lies before you. Now all of you know one man could grade a railroad if he could live long enough and also be given time enough; but ten thousand men with a competent manager could soon have the work accomplished.

Your Secretary does not own this association. He needs assistance. You should be the helpers. A general never becomes great without achievements. His achievements are naught without competent assistance.

Please don't lay up things against your Secretary. Don't imagine he has slighted you, or mistreated you. Remember he is human and that there are always two sides to every question. Your Secretary loves every one of you. He has no grievance with any beekeeper.

If he did not like this bunch of bee folks, he would resign his job, for if the job of Secretary-Treasurer of the Iowa Beekeepers' Association is not a labor of love, then what would you call it, what would it stand for anyway?

We ought to have at least five hundred dollars a year in our treasury for bee propaganda. I am not asking for a salary. Tightwad has never been related to me, either by consanguinity, or any other alliance. My work for this Association has been one of love and devotion. I accepted this office as a duty and will feel honored if I can receive your commendation.

If every member will pay dues promptly in advance your Secretary will not be inconvenienced for funds with which to do your work. Otherwise he has to advance the cash and await your pleasure. In this way you will get better service and your certificate will show you a paid-up member for the year January 1st to December 31st. Of course it is better late than never and you will not be criticised just because you came in late. The dues are really a collection to defray expenses and are fifty cents a year. Every time your Secretary sends out a notice to pay up dues, it takes a set of postage stamps, paper and envelopes. You can help conserve by paying up now and save the postage on re-

mind. I hope all will pay their dues before quitting the convention. When the time comes that you want to drop the association, write the Secretary telling him so and thus save our pitance for use on those who do appreciate and can use the association.

Send in the names of all beekeepers who ought to be members of our association. Their co-operation will be of more benefit to the association than if they remained on the outside, extending to us their good will.

I do hope every member of this Association will be a subscriber to one and all of the bee journals during 1918. You might just as well go without other tools and conveniences in bee work as to go without your daily newspaper in this hurly-burly world and try to keep up-to-date.

By all means have ABC & XYZ of Bee Culture and other bee books in your bee library. They are the Bibles and concordances of bees and bee laws pertaining to the ways of, as well as the rights of, beekeepers. The more you know about bee work the better association member you will become and the less the Secretary will have to run after you.

If I am to be your Secretary another year, there are some things you can do to help the work along, that I do not care to assume the whole responsibility of. The principal one of which is to have a committee to formulate and properly arrange for our annual program, or, if possible, give me the powers possessed by the army officials to draft.

#### Receipts—

Balance Dec. 6, 1916.....	\$ 2.81
Dec. 1, 1917, borrowed.....	28.43
Received from all other sources.....	104.70
<b>Total receipts .....</b>	<b>\$ 135.94</b>

#### Disbursements—

Dec. 6, 1916, C. A. Bolton for use of lantern and projector.....	\$ 2.00
Dec. 9, Balance of 1916 postage.....	28.84
April 4, Hamlin B. Miller, printing.....	42.05
July 21, Domestic Beekeeping for Henry Kahler.....	1.00
Aug. 7, Postage to date.....	21.67
Aug. 10, Hamlin B. Miller, printing.....	21.50
Dec. 1, Postage to date.....	11.80
Dec. 1, Hamlin B. Miller, printing.....	47.18
<b>Total expenditures .....</b>	<b>\$ 187.94</b>

### RESOLUTIONS ADOPTED BY CONVENTION.

Resolved that we observe with much pleasure the healthy growth of our organization, in every phase of our work.

That we appreciate the untiring work of our officers and special representatives in difficult fields; and especially the efficient labors of our president, Mr. B. T. Bleasdale, and our secretary, Hamlin B. Miller.

That we gladly reiterate our welcome to Mr. E. R. Root, Editor *Gleanings in Bee Culture*, Mr. C. P. Dadant, Editor *American Bee Journal*, and members of the faculty of the Iowa State College of Agriculture and Mechanic Arts. We realize that we owe much to these men, who bring to us the results of expert and scientific training.

That we receive with cordial appreciation, our state apiarist, Prof. F. Eric Millen, who comes to us under the Director of Extension and Professor of Entomology of the State College.

That we feel it a duty to heartily commend the summer short course in beekeeping, conducted at the Iowa State College, under the direction of Professor Millen.

That our secretary be authorized to appoint Frank C. Pellett and Professor Millen to act with him as a program committee.

That we are greatly indebted to the chamber of commerce for the use of convenient and commodious rooms for our sessions, and for their kindness in looking after our needs.

That we authorize our secretary to send J. L. Strong, Clarinda, a letter expressing our kindly sympathy in his sickness.

That we wish, as an organization to declare, with emphasis, our continual loyalty to the Stars and Stripes and our support of the government, in this unprecedented trial, and that we cheerfully and respectfully observe official mandates that may help us to win the war.

A. D. BECKHART,

C. W. PRICE,

E. S. BROWN,

Committee.

### THE IOWA STATE COLLEGE AND IOWA BEEKEEPERS.

F. ERIC MILLEN, STATE APIARIST, AMES.

At the fifth annual meeting of the Iowa State Beekeepers' Association, last December, Mr. Frank C. Pellett, State Inspector of Apiaries for Iowa, made recommendations that changes in the apiary inspection law be made so that the work could be placed under the supervision of the Iowa State College of Agriculture and Mechanic Arts.

The thirty-seventh general assembly repealed the existing apiary inspection law and passed the present law.

Under the repealed law, provision was made for the state inspector of apiaries and deputies on a per diem compensation, but



limiting the total amount to be spent, including salaries and expenses, to \$2,500 annually.

The present law provides for a state apiarist working in connection with, and under the supervision of the director of agricultural extension and the professor of entomology of the Iowa State College of Agriculture and Mechanic Arts, and the appropriation provided is \$1,500 annually, with which to meet the provisions of this act.

The repealed law provided that the inspector, on the written request of three or more beekeepers, should inspect the apiaries in question and all other apiaries in the same locality.



MISS BELLE MCCONNELL, Director  
Des Moines

Under the present law section two reads in part: "It shall be the duty of the said apiarist to give lectures and demonstrations in the state of Iowa on the production of honey, and upon other kindred subjects relative to the care of the bees and the profitable production of honey. Upon the written request of one or more beekeepers in any county of the state, said apiarist shall examine the bees in that locality, suspected of being affected with foul-brood or any other contagious or infectious disease common to bees. If upon examination the said apiarist finds said bees to be

diseased, he shall furnish the owner or person in charge of said apiary with full written instructions as to the nature of the disease and the best methods of treating same, which information shall be furnished without cost to the owner."

This, section two, is the substance of the change of methods in carrying out the apiary inspection work, and differs markedly from the provisions of the repealed law. Those having had experience in apiary inspection work have realized that with straight inspection, many thousands of dollars are needed annually and a large force of deputies are required to even partially cover the state. I do not believe any state has yet provided a sufficiently large appropriation whereby the whole state could be covered in one season by means of inspection work alone.

The new law aims at the root of the trouble when it provides for demonstrations and lectures. By means of inspection alone, the apiarist is only able to come in contact with few beekeepers. Under the present provisions a large number of apiary demonstrations and lectures can be arranged during the summer and the inspector can thus actually meet a much larger number of beekeepers during the working season. In the off-season lectures and demonstrations should help make the summer campaign much more effective. Where an inspector is visiting apiaries for the purpose of locating diseases, there is little time to spend with the beekeepers to discuss methods of management and to point out where they can improve their system of handling the bees and so gain a larger crop of honey. All inspection work is bound to fail unless we can show the beekeeper that there is money in bees properly cared for, but not otherwise. Once we can arouse the beekeepers to see this point, the disease will be cared for automatically and we shall have accomplished much towards its control.

Under the present law with the appropriation permitting of only one man to take up this work it will be impossible to cover the whole territory in any one year so that the work will perforce be carried on in those localities where the need seems most pressing and the invitation most urgent. Besides the actual contact with beekeepers in the shape of lectures and demonstrations there is another source from which beekeepers can obtain considerable information and that is by means of correspondence. Oftentimes a question arises in connection with the management of an apiary

and this question needs a solution quickly, a letter or card to the state apiarist at such a time might mean more honey, or profit in other ways. Beekeepers are urged to write, at any time the state apiarist can be of service. This office has been created for the benefit of beekeeping and it is the beekeepers who must ask for the benefit.

Section three of the present law refers to the sale, barter, gift or removal of diseased colonies, the exposing of infected honey or infected appliances and neglect or failure to treat diseases colonies with the penalties similar to those in the repealed law.

Mr. Frank C. Pellett resigned his position as state inspector of Apiaries, the resignation dating from June 30, 1917, and I received my appointment from September 1, 1917.

Before passing on to the work in beekeeping at the Iowa State College it seems to me to be in order to say a few words concerning the excellent work, and untiring interest of my predecessor, Mr. Pellett. The Iowa beekeepers realize that he has done much of the missionary work in this state and it is due to his strenuous efforts that Iowa has the present apiary inspection law. Disregard of personal gain and the advancement of the Iowa beekeepers appear to have been Mr. Pellett's motto. The action of the Iowa beekeepers' association in making Mr. Pellett a life member shows the regard in which he is held by the Iowa beekeepers.

Under the present arrangement my work at the college is divided into two spheres. One-half time is to be spent on teaching and college work, and one-half on apiary inspection, lectures and demonstration work in the field.

During the fall and winter months the work in the field will consist of illustrated lectures and demonstration work in phases of beekeeping management. I have prepared an outline consisting of ten lectures in which all branches of beekeeping are taken into consideration. Three of these lectures are illustrated and are semi-popular, suitable for general audiences, high schools and beekeepers, these illustrated lectures are designed to convey information in an interesting way, concerning the habits, life history and behavior of the honey bee and to stimulate the demand for honey. The other seven lectures are more technical and take up the management of bees in the different seasons and conditions that occur. Following is a list of the lecture subjects:

## LECTURES IN BEEKEEPING EXTENSION WORK.

F. ERIC MILLEN.

I. "The Lure of the Honey Bee." Popular illustrated lecture, 1 hour.

II. "Life History and Points of Interest in the Anatomy of the Honey Bee." Semi-popular illustrated lecture, 1 hour.

III. "Beekeeping in Iowa." Semi-popular illustrated lecture, 1 hour.

IV. "Swarming, Control and Methods of Increase." Lecture and demonstration, 1 hour.

V. "Production of Comb and Extracted Honey." Lecture and demonstration, 1 hour.

VI. "Wintering Bees in Iowa." Lecture and demonstration, 1 hour.

VII. "Spring Management of Bees." Lecture and demonstration, 1 hour.

VIII. "Importance of Queens and Simple Methods of Queen Raising." Lecture and demonstration, 1 hour.

IX. "Beeswax, Comb Foundation, and Care of Combs." Lecture and demonstration, 1 hour.

X. "Diseases of Bees and Treatment." Lecture and demonstration, 1 hour.

Note: Subjects I, II, III, are especially suitable for general audiences, high schools and public schools. Subjects IV to X are technical lectures of interest to the beekeeper.

The fall and winter meetings will be arranged through the county agricultural advisers and also through beekeepers who desire to have one or more of these lectures given in their locality.

The expenses are cared for by the college so that there is no obligation on the part of the beekeepers, except to see that there is as good an audience as possible.

It is to be hoped that in view of the world-wide shortage of foods of all kinds, the Iowa beekeepers will make earnest efforts to see that every pound of nectar is harvested which it is possible to conserve during the coming season and that advantage will be taken to work the state apiarist to his fullest capacity.

There has never been a better time for beekeepers to assert themselves and make beekeeping one of the important agricultural in-

dustries of the country. There are enough successful commercial beekeepers in this state, who have proved that beekeeping is a business capable of returning as large a profit on the investment, as any of the other lines of agriculture. Those of us who are engaged in beekeeping also know that there are few, if any, other lines of business that afford the proprietor so much leisure time as can be had in beekeeping. Honey has long since passed being classed as a luxury, and is now very highly regarded as a healthful and necessary article of food. A few years ago beekeepers realized that the price of honey was too low, but today this is altered and it is now possible to get a fair price for our product with a much increased demand.

The apiary inspectors in visiting the beekeepers realize that very few of all the bee men they meet, are harvesting the amount of honey that should be theirs. Apparent lack of interest, in some cases lack of knowledge and in others lack of equipment seem to be the main factors which account for the poor crops harvested. Far better keep half the number of colonies and get the maximum crop, than twice the number and a poor crop. If every beekeeper would analyze his failure to secure a profitable crop, except in poor season, and do his best to remedy the conditions, then the annual crop of honey produced in Iowa would be much greater. Where there is no time to attend the bees so that they cannot receive the attention due them, then it would be more profitable to sell them and give the other fellow the opportunity. No one should keep stock on his hands which is neglected, for in this way the bees are often a menace to the neighbors who are doing their best to secure a profit.

During the working season demonstrations and field meets will be held in various parts of the state, and wherever one of these field meets will bring together a dozen or more bee men, the local beekeepers are urged to get in touch with the state apiarist and get a date booked for the coming summer.

In the spring of this year, May 28 to June 2, a one-week's short course in beekeeping was held at the Iowa State College. Although this short course was arranged somewhat hurriedly and with little advertising, more than thirty beekeepers attended, the success of this effort has made it possible to continue this year with a similar short course May 13 to 18.

From January 28 to February 2, 1918, during the Farm and Home Short Course week at the Iowa State College, two lectures

will be given daily in beekeeping and there will be demonstrations on assembling bee supplies and other practical work in apiculture. These lectures and demonstrations are aimed to interest the farmer beekeeper primarily and teach them how to care for the bees so that they can return increased profits. Mr. Frank C. Pellett will assist us in these lectures.

We realize that it is impossible for the majority of beekeepers to leave home and attend short course at the state college, even for one week. To meet this difficulty we are commencing a correspondence course in beekeeping. This course will consist of a number of lessons, on the principles and main forms of management in beekeeping, covering the field from spring till fall, and will include such subjects as spring management, production of comb and extracted honey, preparation and marketing of honey, identification and treatment of bee diseases and other subjects relative to the care of the honey bee. This course is open to any beekeeper in the state, irrespective of age. A small fee will be charged and every student enrolling will be provided with two text books on beekeeping, so that the lessons can be followed easily and in a profitable manner. It is our aim by means of this correspondence course in beekeeping to render aid to the maximum number of beekeepers and it is hoped that a large number may be interested and enroll for this course, full particulars may be had by addressing the state apiarist, Iowa State College, Ames.

Students of beekeeping have noticed that in the past few years, beekeeping has made wonderful headway both from a commercial

and scientific basis, and whereas a few years ago there were only one or two colleges in this country giving regular courses in apiculture, today beekeeping is being taught in the majority of our agricultural colleges. The Iowa State college is doing its share and it is now possible for students to attend this college for one or two years and receive sufficient apicultural training, together with practical work during the summer, that will enable them to enter the commercial field. Those who desire to go on and fit themselves for positions as teachers or inspectors will find that the officials of aim. Opportunity knocks at the door; are we beemen going to open the door and put beekeeping where it belongs or shall we wait until the opportunity has passed and find we are too late? With a little effort it should be easily possible to make 1918 the first year in the college will do all in their power to help them accomplish this



which some of us have really tried, by studying the habits and behavior of the honey bee, to do our utmost in producing the large crop of honey which the country is waiting for and which is badly needed, and which Iowa is capable of producing.

### FROM THE FORMER STATE BEE INSPECTOR.

#### AN APPRECIATION

Atlantic, Iowa, Dec. 17, 1917.

To the Iowa Beekeepers: For the first time since the office of State Bee Inspector was created, the duty of writing the official report devolves upon another. The legislature acted favorably upon the recommendations contained in the last annual report, and the old office was accordingly abolished. In its place was created a new office, that of State Apiarist, to be conducted in connection with the work of the agricultural college at Ames. This new law went into effect on July first, 1917, and on that date, I was relieved of all official connection with the



FRANK C. PELLETT  
Former State Bee Inspector for Iowa

work of beekeeping in Iowa. Prior to that date the work had been handled by the department at Ames, from and after the passage of the bill. Accordingly I have had little to do with the work of the office the past season.

I am especially pleased with the selection of my successor in office, who is charged with greatly enlarged duties, and feel that the work will prosper under his direction. I have been personally acquainted with Prof. F. Eric Millen for a number of years, and have come to value his friendship and appreciate his efforts in behalf of better beekeeping. I cannot but feel that under the new law, Iowa beekeeping will receive much better attention at the hands of the state, and that the work can be much more economically done than would be possible under the former provisions.

My relation to the beekeepers of Iowa has been a pleasant one, and although I am glad to lay down the work that it may be placed on a better basis, I shall remember with pleasure the loyal support extended to me by the members of the Iowa Beekeepers' Association, in the discharge of the duties which my office imposed upon me. I expect to remain in Iowa and to devote much of my attention to the production of honey, and hope to be able to render as loyal assistance to my successor in office as has been given to me by the beekeepers of this state.

I look forward with confidence to the time when Iowa shall rank high among the honey producing states, and when beekeeping shall be a prominent industry within her borders. I am grateful for having had an opportunity to assist in laying the foundation of the official work here, and feel that I have received all and more than the consideration due me from the beekeepers and the public.

Yours for better beekeeping,

FRANK C. PELLETT.

### PAPERS READ AT IOWA BEEKEEPERS' CONVENTION.

#### MY BEES.

MRS. CLARA T. NOEL, OSKALOOSA.

I am one of the Little Beekeepers—my apiary has never numbered 40 colonies, yet my enthusiasm is not to be measured by my size or the number of colonies I operate.

My interest in bees began in the early '70s when my honored father, a retired farmer, became interested in bees, and made them his special study. He had the idea of movable frames and for his own amusement made hives of various shapes, but always with movable frames. I was his assistant and companion in operating an apiary located in the woods along the Des Moines river, where basswood was plenty. This apiary consisted of a large number of log-gums and boxes filled with bees that the owner had long neglected. My father and I transferred these into movable frame hives for a consideration. The long days that I operated the smoker and the many queens I helped to find, that might be clipped, my father transferring, uniting, or robbing as he thought best, gave me my first experience in beekeeping.

It is only in the last dozen years that my love for bees has had an opportunity to indulge itself and to put in practice the lessons I learned in early girlhood. A colony of bees came into my possession in a modern,



up-to-date hive, in June, when white clover was in bloom, and the pastures and roadsides were as white as if carpeted with snow—that swarm, the beginning of my apiary gathered over 100 pounds of beautiful white clover honey that season. Since then I have had much pleasure, some profit, and many stings in my beekeeping experience.

My apiary grew very slowly, but it was always self supporting, supplying the home table with choice honey. I used up-to-date hives, and built a substantial bee house for storage and work. The last few years there has been an income that I called "my traveling fund." Through its existence a few years ago I was enabled to make a visit to some of my children living in the far West. In giving parting instructions to the girls who were to care for the home during my absence, one asked "What about your bees? What must we do to them?" Knowing they were never known to molest them in any way I felt safe in saying: "You may have for your own all the honey you take off and sell." Many suppers were on and the white clover harvest was in full swing. After a delightful trip through California's fine valleys, over snow-capped mountains, a day and a night ride on the ocean, home by way of Glacier Park and Montana's wonderful wheat fields, I found my bees had been tampered with and appeared in a decidedly disordered condition. After a little questioning I found those girls had robbed my bees of over 100 pounds of choice white clover comb honey, although they had said they would rather face the German guns than my bees. They had thought to risk a joke on mother. While I wear neither veil nor gloves these girls went mother one better and went forth to conquer with low necked and short-sleeved dresses. They daintily used the smoker and hurriedly took off supers and rushed them to a place of safety, bees and all. The astonished bees did not at once protest, but soon other sounds than laughter came from those girls. Brothers came hurriedly to the rescue, but beat a hasty retreat, even the sedate father disappeared around the buildings in undignified haste. The hired man and the dog came in for a share of fiery darts. Not till dark did those plucky bees desert their stores. The next day with swollen hands and disfigured faces those girls prepared their plunder for market. But they said, "Never again will we play a joke on mother, through the agency of her bees." The hired man would eat no honey while he stayed with us and the dog to this day disappears when the smoker starts.

I have been stung many times, but not always by the bees. Once I bought a red clover queen and had visions of the bees gathering all the honey for miles around, but instead, her workers cared little to fill honey sections with any kind of honey, they swarmed early and late, poorly preparing for winter.

Oh! the talking it took to convince the irate woman who said the bees were ruining her grapes; they were all my bees because they all had Clara T. on their wings. You beekeepers know how hard it is to convince some people that the bees were saying what had been laid waste by other insects and birds.

I never could control swarming, but one year an article in one of the Bee Journals said "Swarms always settle a certain number of feet from the hive, before taking their long flight." I believe it was 50

feet. I was delighted. No more swarms should get away from me. But the writer did not say in what direction these fifty feet would be. My prime swarms settled 50 feet from the hive all right, but straight up to the swaying branch of a tall ash tree where I found it impossible to get them. Just why so many swarms chose that particular place I do not know, but practically every swarm went to the same swaying branch—just 50 feet away.

When white clover blooms, I do not enjoy the Ladies' Aid nor the Missionary society as a good member should. When a paper is being read describing the good work in India or South Africa, I have caught myself wondering if by any chance I had overlooked a queen cell in No. 19 or hoping that No. 6 could wait till tomorrow for another super, or if the clipped golden queen would be lost should No. 13 swarm while I was away.

The best the Good Father had to give the children of earth was a land flowing with milk and honey. Nectar is found in practically every flower and there is no other way to obtain this sweet for man's use but through the agency of the bee. Think for a minute of the many trips afield for the raw product and the mysterious work in the hive that must be done before it is ready for man's use, then have some consumer wonder why the beekeeper wants more than 10 cents per pound.

In these troubled times when we are all urged to do our bit in the great struggle for universal peace, we housewives, in answering the call, have canned nearly every known food product from dandelion greens to beef, pork and chicken. The bees know the art of canning their stores long before the Mason jar and the cold-pack methods were known and every can keeps, the secret of their canning no one has found out, but if the seal is not broken it seems to keep indefinitely. When supplies are scarce the bees go on scant rations and no one murmurs; their stores are so carefully guarded, supplies issued in such a just manner that the colony often lives through a severe famine. But when the harvest is ripe and white clover in bloom, how the bees do work. They let no opportunity pass to bring in supplies even from the humblest source. There are no strikes for shorter hours. The bee keeper is happy as he watches the heavily laden workers returning to the hive, knowing that the surplus stores will enrich him. There is not a slacker in the hive, no one asks exemption from the duty at hand. The future need of the colony is at stake, the life of their home depends upon each one doing her bit and all cheerfully rally to the call.

#### BEE KEEPERS AND OTHER INSECTS.

DR. A. F. BONNEY, BUCK GROVE.

The time was, not many moons ago, that I did not look to meet with you again, but as a man born to be hanged will never be drowned, nor die in his bed, I still cumber the earth, and am afforded this pleasure. If you are sorry, kindly conceal your feelings until I have finished. You may be sadder then.

It pleases me to see so many bee keepers present, even if there are so few in the state. I felt pretty certain to find here our worthy president, Secretary Miller, the board of directors and some of the old stand bys, but bee keepers are just like other insects. When times are good they work with feverish energy and congregate numerously at the slightest provocation, but when the lean years come are apt to vegetate.

I have no apology to offer for the title to this talk, for insects are very valuable animals. Bee keepers are also animals, therefore bee keepers are valuable. Look at the price of honey for 1917, all due to bee keepers and other insects. I mean by this, of course, that if there were no bee keepers there would be no honey to sell, therefore no good prices.

This reminds me, though I do not know why it should, that I have given up trying to reform bee keepers and other insects, in regard not only to selling honey, but other things as well. I cannot resist the temptation to recall that at our last meeting seven cents was mentioned as a wholesale price for honey. How many of you got twice that, this season, net, and for light amber honey at that?

Like other insects I have my weaknesses, and the time was when I was ready to hop into an argument with anyone as whether bees reason, distinguish colors and differentiate between them, and vote for the prohibitory amendment and woman suffrage, but I quit it. I have a new hobby now, and I am going to catch Naturalist Pellett asleep some day so that he cannot talk back, and tell him all about it. It is about the vision of the honey bee. I have acquired the idea that bees have very poor vision, compared with more highly organized animals. They have not the power of accommodation, as man and the brutes have, hence have the large compound eyes for general use and the three little ocelli for very near vision. It is more than likely that bees see masses of light and shade with the compound eyes and have little use for small details, therefore they probably pay no attention to colors, as man understands them, these being to them but different degrees of light and dark objects. In lieu of vision such as other flying things possess, the birds, I allude to, they have in their ages of development acquired a sense of smell that is almost incomprehensible.

I have studied this a great deal. I have weighed out ten grains of beeswax, and taking a warm day when there was a five mile breeze blowing burned the wax in a barren field where there was not a bee to be seen, and in a few minutes there were several flying about me looking for the wax. Imagine if you can how far apart the odor molecules of that burnt wax were separated from each other. The only way I can compare it is to call your attention to a woodsman following a blazed trail with his marked trees fifty or a hundred feet apart. He picks up these marks as he advances, the bees pick up the odor particles. At a distance of one hundred feet from the wax the odor particles are probably many feet apart. Think what a little smelling machine a bee must be!

There are other evils I have quit trying to obliterate. I remember trying years ago to reform a young lady who giggled, that is, sometimes she did, when I told her what I thought was a sad story, but when I told her one of my funniest jokes she was just as like to weep. As I said, I

tried to reform her, for she was a pretty little girl, with dark, tender eyes, sensitive lips and dark hair, but what do you suppose happened? She married me, that's what she did.

As a rule the human mind is so constituted that it is very hard for a person to change his viewpoint. In politics, religion and economic affairs we cling to old things, and knowing that it is useless to argue with either ignorance or prejudice was one reason why I quit trying to reform the world. Oh, I'll confess right away that I am egotistical, but I had some of it taken out of me this trip to Des Moines. I went into a barber shop to have my chin polished.

"Hair cut?" chirruped the artist.

"Nope," I replied, "shave."

He looked surprised, but began making me uncomfortable as only barbers can. "Where do you live?" he asked when he had me trussed up.

I told him.

"Is it in the United States?" he inquired.

"Yes, sir," I answered severely.

"How big a town is it?" was his next flank attack.

"It is not big at all," I replied wearily, and went on to give him a history of my home town from the year one. He listened, as he could not very well get away. When I had run down he looked at me for about a minute, then shaved me with a safety razor.

Ignorance is, of course, only lack of information, but many times we do not know and do not know that we do not know, so keep in the same old rut year after year. Bee keeping is in a state of development. It may never become an exact science. What is good for one part of our great country would not do for another, and I venture to suggest that the sort of a bee which would be perfection for the hotter parts of the United States might not do so well in a colder portion. The honey bee we find in southern Italy has been developed there since the earliest geological ages, its remains have been found in fossil amber, and as the present climate is rather warm it is reasonable to suppose that the Italian bee will stand less cold than those of the Caucasian states where it is much colder, on an average. This must surely apply to our country as well.

However, it takes years to solve these problems. There is a range of close to eighty degrees in temperature between the extreme northern and southern parts of our great country, so I suppose we shall have to keep on muddling until we learn the truth. Even the proper degree of temperature for cellar wintering has not been settled, I read. Formerly forty-five degrees was considered correct, but now a higher is being considered, while some of our best known bee keepers have abandoned the cellar for out of door wintering, and in the eastern part of the country the cellaring fad never has found foothold.

This calls for more reforming, but I am not going to meddle. I have practically always used the chaff hive, even making the first I used, having more time and lumber than money, and I think I have lost no more bees than those who winter in cellars, counting, of course, from



the time the bees go into winter quarters until settled warm weather the following spring. I have had winter losses from various causes, just as bees in a state of nature will die. They would, no doubt, have died in a cellar.

This reminds me of a remark Mr. Pellett made in an article in the American Bee Journal lately. He stated that he found a swarm of bees that had wintered in a hive so open to the weather that he did not know how they had lived, but that the bees were as lively as could be, and asked if others had ever observed anything like it. I felt like butting in, but my natural modesty prevented, and I will allude to it now.

Twice in my experience I have accidentally left the cover of a hive lifted a quarter of an inch or more, on hives which were left unprotected, as I at first wintered part of mine, partly from ignorance, partly from lack of time, health or strength, to attend to them. In both cases in the spring I found medium sized colonies of bees which were as lively as could be. I made some inquiries of editors, but the matter was dismissed with a few words. However, it set me to studying, and going to a fallen tree from which a farmer had taken honey, I made some measurements. I found a cavity twelve (12) inches across at the widest part, which extended from the entrance upward twenty-seven inches, where it was ten inches across. From this point it went upwards about a foot, contracting rapidly in size, so as to form a dome-shaped roof. The cavity extended down below the entrance a foot or more, but there was no comb below the entrance except what had hung about the middle.

Anyone here who has ever robbed a bee tree knows about what shape the combs were built in, and that the inside of the cavity was plastered thick with propolis. In the cavity I found some bones of a squirrel which were also well varnished.

This is the natural home of the bee. The wood surrounding the cavity averaged more than four inches in thickness below the last foot, while it thickened rapidly to the top, and above the cavity was several feet of wood. There were no "absorbent cushions" here, all was in a state of nature, very different from the way we bee keepers handle bees. We have taken the bee from his home with its crooked combs where the bees could cluster and be in contact at several points, while the air could circulate in such a way that the whole cluster had the same temperature, and put them in a square box with a three-sixteenth inch space over them for the poor things to get together in, dividing them below with solid cakes of honey which, once chilled, would take half the store to rewarm, then to add insult to injury we put the ends of these frames against the entrance so that every gust of air will fan the cluster, and goodness knows some of us have winds enough to fan the bees out of the hive.

I have evolved from this an idea, however, and next season, if I still cumber the earth, shall proceed as follows, and I hope I may induce someone else to try it out with me. It is based on the natural home of the bee, an airtight cavity open only at the bottom, the inside well propolized, the combs built as the bees like them.

Take a shallow super and nail a bottom on it. This, I think, were better made of two thicknesses of lumber with a sheet of tar or asbestos

paper between them. It will do no harm if the four walls of the super be fortified in the same way, and I shall make one box like it. That is all there is to it. To use, put it over the brood chamber, open side down, when the bees will proceed to build comb in it the same as in a hollow tree. When this is full of honey pour into it a little bisulphide of carbon and put a tight cover on, and this is best fastened down with screws. Put it away in a warm place.

When the time comes to pack the bees for winter put it over the brood chamber and pack as usual. A box of this kind will hold more than 30 pounds of honey, sealed and well ripened, and notwithstanding discussions in the papers I firmly believe this to be the best possible feed for winter stores. It is the bees' natural food, and it is hard to improve on Nature's processes. Of course this will require some preparation and work, but feeding bees takes work, also. Moreover, bees often starve in a hive simply because they cannot reach the abundant stores which may be within two inches of the cluster, and what sort of a cluster may we look for, let me ask, with three-sixteenths of an inch above the solid frames? Nature's plan consists of a compact mass of animals arranged to conserve heat.

This plan is particularly good with the chaff hive I use, which has a winter rim under a deep, flat cover, and affords sufficient space around and above the super for packing, and as I now think six inches of protection better than three. I like the idea of doubling the walls and top of the supplementary brood nest. I think this a good, and new idea, but cannot help wondering if any bee keeper who has monkeyed with bees more than one season will give it a second thought, for as a rule older men are like the boy—but you never heard the story, so here it is:

A couple old maids took a little boy to raise, the son of a sister, and his father was also dead. The old ladies were very nice, for they went to church every Sunday, to Sunday School, Prayer and class meetings, and they named the boy Algeron. They raised him in the way he should go. By the time Algie was twenty-one he was the sweetest thing that ever happened, tall, strong, with blue eyes, curly yellow hair and peach and cream complexion. He had learned to tat and crochet, and he powdered his nose. When vexed he would say "Pshaw!" and when real angry, "Fiddlesticks!"

All this delighted the old maid aunts, but they still realized that there was something lacking. Algeron did not play base ball, nor go out with other boys, but sat around the house and did his fancy work, and so things drifted on until an aunt, on his father's side, came to visit them. This aunt was a buxom little widow about twenty-five years old, with dark hair and snapping black eyes, and Algie tickled her most to death, while he liked her.

When she was about to return to her home, she said to the old maids, half in jest, "Let me take Algie out to the farm for a month and I'll make a man of him."

The very thing! So the old ladies packed his collar box, put in his fancy work, powder puff and bible, and saw their darling depart, but oh, how lonely it was! The first evening after he left they sat on the front porch and cried, the second they wept, and the next evening sat in the

gloaming both weeping and crying when they heard the gate crash shut, the sound of hurried steps on the gravel walk, and the next instant Algeron came in sight. He wore no hat, his collar was undone, his face pale and his eyes red from weeping.

The two women gave cries of delight and sprang to their feet to welcome him, but he did not see them. He ran into the house, threw himself down on the lounge and wept until he shook the room. His aunts begged him to tell his troubles, but the only thing they heard was a smothered "That woman—" and they looked at each other in horror, dreading the worst. Then they prayed with him, when they all felt better, and he struggled to a sitting position, crushed his hands between his knees, and staring stonily off into space said:

"That woman said—She told me—" Sobs choked him while a slow horror crept into the women's hearts. They were about to hear the worst.

The boy choked, then by a desperate effort cried: "She told me there is no Santa Claus."

We bee keepers are just like Algeron. We do not want our dreams disturbed. If someone tells us that the Caucasian bee is better in my respect than the Italian, we rush off home and throw a fit on the front porch; if I state that bees can be wintered outside a cellar to their eternal benefit I raise a howl that makes a barrage fire in Flanders sound like a whisper; if we state that honey may be sold locally at better than wholesale prices, there are bee keepers who are like the man who saw a giraffe for the first time. He looked at it for two solid hours, then turned his back.

"There ain't no such animal," he declared,

Having demonstrated that there is no profit in such a business these bunglers declare that bee keeping does not pay, and I encourage them so to think. However, they want \$5 for a swarm of bees in a box here, late in the fall, and probably after they have taken part of the honey.

Just before I left home a small article in the Sioux City Tribune attracted my attention. It read as follows:

"Last year honey was  $7\frac{1}{2}$  cents a pound. Now it is  $17\frac{1}{2}$  cents. The bees are not drawing any larger salaries, and they are not engaged in any strikes which would reduce production . . . ." I replied as follows: In protection of an "infant industry" I wish to call attention to a few glaring errors in the above article: First, the wholesale price of honey was not  $7\frac{1}{2}$  cents in 1916. The A. I. Root Co., probably the largest dealers of honey in the world, offered me 9½ cents for honey in November of last year. Second, the (wholesale) price of honey is not  $17\frac{1}{2}$  cents a pound at the present time, November, 1916. The last quotations I have range between 11 cents for dark to 15 cents for light, wholesale and the market is bare. This, you will note, is an average of about 13 cents. Were it any other food product than honey the price would be "out of sight." There had not been an increase of more than 75% in the wholesale price of honey up to December 1st of 1916, while everything that honey producers use has increased 100% to 200%, and are still going up. Tin cans, of which we use millions, have advanced fully 200% in three years, and are very hard to get.

The season of 1917 was the poorest since 1915. If the bees did not go on a strike Mother Nature did, and the United States lacked a matter of 60% of a normal crop. I had about one-fourth of a crop. It netted me 15 cents a pound.

Up to December 1916 honey was the one single food product that had not increased in price, and the subsequent advance is due to shortage of sugar, the tremendous demand from Europe and a very short crop.

There is a suspicion in the minds of honey producers in the state that someone is trying to "bear" the honey market, and as a result much more honey is being sold without the aid of the middleman. This  $7\frac{1}{2}$  cents per pound proposition seems to be an echo of what happened here a year ago, when a dealer member stated that 7 cents was a fair (wholesale) price for honey. Later in the day this was discussed and indignantly repudiated, but the reporter got it, and it went out, to come up, like Banquo's ghost to haunt us.

Wife is always telling me that I talk too much, and honestly I believe she means it, so I shall finish this talk sometime this afternoon, but first want to tell you about a pupil I had the past season. It was not a good one in which to instruct a person, especially a young lady given to enthusing, but I did the best I could. The moth worms were particularly bad with me last summer, it was a constant fight to keep them under control, and I had an opportunity of informing my pretty young student quite thoroughly about the pests. She had foul brood on the brain, that is, she worried about it getting into the one hundred hives she had, in prospect. She really had two last fall, and one was empty. Talking with her one day after I had dug out twenty combs riddled with the moth larvae, I said:

"Which do you think the worst, Sister, the worms or foul brood."

She looked at me from under arching brows, hesitated, flushed, then replied: "I—I—er—don't know, Doctor, I—I—um—I never had foul brood."

#### PAINTED VS. NON PAINTED COMB FOUNDATION.

J. W. TINSLEY, AMES.

This seems to be a subject on which a limited amount of data is available and what little I may be able to furnish is from results of the past season.

A year ago, having a great deal of old transferred comb and altogether too much Drone Comb, we made plans to put sixty or seventy-five colonies on to new foundation which meant to prepare not less than 750 frames for the coming spring.

The question of painting foundation was considered but whether it was advisable or not was a question not easily answered.

In referring to the trade journals we found the articles on the subject were mostly theoretical and none of them really solved the problem.

After conferring with friend F. W. Hall of Colo, Iowa, who had obtained excellent results from painted foundation the previous year we



started painting as he advised; we did not paint all of the frames until some of the first were in use and we were able to see the results from which we concluded we were not applying as much wax as would be worked out by the bees, so we applied 50% which seemed to be about correct.

Now, after the close of the season I can say that we will never again think of using any thing but 50% painted foundation.

The comparative merits of painted and unpainted foundation were clearly shown where normal colonies were given mixed frames of painted and unpainted foundation which had distinguished marks on the top bars.

Later we found sealed brood for the second time in the painted foundation while only first sealed brood appeared in the unpainted.

Thus it appears that painting has three advantages which should not be overlooked, namely: Advancing colony work; conserving stores, and increasing the value of old wax, to that of foundation.

Here it may be well to state that far too many good Bee-keepers do not realize what old wax has cost them and when you discover neglected combs, just remember that, at a conservative estimate every pound of wax has cost not less than seven pounds of honey and very likely considerably more.

When making arrangements for painting, a rather large pan should be provided for melting wax and retaining as uniform temperature as possible which should be several degrees above melting point.

Over this pan a suitable support should be arranged to keep a two or three inch flat brush upright while not in use, and over which surplus wax may be removed from the brush.

A board slightly smaller than the inside of the frame should be provided, on which the frame with foundation may be laid with the wiring above.

Care should be taken to have the wires securely imbedded by electrical or other device.

The brush should be used very much as a house painter would use it except, perhaps more rapidly.

The brush should be kept rather flat and foundation brushed from end to end, finishing by brushing across each end.

With a little practice this will be found most satisfactory.

Do not be afraid of covering the cell base, but avoid thick spots of wax as much as possible.

I do not believe five square inches of drone comb can be found on all of our new combs this season.

In order to arrive at a fair average of 50% take eight frames with foundation set and wired, this will represent practically sixteen ounces of foundation. Lay all on the scales and note the gross weight.

Now paint on these until you have increased their gross weight by eight ounces.

By inspecting these you will be able to judge the amount of wax necessary to increase the weight of the foundation the desired 50%.

State of Iowa

1918

REPORT OF THE

## STATE APIARIST

FOR

The Year Ending October 31, 1918

Also Report of the Convention of the Iowa Beekeepers' Association  
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F. ERIC MILLEN, State Apiarist

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