State of Jowa 1927

REPORT OF THE

STATE APIARIST

FOR

The Year Ending December 31, 1927

Also Report of the Convention of the Iowa Beekeepers' Association in Ames, November 17-18, 1927

F. B. PADDOCK, STATE APIARIST
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REPORT OF THE

STATE APIARIST

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the Year Ending December 31, 1927

S. P. PADDOUR, STATE APPAREL

LETTER OF TRANSMITTAL

HON. JOHN HAMMILL, Governor-

Six: As required by law, I herewith transmit to you my ninth annual report as State Apiarist, for the year ending December 31, 1927.

F. B. PADDOCK, State Apiarist.

Ames, Iowa, January 18, 1927.

J. H. PAARMANN



J. H. Paarmann, for many years curator of the Public Museum maintained by the Davenport Academy of Sciences, died after a long and painful illness, in July, 1927. He was an enthusiastic sideline beckeeper, and at the time of his death his been were harvesting the finest crop of honey in many years.

Paarmann was a scientist with many interests. His work brought him into intimate contact with the public and much of his time was spent in such popular work as lectures on bees, flowers and birds, to schools, clubs and security troops.

He held the office of vice president of the Iowa Bee-

keepers' Association for a time and was especially active in the local beekeepers' organization in Scott county. With the assistance of Miss Sheldon, assistant at the Museum, he made a series of colored lantern slides of the principal honey plants of the Middle West. These were from photographs, accurately colored and were highly praised by all who saw them.

Mr. Paarmann was an enthusiastic gardener, an accomplished musician, and had recently built a loom for the weaving of rugs. Life holds much of interest for such a man. Seldom does he find a dull hour. There are too many things to be done, too many things to be seen or heard to leave any time for idleness. Apparently our friend literally wore himself out by ceaseless activity with the hundreds of things which he found to do. He died after an illness extending over several months with severe suffering. In January, 1927, he submitted to an operation for stomach trouble and seemed to make a good recovery.

is spring advanced, his trouble returned with increasing severity and a second operation was deemed necessary. The incision dislosed a cancer so far advanced that the case was hopeless. He lingered for several weeks before the end which came at his home in Davenport. He maintained a lively interest in his bees to the last and was much cheered by the reports of the big crop which was piling up on his hives.

Few men were so well known locally as was J. H. Paarmann, and he will be greatly missed in Davenport and Scott county. Hundreds of persons had learned to depend upon him for solving their problems in natural science, beekeeping or gardening. He answered questions and gave freely of advice and information to a constantly widening circle of friends. His life was one of service and his usefulness in the community cannot be measured.

FRANK C. PELLETT.

REPORT OF STATE APIARIST

REVIEW OF YEAR

The season of 1927 must be considered one of unusual conditions for the beekeeper of Iowa. The winter of '26-'27 was one with few very low temperatures and with less than the usual amount of snow. The bees came through the winter in excellent condition, whether wintered in cellars or packing cases. The spring seemed to open early enough and offer excellent conditions for brood rearing. There was no freeze to cut off the early sources of pollen. The month of March was unusually favorable to colony development but April brought a very definite reversal of conditions. Colonies which were unprotected showed the effects very soon of the unfavorable weather. The stores were depleted rapidly and brood rearing was restricted. The nectar flow from dandelion was indifferent and the fruit crop was injured by freezes so it offered nothing for the bees. The severe conditions continued through May and unprotected colonies were forced to abandon brood rearing. When bees were in packing cases they continued brood rearing but drew heavily on their stores. By the end of May many colonies were found almost out of stores and some bekeepers feed heavily. The fact of drawing on the last of reserve stores showed up in an abnormal amount of disease in apiaries formerly declared free. These "carrier" colonies could be identified and treated. This condition is explained more fully in the "Inspection results for 1927." The bees were in such poor condition by June that it seemed like an impossible task to develop a colony for profitable honey production. Conditions improved for building up and the spring conditions retarded the honey plant development so that the two did coincide even though late in the season.

The main honey over the state began two to three weeks later than normal and was more intense than usual. The spring weather was apparently favorable for honey plants as the excellent honey flow was uniform over the state. The white clover area is the northeast quarter and in this region the crops have been spotted during the past three years. In 1927 an excellent crop of honey was secured from this source over the entire region. Yields of 200 pounds per colony of extracted honey were made in the demonstration yards in the white clover region. The white sweet clover region is increasing each year so that it now covers most of the west third of the state. This is an excellent honey plant and can

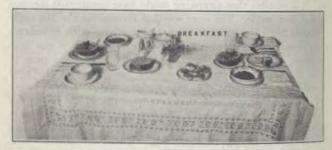
be depended on practically every year. The increased acreage is being used for soil improvement and for dairy pastures. In this later service it is most useful to the beekeeper as the bloom persists throughout the summer and early fall. There are not many areas where seed production is the service which is the ideal situation for the honey producer. Larger yields are general in the sweet clover region than are expected in the white clover region. There was very little flow anywhere from basswood. Yellow sweet clover is spreading rapidly along in the area with the white sweet clover. This plant is of great value to the beekeeper as its blooming date is fully two weeks ahead of the white sweet clover. The honey flow of 1927 was of such a character that a large amount of good honey was produced.

The main crop was produced and removed in anticipation of fall manipulations of the colonies. The fall crop followed closely after the summer crop for the first time in five to seven years, depending on the locality. The amount of fall honey was much above normal and of unusually good quality. One beekeeper expressed the situation of the fall flow, "never expect a fall flow but always be prepared for one." The fall requeening was delayed on account of the heavy flow but all colonies brooded up well under the influence of the fall flow. It was possible to make considerable increase of colonies on the fall flow and especially in conjunction with requeening. It is possible that swarming might have occurred if increase had not been made. The open weather throughout the fall made it possible for all colonies to prepare for winter with abundance of stores and a good supply of young bees. The fall flow was from heartsease, spanish needle and goldenrod. Dandelions were in bloom throughout October. Bees were packed under the most favorable conditions and even late packing was no serious handicap. The weather was such that bees were put in the cellars one to two weeks later than usual. The bees should come through the winter of '27-'28 in very good condition. More attention is being given to the wintering of bees each year. A bulletin entitled "Wintering Bees in Iowa" was issued to meet the demand for information on this subject.

CROP DISPOSAL

The problem of crop disposal is demanding more attention each year from beekeepers everywhere. There are several interesting factors which have a very important bearing on this subjet and the inter-relation of these factors is very interesting. Beekeepers

are usually inclined to look only at local conditions when consid. ering the matter of marketing their production of honey. The crop condition of that state is sometimes considered but seldom if ever is the national crop ascertained. This year has been an excellent example of these factors. The honey crop of Iowa was about normal except in two restricted areas. Everyone felt that it was necessary to make any possible price in order to move hones Therefore, the opening price was too low and the honey moved to market freely. Never has so large a proportion of the crop moved out of the producers' hands so early as this year. There are seat. tering small lots which seem to drag but for reasons to be discussed later. Normally the California erop has been the controlling factor in establishing the price. During the last few years California has been unfortunate in poor crop yields and at the same time this state has been developing an export trade. Therefore, the national honey price is not influenced so much now by the far west conditions. The great intermountain region has been perfecting a marketing organization to handle the crop more efficiently. A more orderly disposal of honey from this area would have a great stimulating effect on the national honey price. It was unfortunate that the crop of this section was light the past season, A general export trade in honey is being developed as the item of 11,000,000 pounds sent out of the country in 1927 is three times



Begin each day by using some honey with other foods.

the export of any former year. A good crop in Iowa should not cause anyone to start selling at a reduced price. It is necessary to first determine all the factors which may enter into the established price.

A great change has taken place in the beekeepers of Iowa during the past ten years. Formerly there were probably not more than is commercial honey producers. Now it is possible to count at least one hundred commercial beekeepers who receive the major part of their income from honey production. It is possible to account for almost another hundred persons who are receiving ane-fourth to one-half of their income from bees. The problems of beekeeping are shifting with this advancement of beekeepers and now one of the major problems in crop disposal. The solution of marketing can be accomplished in part by better grading and preparation of the product for the consumer. The United States Department of Agriculture through the Bureaus of Entomology and Agricultural Economics has established standards for honey. These standards are available in Department Circular 410, issue May, 1927, and also in a color chart. Beekeepers in many states are officially adopting these standards and it is hoped that the lows beekeepers will also adopt them in the near future.

Effort without limit has been made during the past year throughout the nation to increase the consumption of honey. Every possible agency has combined to help in this problem. But more honey will not be consumed until the product is offered in a manner that appeals to the consumer and it must be available whenever the consumer may want it. It is especially fortunate that in Iowa the consumption of honey is at least twice as much as the average consumption of the United States. The solution of the problem of crop disposal is entirely in the hands of the producer. If the producer does not care to meet the demands of the consumer then it should be possible for someone else to act in marketing the crop.

EDUCATIONAL WORK

Extension field bee work was conducted in 37 counties, consisting of special meetings, apiary inspection, area disease eradication and demonstration apiaries. There was also a beekeepers short course and several lectures on bees was given at club boys short course.

During the fiscal year 1926-1927, 147 bee meetings were conducted and 1,064 apiaries visited giving a total of 5,996 persons attending meetings and 1,994 persons interviewed when visits were made to inspect apiaries, giving a total of 7,990 persons given personal assistance and information by Extension field specialist.

Literature, such as Beekeepers Bulletin, was mailed quarterly to 17,000 beekeepers, over 5,000 pamphlets on honey uses was sent to beekeepers upon their request for same. Some 4,000 copies each of pamphlets on "Installing Package Bees," "Tar Paper Packing Case" and "Wintering Bees" were sent to beekeepers upon request for information along such phase of beekeeping. Over 5,000 bulletins on "Wintering Bees," "Diseases of Bees," and "Management of Bees" were sent to beekeepers.

The 26 demonstrations consisting of 120 colonies in 11 counties, yielded 167 pounds per colony or over double the average state yield of 80 pounds. The average yield over check colonies was 38 pounds per colony. The check colonies handled by the co-on-



Honey can be used in many ways for the lunch.

erator proved that the method being taught was not only effective but was being put into actual practice as the colonies handled by the co-operator showed an increase of 49 pounds per colony. The increase since 1922 of four or five commercial beekeepers to 100 commercial beekeepers in Iowa proved that the production of demonstration and "check" colonies was 34,400 pounds of honey. The average yield of 120 demonstration colonies was 167 pounds per colony, or the increased production being 87 pounds per colony over state average yield of 80 pounds.

Disease eradication on an area basis was conducted in 14 counties. A total of 16,737 colonies were examined. A total of 1837 colonies were found diseased and 1,375 of these were treated or destroyed. Inspection results show that 75% of disease was actually cleaned the first year. The increase production is 40 per colony where colonies are treated, therefore, an increase production of 40,280 pounds was gained by persuading beekeepers to treat 1,007 colonies which were found diseased. Valued at 20 cents per pound the net gain would be \$8,056,00.

In summarizing results of Extension bee work it can be shown conclusively that an increase production of 54,650 pounds of honey valued at 20 cents per pound would be \$10,930.00 was gained

by the Extension Department's assistance. The increase value of 1,007 colonies of bees treated means an increase value of \$10,070.00 to beekeepers. This is not taking into consideration the value derived by beekeepers who attended meetings, received literature, and those protected by cleaning up disease in their neighbors' bees. The value to beekeepers in general by increase sales of honey, co-operation in purchasing equipment, bees and queens, and the value received from using methods taught them by the Extension



Honey meets a need for food in the dinner menu. These three meals were prepared and demonstrated at Iowa State College by Thelma Roe of Garner, Iowa.

Department is far greater than the actual gains in result demonstrations and disease eradication campaign. Approximately 2,100 pure Italian queens were introduced, thereby doing away with inferior bees.

INSPECTION RESULTS FOR 1927

It has been possible to increase the amount of inspections during 1927 through the co-operation of the Agricultural Extension Services ice and the increase in the funds made available by the last legis lature. The staff has consisted of Howard Shipton for eight months, George L. Lott for three months, inspection in conjunction with demonstration apiary work by A. D. Worthington, and or, ganization and check-up work by the State Apiarist. The work of the season began at the usual time and was increased on July first. This was the only program available on account of the fiscal year beginning at that time but it is not the most desirable time from the standpoint of inspection. After July 1st there is so much honey on the hives that inspection is slow and very tedious. Furthermore during the late summer there is often a dearth of nectar flow which makes inspection difficult and unsatisfactory on account of robbing. Under such circumstances treatment of diseased colonies is practically impossible.

GENERAL INSPECTION

There will always be a demand for scattered or general inspection as the law encourages it "by written request . . . said apiarist shall examine the bees of that locality suspected of being affected" In the light of our modern scheme of area clean-up campaigns we feel justified in discouraging this type of inspection which is unorganized. Under the present plan these requests are held until a circuit can be arranged for the inspector which will tend to reduce the cost of this scattered work. There are many worthy cases which come to our attention and it has been the policy to take care of all such requests. Some of this work is necessary. There are queen-breeders who need very thorough inspection of their territory and when any disease is found it must be cleaned up promptly. It is fortunate that there are no shippers of bees, in which case it would be necessary to declare disease free territory over a larger area. Some of the honey producers market a portion of their crop in Missouri. This state has recently enacted a law requiring a health certificate to accompany all honey offered for sale within the state.

Area clean-up inspection has demanded first consideration from the force because it is believed that this character of work is fundamentally sound. It is not possible to include many counties in such a campaign as the funds are too limited. It is necessary to withstand criticism from many who feel that their county should be among the first so inspected. It is necessary to explain many times why the counties were selected for the present work. There is a strong feeling that a county can be made free of disease in a short time. Another feeling is to want to scatter the counties involved in the area clean-up. On the contrary the effort has been to clean up counties more or less adjacent or those which would soon enlarge into a solid area. There are at present two well defined areas in the state. The one is building around area clean-up counties in the west which should expand to include the two tiers of counties on the west. The other is to expand from locality counties in the northeast central portion. It should be the policy to complete these areas and to work without a break in all directions from these areas.

Wherever possible the inspection work has been conducted in co-operation with the Farm Bureau office of the county. This co-ordination has been excellent in those counties where area clean-up work was conducted. The co-operation has always been accorded in counties of locality clean-up but it has never been as effective. Wherever inspection has been conducted as an adjunct of the demonstration apiary project the help of the Farm Bureau office has been very effective. It has not been feasible in many instances to secure help in those counties where a few miscellaneous inspections were made. The policy has been adopted of supplying the Bureau office with a copy of all work done in the county during the season.

A very decisive drive was made this year on the disease which was found in any apiary. The small part of eradication is to find the disease, the difficult part is to eliminate the disease. Last year a clean-up order was left with each owner where disease was found but experience shows that the order will not be carried out unless it is evidently necessary. During the present season still more effort has been put on the clean-up. It has been the policy to reinspect wherever disease is found to determine if clean-up is accomplished. It has been necessary to use much force in some instances to bring about the clean-up. This method has naturally made the cost of inspection per colony higher than in former years. But the real clean-up of disease must be the basis of cost for this work. There are yet too many cases which must be considered as incomplete because disease was found and no record has been

made that such disease was treated or destroyed. There are always circumstances surrounding some cases that make it impractical to close the case promptly.

Reference to Table 1 will show that 964 apiaries composed of 13,934 colonies were inspected. In addition 2,803 were reinspected, making the grand total of 16,737 colonies inspected during 1927. The disease was found in 1,893 colonies or 13.5% for all of the inspection for the entire state. This must not be considered as a real state average for the existence of disease for there are factor which have made this figure high. Inspections have been made in those areas where it was known that disease was very prevalent. The average was raised by one or more inspections in a few counties of particular yards reported as a menace. Of the disease found 53.2% was treated, either by the owner or the inspector, whereas 19.4% was destroyed at the time of inspection or reinspection. There are included as incomplete many instances where there is every reason to believe that treatment or destruction was completed but a recheck was impossible.

AREA CLEAN-UP

Work has been pursued during this season in three counties an the clean-up basis and county wide area. It is the aim in this work to inspect every colony of bees in the county. Where disease is found it is either treated or destroyed. When the county has been inspected the effort is directed then to those districts where disease is found. Even though disease has been treated or destroyed it is not safe to assume that it will not be found again in the same yard later in the season or even in following seasons. Furthermore, the disease may be found in yards in a disease region where it did not appear in former seasons. It will take a period of years to clean out the disease from any apiary when it has once become established. By the very nature of the season of 1927 more disease could be found everywhere. The spring was long and cold so that the bees went to their reserve stores in the far corners of the brood combs. Here may have been stored the contaminated honey secured some three or four years previous but never used in brood rearing so the disease did not appear in the brood. Therefore this year a great amount of potential disease showed up as actual disease and it is to be expected that such an occurrence will not take place again for many years. Fortunately most of the possibly contaminated honey was used for brood rearing in the hive and even if such colonies were later robbed the possible

amount of diseased honey was quite small so the normal spread of disease would be restricted. If these theories are founded well the past season has shown an accumulated crest of disease which should not be repeated soon. This condition has been an aid whenever intensive inspection has been conducted. Under normal conditions these potential or carrier colonies would have been passed as disease free only to break out later, perhaps after the area had been declared free. It would have been hard then to explain the apparent reappearance of disease. It should be evident to any student of disease control that time is required as well as very persistent labor to really drive out the disease from any area.

IDA COUNTY

In this county the inspections were much more extensive this year and the entire county has been covered carefully for the first time. The per cent of disease found this year is no lower than last year. However, of the 90 diseased colonies 19 were destroyed and 33 were treated. A reinspection was made of 73 of the diseased colonies found. The number of colonies per apiary is small in this county and the cost of inspection is high with the recheck which is necessary. It is expected that the work of next year will begin to show a decline in the amount of disease.

WEST POTTAWATTAMIE COUNTY

The results of inspection in this county show very well the good that may be obtained from area clean-up work. Considerable work was done in and adjacent to Council Bluffs during 1926. The results showed 46.8% disease. The same territory was worked in 1927 and several new townships were visited. In the old area 79 parties were visited who had bees and disease last year who did not have any bees this year. In every instance such beekeepers had one to four colonies all of which were diseased. A few of these destroyed all colonies and had no desire to keep bees again. Others treated and either due to poor methods or the uncontrolable weather lost their small holdings. Several beekeepers were high in disease in 1926 but followed methods of treatment carefully as outlined by the inspector. Many such yards showed no disease in 1927 while in others the disease was very small. In a few yards a high percentage of disease persisted in 1927. One case in this area is especially interesting. A local co-operator worked with the inspector for several days in 1926. Wherever disease was found and the owner was not interested the co-operator

moved such colonies to his yard which was badly diseased. Latethe entire yard was treated in one day and a fair crop was har. vested in 1926. Only one colony showed disease in 1927 and this was moved into the apiary during the early spring. The crop of honey from this apiary in 1927 was the largest in the history of the beekeeper's experience. In the new area the disease was plenty high, bringing the average for the county to 15.0%. A very large amount of reinspection was done in this county. Nine hundred and ninety-seven out of 2,043 colonies in the 219 apiaries. There is only one isolated case in the county where disease was found that a recheck was not made to determine if treatment or destruction had been made. Of the 308 colonies found diseased 271 were treated by the owner or inspector and 74 colonies were destroyed by the owner or at his request by the inspector. It is evident that a number of colonies were destroyed on the recheck which had been improperly treated during the early season.

A big reduction in the amount of disease can be expected under such an intensive campaign. Several townships in this county have not been inspected but work is now under way to extend inspection during the coming season.

WOODBURY COUNTY

Inspection work has been conducted on an area clean-up basis in this county for four seasons. It is a large county which is the center of commercial honey production in the state so there are many beekeepers to visit and many colonies to inspect. The entire county has been carefully covered now and the effort can be concentrated in the future in reducing the amount of disease. The large and the small beekeepers have cleaned or destroyed disease equally effective. The task of inspection in Sioux City is slow and expensive but has been done effectively as fill-in work when work in outlying territory was difficult. The inspection of 1927 covered 214 apiaries composed of 6,337 colonies. This was a decrease in apiaries but an increase in colonies over the work of 1926. Disease was found in 223 colonies or 3.5%, which is a very decided reduction from 1926 when the disease was 9.2%. Of the disease found 18 colonies were treated and 78 colonies were destroyed This last item is unusually large and can be done best with large beekeepers who believe that destruction is a superior method to treatment for the eradication of disease. Only 43 colonies were reinspected and the incomplete records are confined to Sioux City.

LOCALITY CLEAN-UP

This type of work is conducted with the same care as the area type but is restricted to small units of territory, usually townships. The work has usually started in a town where local interest and disease prevalence warranted some action. The results are effective but in the Table 3 appear to be less impressive. It is to be expected that when the territory is enlarged to area proportions the results will be wholly satisfactory.

BLACK HAWK COUNTY

The work was opened in 1926 by work around Cedar Falls where disease was heavy. This year the old area was rechecked and some new territory was included in the work. The results are especially impressive when it is considered that of the 38 diseased colonies, 13 were treated and 12 were destroyed. A very large amount of reinspection was done and few incomplete cases are reported.

BREMER COUNTY

Work was started around Waverly where disease is very common among many small beekeepers. The average yard inspected was only 4 colonies. The 27% disease was not high but was scattered so generally that it is big problem. Of the 46 diseased colonies only 4 were treated but 15 were destroyed which is sure to show results later in the work. Some reinspection was done but unfortunately it was necessary to leave too much incomplete work. An early start will be made on this class of disease next year.

MONONA COUNTY

Very little work was done during 1926 and in 1927—only 14 apiaries were inspected. These were along the southern boundary and cannot be taken as representative or significant.

CHEROKEE COUNTY

The work in this county has centered around the city of Cherokee. There has been some disease in this locality for several years but it has been reduced gradually. It is hard to account for the apparent increase in the prevalence of disease this year. Only half of the 28 diseased colonies were treated and none were destroyed.

O'BRIEN COUNTY

No real work was done in this county last year and only a small amount this year. The work was conducted in a locality where disease was known to be prevalent so it is only natural that 32.9%

of the colonies should be diseased. Of the 65 diseased colonies, 50 were treated and 11 were destroyed. A reinspection was made of 51 colonies.

IN CONJUNCTION WITH DEMONSTRATION APIARIES

This type of inspection has developed during the past two years from necessity. In some counties interest was sufficient to start the program of demonstration apiaries. After the work was under way it became evident that disease was very general throughout the apiaries of the area. In some instances the co-operator had disease where it was proposed to establish the demonstration. The first step then was to clean that apiary. From that point it has been necessary to work out in all directions to keep the demonstration apiary free from reinfection in the neighborhood. The scope of these inspections has increased and where two or four demonstrations have been established much of the county is represented in the inspections. The value of this work is very great for the basis of disease control is education, so it can well be closely associated with the demonstration work.

CHICKASAW COUNTY

The inspections of 1926 showed disease in 87.5% of the colonies. In 1927 the work was much more extensive, covering 415 colonies of which 219 or 52.9% were diseased. Of the diseased colonies 160 were treated and 17 were destroyed. The reinspection of 354 colonies was very extensive, perhaps the largest proportion of any county. The results should be highly satisfactory when the inspection is continued in this area.

FAYETTE COUNTY

It was evident at once that inspection was necessary to supplement demonstration work in this county. Inspection was made of 743 colonies and 190 or 25.5% were diseased. Treatment was given to 133 colonies and 54 were destroyed. The reinspection was very thorough, covering 646 colonies. Such intensive inspection work as this will show big results for next year.

DALLAS COUNTY

The inspection work covered 267 colonies this year which was equal to the work of 1926. However, the disease was much more prevalent in 137 colonies or 51.2%. An unusual example of educational effort is offered here. The specialist who was also the inspector conducted treatment demonstrations and made it possible

to treat the entire 137 colonies. A reinspection was made of 148 colonies and no further disease was located.

HARRISON COUNTY

Inspection work as an adjunct was much extended this year over the work of 1926. Disease was found in 210 colonies of the 763 inspected or 27.5%. Treatment was given to 146 and 35 colonies were destroyed. A reinspection was made of 250 colonies so it is certain that most of the disease found was eliminated.

DISCONTINUED

It was necessary to discontinue effort in three localities where inspection work was started in 1926. These were listed by towns, Chariton, Webster City and Dyersville. The chief reason for no work in these areas was insufficient local co-operation. It is not always possible to foresee such a condition and there will always be some areas where work is started that it is not feasible to continue. The effort is to reduce such work to a minimum.

RESULTS

One of the outstanding results is the large percentage of disease which was treated or destroyed, 1,375 out of 1,893 colonies or 72.7%. The real value of this item will show up in future inspections. It is evidence of very definite progress toward the reduction of disease.

The large amount of reinspection or check-up work insures carrying out treatment or destruction of colonies. This phase of the work is very important in the progress to kill out disease. The records show that 2,803 of the 13,934 colonies or 20.8% were reinspected.

Every effort is made to account for all disease found, to try to provide for treatment or destruction. Not much of a battle has been waged, when the disease has been found it must be taken care of. The table shows more incomplete cases than there is reason to believe exist. Many promised to treat or destroy at the time of inspection and no doubt some of these did take care of the disease, but a positive check was not made. Some are very good cases but where an actual check was not made they are listed as incomplete. The aim is to reduce the amount of incomplete cases.

In looking back over the inspection results of 1927 it becomes more evident than ever that the really effective measure is the area clean-up plan. This work is especially good where local co-operation is available, both the Farm Bureau and the beckeepers. In 20

TABLE 1-SUMMARY OF 1927 INSPECTION

County	No. of aplaries	No. of eclonles	Diseased	Treated	Destroyed	Reinspected	Incomplete	% diseased
Hark Hawk	30	190	38	13	12	90	. 5	99.0
Hark Hawa.	43	169	-66	4	15	18	15	27,2
eschattan	4	103	2	1	1	39		1.8
Participation	17	195	28	. 14			5	14.3
	23	415	219	160	17	354	8	53.7
blekasaw	17	207	137	137		148		51.1
DE TON.	26	743	190	133	54	646	1	25.5
Payette	20	63	13	1000	arca de		1	20.9
Premont		54	21	*******			9	38.8
Buthrie	8	24	24	***********				10000
Hamilton	-		210	146	25	250	3	27.5
Harrison	54	763	230	140	- 50	200		
Humsboldt	T.	50	was to see	******		78	18	10.4
da	152	861	.90	19	33	13	18	8.1
Johnson.	1	49	- 4	******			100	
MIDS	1	10	10	10			*******	100.0
Mitchell	1	35	10				1	35.0
Monona	3.4	66	0					*****
O'Brien.	23	197	65	50	11	51		32.9
	26	310	41		6	12	4	13.2
Page	29	282	29	22	. 5	68	2	7.4
E. Pattawattamic	219	2,043	308	271	74	997	1	35.0
W. Pottawattamie	22.519		37			J. Charles	4	62.1
Shelby	- D	50	12		12			197
Sloux	01 4	21				24	2	7.0
Story	- 8	144	11	9		24	7	5.
Wapello	6	33	17				- 2	1.
Washington	-1	9	1			******	- 5	
Webster	2	114	1				1	
Winneshiek	3	22	8				1	36.0
Woodbury	214	6,337	993	18	78	43	35	3.4
Wright	24	231	123	31-11-5	15		13	50.7
Total.	964	13,984	1,863	1,007	308	2,806	123	12.

		SUMMARY Apiaries	OF IOWA Colonies	INSPECTIONS Diseased	Per Cent
1919	***********	66		0.0	
1920	*********				
1921	***********	155 (81)			
1922			4.086	920	22.5
	***********				10.0
1923	***********	198	4,152	567	10.0
1924	************		11.631	1.512	13.0
1000				41000	110
1935	***********	829	11,429	1,702	19.0
1935 1926	***********		11.071	1.779	16.1
			24,9714		13.5
1927	***********	964	13,934	1,893	13.0

TABLE 3-1927 INSPECTIONS

A	Per	Rein-		
Aplaries	Colonies	Diseased	Cent	spected
1da County 1926	749 861	80 90	10.8 10.4	73
West Pottawattamie County 1926	1,017 2,043	476 308	46.8 15.0	997
1924	5,236 2,838 5,719 6,339	314 482 526 223	6.0 16.9 9.2 3.5	43

one county the beekeepers have given support to a certain extent but have not put in all that is required for the best work. It is more necessary than ever to select the locality clean-up with the idea that they will grow into area clean-up. If the start is made without full co-operation of both local factors the work is slowed up. Many things can happen in the growth of this type of work which will seriously affect the ultimate development. No one can fail to appreciate the value of inspection work as an adjunct to the demonstration apiaries. But here again it is very necessary to select the territory with great care in order that the work may be carried to its logical conclusion even over a period of five to seven years. A healthy sign on the part of the beekeepers is the will. ingness to burn infection, especially when the amount is relatively small. It is not necessary to destroy property of value but a diseased colony in poor equipment has little or no value. In fact in two states such a solony is defined as a public nuisance and as such the inspector must perfect the destruction of it. Unless a diseased colony is properly treated in every sense of the word, the work is more apt to spread the disease than to check it. One of the big factors in the continued spread of the disease is the inability of the beckeeper to make the necessary initial sacrifice. The desire to save by salvage proves to be the downfall.

Locality Clean-up

The state of the s	Anjayles Colonte to Per					
Black Hawk County	Colonies	Diseased	Cent	Rein.		
1926 25 1927 30	162 190	53 38	32.1 20.0	81		
Monona County 1926 6 1927 14	19 66	2	10.5			
O'Brien County	- 00					
1926 1	150					
Cherokee County	197	65	32.9	51		
1926 15	140	9	6.4			
1927 17 Bremer County	195	28	14.3			
1927 42 Chickasaw County	169	46	27.2	18		
1926 12	104	91	87.5			
Dallas County	415	219	52.7	354		
926 24 927 17	261 267	24 137	9.2 51.2	148		
Fayette County			72.5	140		
927 26 Harrison County	743	190	25.5	646		
926 4 927 54	443 763	30 210	6.7 27.5	256		

BEEKEEPERS' CONVENTION

The sixteenth annual convention of the Iowa Beekeepers' Association was held at Iowa State College, Ames, Iowa, November 17 and 18, 1927.

OFFICERS OF THE CURRENT SEASON

President—N. Williamson, Bronson.
Vice President—J. G. Jessup, Council Bluffs.
Secretary-Treasurer—F. B. Paddock, Ames.
Director—W. S. Walker, Iowa Falls.
Director—Ed. G. Brown, Sergeant Bluff.
Director—Gerald Gay, Beacon.
Director—G. H. Ohmert, Dubuque.