

State of Iowa

1918

REPORT OF THE

Veterinary Department

FOR THE

Biennial Period Ending June 30, 1918

J. I. GIBSON

State Veterinary Surgeon

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THE STATE OF IOWA
Des Moines

LETTER OF TRANSMITTAL.

HON. W. L. HARDING, *Governor of Iowa:*

In compliance with Section 2532, Chapter 14 of the Code, I take pleasure in presenting this Tenth Biennial Report of the State Veterinary Surgeon of Iowa, for the period ending June 30, 1918.

Respectfully submitted,

J. I. GIBSON,
State Veterinary Surgeon.

Des Moines, December 30, 1918.

REPORT OF VETERINARY SURGEON

During the biennial period from July 1, 1916, to June 30, 1918, this department has been called upon to investigate in all 789 calls which are tabulated as follows:

Anthrax, (suspected)	5
Blackleg	1
Cholera	13
Coital-Exanthema	31
Dourine, (suspected)	1
Forage Poison	9
Glanders	18
Hemorrhagic Septicemia	23
Necro-Bacillosis	1
Rabies	4
Scabies	53
Stomatitis	2
Tuberculosis	588
Miscellaneous	49
Total	789

ANTHRAX.

The five outbreaks suspected of being anthrax were not substantiated by diagnosis and we are glad to report the state as being free from this disease.

BLACKLEG.

This disease exists to some extent in the state but, as a rule, is handled successfully by the owner of the livestock and his veterinarian. Through the prompt use of serum and vaccine serious loss from this disease is prevented.

HOG CHOLERA.

During the period covered by this report hog cholera has been steadily declining, both as to the number of outbreaks and the losses resulting from such outbreaks.

The prompt co-operative methods now applied to each outbreak prevent the serious spread of this disease.

The Bureau of Animal Industry, United States Department of Agriculture, during the past year has maintained an inspector, in charge of hog cholera control work—Dr. J. S. Koen, Room No. 18,

Federal Building, Des Moines, Iowa, with a staff of twenty veterinary inspectors, who are located at the most advantageous points throughout the state. The entire time of this federal force of veterinarians is given to the investigation of outbreaks of disease in hogs, their services being free to the farmers for whom they diagnose the disease and give instructions as to the best methods of controlling the outbreak, and eradicating the infection from the premises.

The salaries and expenses of this Bureau force amount to approximately \$70,000.00 per year, which the Federal Government is spending freely, for the benefit of our swine industry in Iowa.

In order to make this work thoroughly co-operative between the Federal Bureau and the Veterinary Department of this state there should be a special appropriation made by our Legislature of not less than \$50,000.00 annually in order to thoroughly cover the entire state; in fact there should be an average of one official veterinarian per county, whose sole business should be the control of swine diseases. Elsewhere in this report there appears an article on Hog Cholera Control, by Dr. J. S. Koen, Inspector in charge.

COITAL EXANTHEMA.

Coital Exanthema is a transmissible vesicular disease of the urino-genital organs of the equine species which runs its course in from three to six weeks. It responds readily to local treatment and when properly handled complete recovery ensues. During the course of this disease it is necessary to suspend breeding, which, in some instances, prevents full production of the species.

All stallions and mares affected should be held in quarantine until complete recovery.

DOURINE.

Dourine is a malignant, specific, vesicular disease of the urino-genital organs of the equine species resembling closely in all its aspects and effects syphilis in the human patient. This disease is incurable. It has been the policy of the Federal authorities co-operating with the state department, to destroy all animals affected. As a result of this policy we are glad to state there is no known case of this disease in the state at this time.

During this history of this department three outbreaks have occurred in Iowa. The first one in Van Buren county in the year 1903. The second outbreak occurred in Taylor county in 1911, and

the third in Carroll county in 1915. The origin of each outbreak was due to the importation of stallions from Europe. There was never any connection traced between the outbreaks.

FORAGE POISONING.

Forage poisoning is a convenient term applied to various toxic conditions resulting from the use of improper feed. In some instances the causative agent seems to be chemical in nature. In others toxins or ptomaines seem responsible for the condition, while again the condition may be due to micro-organisms, pathogenic in character. The condition commonly called "corn-stalk disease," comes under this heading. Owing to the fact that little is known of the nature of the so-called "forage poisoning," the only remedy at hand is change of feed or pasturage. In some instances a certain pasture or stock field which proves injurious early in the season may become safe later, due possibly to changes of climatic conditions, including frost. There should be continued research until the true nature of this disease or condition is discovered.

GLANDERS.

Glanders we are glad to report as not known to exist in the state of Iowa at this time. It was feared that the extensive movement of horses for war purposes would tend to spread the infection through out the states. We are glad to state that such has not been the case, at least so far as Iowa is concerned.

HEMORRHAGIC SEPTICEMIA

Hemorrhagic Septicemia is a specific infection due to the presence of the bi-polar organism, which exists in the soil of certain fields and sections of the state. We have this disease in horses, cattle, sheep and swine. This disease was formerly classed as "forage poisoning." Vaccines are now available for the treatment of this disease in the different species, the prompt use of which prevents extensive losses.

NECRO-BACILLOSIS.

Necro-bacillosis is a condition or disease found in cattle, sheep and swine resulting in the infection of the animal by the bacillus-necrophorus. This infection in cattle results in what is termed "ulcerative-ano-vulvitis," a local infection. In sheep it results in what is commonly called "lip and leg" ulceration. In swine this

condition produces "sniffles" or "bull nose," necrotic-pneumonia and neuro-entiritis. This infection is rather rare in cattle and sheep but is quite prevalent in hogs and in all external forms responds rapidly to treatment. The internal necrotic conditions found in hogs are more difficult to overcome and cause considerable loss.

RABIES.

Rabies is practically extinct in Iowa at the present time and when prevalent should always be controlled by strict quarantine measures and the destruction of infected animals. There should be perfect isolation of all exposed animals including confinement or destruction of dogs in the community where the outbreak occurs.

SCABIES.

Scabies in cattle seldom occurs in Iowa and when found to exist in many instances it is traced to the importation of range cattle.

Sheep scabies is more or less prevalent at all times and is apparently on the increase, in Iowa, in the last two years.

We find that many shipments of feeder sheep imported into the state and passed through the most approved dips develop more or less disease during the feeding period. The native sheep in some localities are infected.

In order to properly control this infection in sheep this department should have one or more specialists devoting their entire time to the treatment of flocks and disinfection of premises.

STOMATITIS.

Stomatitis is a diseased condition occasionally found in cattle and more rarely in horses. It is of special interest when found in cattle because of its similarity to European foot and mouth disease, which fact makes it necessary to investigate reports very promptly and thoroughly. Such investigation is always made when reports are received stating that cattle are affected with sore mouth and, when there is the least doubt as to the nature of the infection, experimental inoculations are promptly made.

TUBERCULOSIS.

Tuberculosis is not only the greatest menace known to human life, but undoubtedly is the cause of a greater economic loss in cattle and hogs than all other diseases combined. This statement is borne out by the postmortem reports of federal inspectors in the various abattoirs of the country.

This disease exists to a greater or less extent in every state and country, and we must admit that the disease is too prevalent in Iowa cattle and hogs to enable our people to get the best returns for their efforts in cattle and swine production.

Tuberculosis is preventable and, with thorough measures may be controlled and eradicated. It will cost considerable to eradicate this disease, but the cost of eradication will be small compared with the direct losses accruing annually. Many of our breeders, especially of pure bred cattle, have determined to eradicate tuberculosis from their cattle and to place their herds upon the tuberculosis-free accredited list.

At this time several herds have been tested by the Federal Bureau and this department, in co-operation. The Federal Bureau has stationed F. H. Thompson, Inspector-in-Charge of tuberculosis eradication work in Des Moines; his address is Room 18, Federal Building, Des Moines, Iowa. At present Dr. Thompson has two veterinary inspectors on his force.

Congress has made an appropriation for the carrying on of this work on the part of the Federal Bureau and, in order that this department may co-operate fully, the Legislature should appropriate not less than \$50,000.00 annually, to enable us to meet the demand of our people for herd tests. In addition to this we believe an appropriation should be made from which to indemnify owners of condemned cattle. A reasonable indemnity will remove all opposition to the work and the work will progress favorably.

TUBERCULIN TESTING OF HERDS.

The following is an exact copy of the Co-Operative Rules and Agreement for the accrediting of tuberculosis-free herds by the United States Department of Agriculture Bureau of Animal Industry, and the Iowa Commission of Animal Health:

Agreement For the Tuberculin Testing of Herds of Pure Bred Cattle and the Uniform Methods and Rules For Tuberculosis-Free Accredited Herds of Pure Bred Cattle. Unanimously Adopted by the United States Live Stock Sanitary Association and by Representatives of Pure Bred Cattle Breeders' Association, Approved by the United States Bureau of Animal Industry and the Iowa Commission of Animal Health.

Whereas, The Bureau of Animal Industry of the United States Department of Agriculture and the Iowa Commission of Animal Health, for the purpose of improving the pure-bred dairy and beef breeds of cattle in the United States, encouraging recognition of the importance of maintaining herds of such cattle free from tuberculosis, and promoting the interchange of healthy, pure-bred cattle, proposes, so far as available funds permit, to co-operate with the breeders of pure-bred cattle, by assisting them to eradicate tuberculosis from their herds and to maintain officially tuberculosis-free accredited herds in the state of Iowa.

Now, Therefore, in consideration of receiving assistance from the Bureau of Animal Industry and the Commission of Animal Health along the lines and for the purposes specified, I do hereby agree to co-operate with the said Bureau and State Officials upon the following terms:

1. I will permit my entire herd, or any cattle of my herd, to be examined and to be tuberculin tested or retested at such times as are considered necessary by the Bureau or State Officials.
2. I will cause all animals which show physical evidence of tuberculosis to be promptly slaughtered under the United States meat-inspection regulations, and I will cause the carcasses of said animals to be disposed of according to the meat inspection regulations of the Bureau of Animal Industry and State Laws, based upon the lesions found upon post-mortem inspection.
3. All animals which react to the tuberculin test, but which show no physical evidence of tuberculosis shall be removed from the herd and shall be disposed of as recommended by the Bureau or State Officials.
4. It is agreed that quarantined reacting bulls may be used for breeding, provided they are held upon the staff, their sexes' organs properly disinfected and the cow restrained by some suitable method so as not unnecessarily to be exposed to tuberculosis from the bull or infected premises.
5. I will cause in all cases where the milk or milk products from the quarantined reacting cows are to be used for any purposes whatever, the said milk or products to be first submitted to pasteurization at not less than 150 deg. F., for not less than 30 minutes.

6. I will cause the calves from quarantined reacting cows to be removed from their mothers at birth, to be maintained upon premises free from infection with tuberculosis, and to be fed upon the milk of cows which have passed a satisfactory tuberculin test or upon the pasteurized milk of tuberculin reactors.

7. I will allow no cattle to be associated with my herd which have not passed a tuberculin test approved by the Bureau or State Officials. I will keep all new cattle separated from my herd, pending the application of a tuberculin test by an inspector of the said Bureau of State. I will notify the proper officials immediately, giving details of the identification characteristics and records of tuberculin tests of any cattle which may be added to my herd.

8. I will surrender any premises contaminated by tuberculous animals as indicated by a physical examination or a tuberculin test, to a thorough cleaning and disinfection, at my expense, under the direction or supervision of the Bureau or State Officials. I will comply with all reasonable sanitary measures and other recommendations for the control of tuberculosis.

The following "UNIFORM METHODS AND RULES FOR TUBERCULOSIS-FREE ACCREDITED HERDS OF PURE-BRED CATTLE," having been adopted by all parties concerned and entered as a part of this agreement:

1. A tuberculosis-free accredited, pure-bred herd is one which has been tested by the subcutaneous method, or any other test approved by the Bureau of Animal Industry, under the supervision of the Bureau of Animal Industry, or a regularly employed veterinary inspector of the state, in which co-operative tuberculosis eradication work is being conducted jointly by the United States Department of Agriculture and the State. Further, it shall be a herd in which no animal affected with tuberculosis has been found upon two annual or three semiannual tests, as above described, and by physical examination.
2. The entire herd, or any cattle in the herd, shall be tuberculin tested or retested at such times as is considered necessary by the Federal and State Authorities.
3. No cattle shall be presented for the tuberculin test which have been injected with tuberculin within sixty days immediately preceding or which have at any time reacted to a tuberculin test.
4. No herd shall be classed as an accredited herd in which tuberculosis has been found by the application of the test, as referred to in paragraph 1, until such herd has been successfully subjected to two consecutive tests with tuberculin, applied at intervals of not less than six months, the first interval dating from the time of removal of the tuberculous animal from the herd.
5. Prior to each tuberculin test satisfactory evidence of the identity of the registered animals shall be presented to the inspector. Any grade animal maintained in the herd, or associated with animals of the herd, shall be identified by a tag or other marking satisfactory to the State and Federal Officials.

6. All removals of registered cattle from the herd, either by sale, death, or slaughter, shall be promptly reported to the said State or Federal Officials, giving the identification of the animal and, if sold, the name and address of the person to whom transferred. If the transfer is made from the accredited herd to another accredited herd, the shipment shall be made only in properly cleaned and disinfected cars. No cattle shall be allowed to associate with the herd which have not passed a tuberculin test approved by the State and Federal Officials.

7. All milk and other dairy products fed to calves shall be that produced by an accredited herd, or, if from outside or unknown sources, it shall be pasteurized by heating to not less than 156 degrees F., for not less than 26 minutes.

8. All reasonable sanitary measures and other recommendations by the State and Federal Authorities for the control of tuberculosis shall be complied with.

9. Cattle from an accredited herd may be shipped interstate, by certificate obtained from the office of the State live-stock sanitary officials of the state in which the herd is located, or from the office of the Bureau of Animal Industry, without further tuberculin test for a period of one year, subject to the rules and regulations of the state of destination.

10. Strict compliance with these methods and rules shall entitle the owners of tuberculosis-free herds to a certificate, "Tuberculosis-free Accredited Herds," to be issued by the Bureau of Animal Industry and the state live-stock sanitary authority. Said certificate shall be good for one year from date unless revoked at an earlier date.

11. Failure on the part of owners to comply with the letter or spirit of these methods and rules shall be considered sufficient cause for immediate cancellation of co-operation with them by the State and Federal Officials.

My herd is composed as listed below:

Breed	Pure-Bred	Grade	Total
Females over six months old.....
Males over six months old.....
Calves under six months old.....

Total number of animals in herd.

In Witness Whereof, I have signed this Agreement this
day of One thousand nine hundred and

Owner.

Address.

Witness.....

Address.....

We are pleased to introduce here a brief statement by Dr. F. H. Thompson, Inspector-in-Charge of Tuberculosis Eradication work for the Bureau in Iowa:

THE ERADICATION OF TUBERCULOSIS.

The eradication of animal tuberculosis is one of the greatest needs of the live-stock industry, both in the state and nation. It is estimated that the annual loss from this disease is at least \$25,000,000.00. Not only is it taking a large amount of wealth from the country, but it is a very serious menace to the health of our people.

On account of this great loss, which is increasing every year, the U. S. Government is taking active steps to try and eradicate this disease, but in order to carry this out properly, they must have the active co-operation of the state and the individual owner also.

In states where the percentage of tuberculosis is very low, rapid progress is being made with this work, and some few states where the disease runs four or five per cent have made good progress by co-operation of the state and Bureau of Animal Industry in applying the test and in reimbursing owners for the diseased cattle found.

It is now an absolute necessity for this state to legislate for an appropriation to indemnify owners for tuberculous cattle, if any progress is to be made in the eradication of this disease.

In some herds that are badly affected, the disease may run as high as 25 per cent, therefore it will readily be seen that the owners of such herds should have some indemnity in order to induce them to clean up.

The U. S. Government has appropriated money to carry on this work in states that agree to co-operate, and will place equally as many men in the field to apply the test and will also pay indemnity where states will also agree to indemnify owners.

The State of Iowa has the distinction of having MORE PURE BRED CATTLE than any other state in the union.

The State of Iowa raises MORE THAN TWICE AS MANY HOGS as any other state in the union.

Consequently, Iowa is the wealthiest live-stock state, but it is estimated that 23 per cent of Iowa hogs are also affected with tuberculosis, and, as hogs get their infection almost entirely from cattle, this proves conclusively that tuberculosis is quite prevalent among cattle.

The U. S. Bureau of Animal Industry will co-operate with any state which wishes to eradicate tuberculosis from its live stock, and place the pure-bred herds on the Tuberculosis-Free Accredited Herd List, which is a herd that has passed two annual or three semi-annual clean tests.

The states bordering Iowa on the north and west are very anxious to get cattle for breeding purposes from this state, and as these states have sixty and ninety day re-test regulations, it is to the interest of every breeder to have cattle that are free from the disease.

Breeders are becoming educated along these lines and it is only natural that prospective buyers will give the accredited herd the preference.

It is merely a business proposition for breeders to clean up, as their reputation depends upon the quality of goods delivered.

HOG CHOLERA CONTROL.

By J. S. Koen, U. S. Inspector-in-Charge.

Five years ago the losses from hog cholera were 2,709,876 hogs in a single year. During 1917 the losses were 188,909 hogs, and will be still less during 1918. This shows the progress of the fight waged during this time for the control of this dread disease.

These results show conclusively that hog cholera can be and is being controlled by the adoption of the control measures evolved by the Dallas County experiment during the years 1913-1916. In July, 1914, the Bureau of Animal Industry, U. S. Department of Agriculture, in co-operation with the state authorities, inaugurated the first experimental demonstration in Dallas County to determine the best method for the control and ultimate eradication of hog cholera by a judicious use of the serum preventive treatment in conjunction with practical quarantine and sanitary measures.

This three-year demonstration proved that the fundamental principles which must be applied if cholera is to be controlled are:

- I. Vaccination.
- II. Quarantine.
- III. Sanitation.

- I. Vaccination—By vaccination is meant the use of the preventive serum and virus treatment. There is no other treatment known that will either prevent or successfully combat hog cholera. The results of vaccination depend upon the quality of the serum and virus used, method of administration and the condition of the animals to which the treatment is administered.

The quality of the serum is established by the strict Federal inspection maintained at all plants doing an interstate business. The intelligent administration of the treatment necessitates a thorough understanding of both the disease and treatment.

Since only competent veterinarians possess these qualifications the most favorable results follow the use of serum and virus in their hands.

Their experience and scientific knowledge is very necessary to determine the condition of the hogs at time of vaccination.

Many unfavorable results have followed the use of serum where the hogs were too sick, the pigs too young, the dosage of serum and virus too small, etc. These irregularities are being rapidly overcome, yet in spite of them there has been a saving of 85 per cent of all hogs in infected herds given the serum treatment as compared with a loss of more than 85 per cent of all hogs in infected herds not so treated. When infected hogs are treated early there has been a loss of less than 5 per cent.

To compare the serum treatment with any other "so-called" treatment as a preventive in well herds would be ridiculous. There is no other product advocated as a preventive that its producer dare use against virulent virus.

By a continued use of the serum treatment cholera can be ultimately eradicated, at which time its use will be unnecessary.

II. Quarantine—"Quarantine" is the most abused and least understood word in the English language. Most people regard it as a club or means to restrict personal liberty. It really is quite the contrary and means protection. As applied to hog cholera it includes the care of the sick hogs and the destruction of the dead. All sick hogs should be confined under cover in order to confine the virus they discharge with their urine, feces, eye and nose secretions, and to prevent their scattering virus about the premises. It is just as sensible to scatter virus over the premises out of a bottle as to let the hog sick with cholera run at large to do the same thing by its body discharges. All dead hogs should be destroyed by burning. This can be accomplished with fire above the ground or by burying in quicklime. By observing these practical quarantine measures the owner of the infected herd and the neighbors are alike protected.

III. Sanitation—A thorough cleaning and disinfection of pens, sheds, hog houses, around straw stacks, etc., where the sick hogs have nested is essential to rid the premises of infection and make them safe for the next crop of pigs. In addition to this all farm premises should be cleaned and disinfected annually, preferably in the spring time.

These control measures are being generally employed with gratifying results. Following the successful demonstration in Dallas County, where the losses were reduced from 25 per cent of all hogs raised in 1912 to 1.5 per cent in 1916, the control work was extended July 1, 1916, to a district comprising twenty-seven counties in central Iowa, with headquarters in Des Moines. With the conclusion of the demonstration in Dallas County the use of free serum and treatment was discontinued. Seven experienced inspectors were assigned to districts of four counties each, and intensive work begun to secure the adoption of the control measures wherever cholera made its appearance.

The work of these inspectors include investigation of reported outbreaks, sanitary surveys of infected premises, warnings to neighbors supervising the cleaning and disinfection of farms, inspection of imported hogs, consultations with practicing veterinarians, etc.

The work was further extended to include the entire state in September, 1917. Twenty veterinary inspectors were assigned to the work and have been actively prosecuting it since that time. These inspectors are located in such a manner as to be easily available for every county. Their services are free. The success of their work depends largely upon the co-operation of the farmers, and as their work becomes better known and more thoroughly understood we look confidently to a continued reducing of the losses from cholera until its eradication has been accomplished.

LIVE STOCK EXPORTED FROM IOWA.

Number of Animals Exported and Destination Between July 1, 1916, and July 30, 1918

State	Horses	Mules	Dairy and Breeding	Stockers	Hogs	Sheep
Alabama	25		23		26	
Arizona					6	
Arkansas	107	24	206	2	113	
California	4		152		72	
Colorado	1,205	66	1,651		115	
Connecticut	359	10	6		6	
Florida	10	19	28		196	32
Georgia	2		25		52	
Idaho	72	7	209		37	
Illinois	794	30	3,970	31	337	60
Indiana	109	5	231		193	7
Iowa	655	19	922		191	10
Kentucky	48		88		34	1
Louisiana	229	25	215		55	5
Maine	1		2		12	
Maryland	1		2		4	
Massachusetts	17		62	26	4	
Michigan	668	2	198	131	23	
Minnesota	7,090	267	6,835	247	2,744	120
Mississippi	73	15	192		61	
Missouri	780	60	5,600	20	377	119
Montana	2,219	120	1,596	37	233	7
Nebraska	1,888	226	5,158	2,613	3,043	143
Nevada						
New Hampshire	1		10		00	
New Jersey			1		00	4
New Mexico	22		77		5	
New York	208		58		14	
North Carolina	3		24		16	
North Dakota	1,783	111	1,473		294	94
Ohio	71		88		71	
Oklahoma	327	19	925		80	
Oregon	10		37		5	
Pennsylvania	20		15		21	
Rhode Island	2					
South Carolina			14		8	
South Dakota	2,593	165	6,169	750	2,779	695
Tennessee	230	10	357		34	
Texas	469	65	479		256	116
Utah	12		252		5	
Vermont	4		43		7	
Virginia	4		49		43	
Washington	18	2	95		14	1
West Virginia	1		8		5	1
Wisconsin	1,941	73	1,224	219	487	81
Wyoming	230	22	1,214		30	2
Canada	754	4	24		1	
Totals	28,101	1,421	26,730	4,307	13,073	2,232

LIVE STOCK IMPORTED INTO IOWA.

Number of Animals Imported and States From Which They Came, July 1, 1916, to June 30, 1918.

State	Horses	Mules	Dairy and Breeding	Stockers	Hogs	Sheep
Alabama	2	2	67			
Arizona						
Arkansas	2	1	134			224
California						2
Colorado	100	4	81	220		328
Florida		5				
Georgia						2
Idaho						
Illinois	25,011	308	4,734	21,243	3,267	1,544
Indiana	66	3	219		23	54
Kansas	245	129	1,281	189	4,193	3
Kentucky	36		37			2,364
Louisiana	4		22			64
Maine			1			
Massachusetts			1			
Michigan	9		18			
Minnesota	2,262	196	5,622	45,964	12,243	152
Mississippi						17
Missouri	875	1,554	2,371	45,689	6,635	209
Montana	264	17	60		198	12,319
Nebraska	2,727	867	4,830	89,695	4,802	413
New Jersey						50
New Mexico	45		124			
New York	2		67			
North Carolina						2
North Dakota	815	60	211	60	77	
Ohio	13		117	853	22	
Oklahoma	128	60	134			216
Oregon	2		2			150
Pennsylvania					97	
South Carolina						1
South Dakota	1,022	62	1,374	2,035	2,182	1,202
Tennessee	71	75	377			
Texas	93	26	64	1,623	2,684	18
Utah	2		2			
Vermont			1			
Washington	1		1			22
West Virginia			2			
Wisconsin	412	68	4,073		56	822
Wyoming	261	40	63	79	664	
Canada	59	2	42			
Totals	31,708	5,411	27,570	108,008	41,970	16,051

FINANCES OF THE VETERINARY DEPARTMENT AND COMMISSION
OF ANIMAL HEALTH.

Following is financial report of the State Veterinary Department and Commission of Animal Health. Salary of State Veterinary Surgeon and office force provided from general pay roll. Per diem and expenses of assistant state veterinarian provided by annual appropriation:

State veterinarian (2 years).....	\$ 3,500.00	
Secretary (2 years)	2,400.00	
Stenographer (2 years)	1,800.00	
	<u>\$ 7,800.00</u>	
Appropriation for two years for operation of Veterinary Department		\$22,000.00
Overdrawn account for biennial period ending with June 30, 1916.....	475.86	
Per diem, transportation, hotel and miscellaneous expenses of department and assistant state veterinary surgeons for the year ending with June 30, 1917.....	10,049.44	
Per diem, transportation, hotel and miscellaneous expenses of veterinary department and as- sistant state veterinary surgeons for the year ending June 30, 1918.....	8,432.12	18,957.42
*Balance		\$ 3,042.58

COMMISSION OF ANIMAL HEALTH

There was received from veterinary examination fees, practice certificate renewals and sale of veterinary registers for the biennial period ending June 30, 1918.....		\$ 5,243.00
Expended for salaries, Commission of Animal Health and clerk.....	3,725.00	
Expended for hotel and miscellaneous expenses of Commission of Animal Health for biennial period ending with June 30, 1916.....	931.23	4,656.23
*Balance		\$ 586.77

*Claims for per diem and expenses incurred prior to June 30, 1918, but filed after that date, not deducted.

RESULTS OF VETERINARY EXAMINATIONS.

Under the Veterinary Practice Act, the examining board is required to meet at least twice a year, which is as often as practical. However, this makes it necessary for many veterinarians to wait considerable time to qualify and, according to law, they cannot enter into practice until they

have been registered. (During the year ending with June 30, 1918, on account of war conditions, it was found necessary to hold a special examination in May, 1918.)

This difficulty could be met by a clause providing for a temporary permit upon presentation of proper credentials. Other changes, such as a reciprocity clause and a clause providing that no person who has not registered in accordance with the provisions of the original veterinary practice act, shall be permitted to practice or represent themselves to be a veterinarian.

Many inquiries have been received regarding credentials necessary to qualify for examination under the veterinary practice act of the state of Iowa. It seems many are led to believe that a course in a veterinary correspondence school or even a few years services with a practicing veterinarian is all that is required.

The veterinary examining board have adopted as a standard the following list of colleges recognized by the Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C., and which is also accepted by most veterinary examining boards:

Alabama Polytechnic Institute, College of Veterinary Medicine.
Chicago Veterinary College.
Cincinnati Veterinary College.
Colorado State College, Division of Veterinary Medicine.
George Washington University, College of Veterinary Medicine.
Grand Rapids Veterinary College (2).
Indiana Veterinary College.
Iowa State College, Division of Veterinary Medicine.
Kansas City Veterinary College.
Kansas State Agricultural College, Veterinary Department.
McKillop Veterinary College.
Michigan Agricultural College, Division of Veterinary Medicine.
New York-American Veterinary College.
New York State Veterinary College.
Ohio State University, College of Veterinary Medicine.
St. Joseph Veterinary College (3).
San Francisco Veterinary College.
State College of Washington, Veterinary Department.
Terre Haute Veterinary College.
United States College of Veterinary Surgeons (4).
University of Pennsylvania, School of Veterinary Medicine.
University of Toronto, Ontario Veterinary College (to include only those graduated during or prior to 1897).

Graduates of the following named colleges which are not now in session will be admitted to examination:

American Veterinary College, New York, N. Y.
Columbia Veterinary College, New York, N. Y.
Columbian University, Veterinary School, Washington, D. C.
Harvard University, School of Veterinary Medicine, Boston, Mass.
McGill University, Veterinary Department, Montreal, Canada.
National Veterinary College, Washington, D. C.

Graduates of the following named foreign colleges will be admitted to examination:

Glasgow Veterinary College, Glasgow, Scotland.
 Royal Veterinary College, London, England.
 Royal Veterinary College of Ireland, Dublin, Ireland.
 Royal (Dick) Veterinary College, Edinburgh, Scotland.
 The New Veterinary College, Liverpool, England.
 Veterinary College of Lemberg, Austria.
 University of Melbourne Veterinary School, Melbourne, Australia.

1. This list is subject to change. The failure of any college to comply with the provisions of the regulations will necessitate removal from the list.

2. To include only those graduates who have pursued the study of veterinary medicine at this college or in some other accredited college for three years.

3. Matriculates of 1910, in addition to the regular course will be required to take one year's additional instruction at this college. Graduates prior to 1914 will be required to have had one year's practice and to take an additional year's instruction at this college.

4. Graduates of 1910 and 1911 will be required to present a certificate showing attendance for an additional session at this or some other accredited veterinary college.

The following is a statement of the Veterinary Examinations held by the Veterinary Examining Board of the Animal Health Commission:

College	July 1916			January 1917			July 1917			January 1918			Special May 1918		Total
	Examined	Re-examined	Failed	Examined	Re-examined	Failed	Examined	Re-examined	Failed	Examined	Re-examined	Failed	Examined	Failed	
Chicago Veterinary College	13	3	5	3	3	20	5	2	15	1	2	1	2	0	11
Kansas City Vet. College	15	1	2	1	1	16	3	4	15	1	2	1	1	0	17
Iowa State College	8	1	1	1	1	19	1	22	1	1	1	1	1	1	1
McKillop Veterinary College	10	3	4	1	1	12	0	1	1	1	1	1	1	1	1
St. Joseph Vet. College	3	1	1	1	1	3	1	1	1	1	1	1	1	1	1
Grand Rapids Vet. College	1					1	1	1	1	1	1	1	1	1	1
Ohio Veterinary College	1					1	1	1	1	1	1	1	1	1	1
Ontario Veterinary College	1					1	1	1	1	1	1	1	1	1	1
New York Vet. College						1	1	1	1	1	1	1	1	1	1
Indiana Veterinary College						1	1	1	1	1	1	1	1	1	1
Cincinnati Vet. College						1	1	1	1	1	1	1	1	1	1
Western Veterinary College						1	1	1	1	1	1	1	1	1	1
San Francisco Vet. College						1	1	1	1	1	1	1	1	1	1
Total	61	8	14	6	6	79	1	27	32	5	3	75	1	2	117

ASSISTANT STATE VETERINARIANS

		Commission Expires
Acorn, H. A.	Adair	October 15, 1918
Anderson, T. F.	Bedford	October 15, 1920
Anstey, J. A.	Massena	June 12, 1920
Adams, A. A.	Newton	October 15, 1920
Anderson, G. W.	Jewell	October 15, 1920
Allbright, V. W.	Jefferson	February 8, 1919
Anderson, J. A.	Stanhope	October 25, 1921
Brown, I. C.	Afton	October 29, 1920
Bischoff, G. W.	Belle Plaine	October 15, 1920
Bauman, S. H.	Birmingham	October 15, 1920
Bloomont, E. C.	Britt	May 21, 1921
Brooks, A. S.	Cedar Falls	October 15, 1920
Brooks, J. L.	Clinton	October 15, 1920
Button, P. G.	Cross	October 15, 1920
Bahwin, A. F.	Creston	May 20, 1918
Baughman, D. E.	Fort Dodge	October 15, 1920
Brass, F. E.	Harlan	October 15, 1920
Ballard, F. S.	Sibley	July 1, 1920
Baker, G. G.	Spencer	October 15, 1920
Bunker, J. W.	Waterloo	October 15, 1920
Buxton, E. A.	Vinton	October 15, 1920
Barrett, L. F.	Cascade	June 5, 1919
Bovins, N. O.	Hawkeya	January 22, 1920
Wheeler, C. E.	Sermour	March 17, 1920
Brown, W. W.	Wyoming	November 9, 1921
Boehle, Walter H.	Bradlyville	July 15, 1920
Bemis, H. J.	Ames	September 1, 1920
Bergman, H. D.	Ames	March 1, 1921
Born, A. L.	Story City	June 18, 1921
Byrnes, R. C.	Traer	June 18, 1921
Cuthers, H. W.	Bloomfield	October 12, 1918
Chandler, T. W.	Davenport	October 15, 1920
Copeland, F. B.	Logan	October 15, 1920
Caine, P.	Fatherville	April 8, 1920
Conquist, A. M.	Gowri	July 16, 1921
Cummings, W. P.	Woodward	November 17, 1919
Carson, Geo. M.	Lake Mills	September 6, 1920
Crider, C. L.	Elkader	July 20, 1921
Council, A. G.	Aurelia	October 25, 1921
DeWitt, E. J.	Dallas Center	October 15, 1920
Diller, L. L.	Traer	December 8, 1920
Dodge, Geo. A.	Northwood	October 15, 1920
Dorning, Tom	Washington	June 5, 1920
Dixon, James	Pipton	October 15, 1920
Dunsmock, W. W.	Ames	September 1, 1920
Edwards, F. H. P.	Iowa City	October 15, 1920
Evans, C. S.	Sioux City	March 15, 1921
Edwards, R. M.	Des Moines	October 22, 1921
Fullerton, W. H.	Dubuque	October 15, 1920
Franks, J. E.	Indianola	October 15, 1920
Flecker, P. W.	Greenfield	April 30, 1921
Fred, O. F.	Huxley	August 31, 1921
Fisher, B.	Present	November 19, 1920
Gooder, J. W.	Osage	October 15, 1920
Gilman, H. M.	Mason City	October 15, 1920
Gunn, R. H.	Massena	June 5, 1920
Gidley, T. W.	Malvern	October 15, 1920
Griffith, J. W.	Cedar Rapids	October 15, 1920
Giloon, T. J.	Dyersville	October 15, 1920
Gidley, R. E.	Shenandoah	October 15, 1920

Commission Expires			Commission Expires		
Glen, J. C.	Norway	October 6, 1920	Middleton, Fred	Grandy Center	August 30, 1921
Grover, H. E.	West Branch	December 15, 1920	Mohr, H. I.	Columbia Junction	October 15, 1920
Greenwood, E. S.	Laurins	April 30, 1921	Mohr, W. W.	Sioux City	August 15, 1921
Graf, C. J.	Exira	November 30, 1920	Mohr, H. I.	New Sharon	October 15, 1920
Garrison, C. E.	Nora Springs	October 31, 1920	Mohr, H. A.	Magunketa	October 15, 1920
Garratt, S. B.	Pleasantville	October 31, 1920	Mohr, W. C.	Exira	April 10, 1921
Garrath, C. L.	Fairfield	November 15, 1920	McNeal, J. W.	Charles City	August 26, 1921
Green, March	Irwinell	May 15, 1921	McCabe, J. C.	Fairfax	July 20, 1920
Gubser, W. E.	Earlham	October 27, 1920			
Haxby, J. W.	Clairinda	October 25, 1920	Samson, F. J.	Marshalltown	March 28, 1921
Hollingsworth, F. W.	Onion Hill Bluffs	October 25, 1920	Soren, O. J.	Nebraska City, Neb.	March 15, 1921
Hornou, B.	Decorah	October 15, 1920	Stebbins, D. W.	Humboldt	October 15, 1920
Howe, F. E.	Des Moines	October 15, 1920	Selmon, J. M.	Sigourney	October 15, 1920
Hagerty, H. J.	Des Moines	October 15, 1920	Sykes, H. J.	Waverly	July 17, 1921
Hansen, R. E.	Forest City	October 15, 1920	Sund, C. P.	Onawa	September 6, 1920
Hell, Henry	New Liberty	June 15, 1921	Sutton, S. S.	Sioux City	November 17, 1920
Hess, C. F.	Mt. Pleasant	October 25, 1920	Sutton, C. O.	Ogden	October 26, 1920
Hess, W. A.	New Liberty	October 25, 1920	Sydney, C. A.	Marshalltown	January 25, 1921
Hoglund, A. L.	Ottumwa	October 15, 1920			
Harry, C. E.	Alta	October 4, 1921	Thomsen, H. H.	Greene	December 27, 1921
Hodan, W. F.	Le Mars	October 6, 1920	Thom, Carl	Sac City	July 6, 1920
Hoglet, S. K.	Osborne	November 28, 1920			
Hiekman, B.	Central City	May 7, 1921	Wade, T. H.	Cherokee	November 2, 1921
Hoffman, H. J.	Alta	September 26, 1920	Wade, F. G.	Ida Grove	October 20, 1920
Hinken, A. H.	Sheffield	May 10, 1921	Wacker, P. P.	Noville	October 20, 1920
Hanson, W. L.	Greene	November 20, 1920	Waller, C. D.	Oskaloosa	October 20, 1920
Hume, F. G.	Leola	April 6, 1921	Waller, J. S.	Clear Lake	August 2, 1921
Hughes, Guy	Corydon	December 1, 1921	Waller, L. D.	low City	December 26, 1920
Huston, S. S.	Jefferson	December 14, 1920	Waller, F.	Frontenac	November 27, 1920
			Waller, F.	Milford	July 12, 1920
Ingmand, J. E.	Bel Oak	March 12, 1921	Quin, A. H.	Creston	March 20, 1920
Jannston, S. H.	Carroll	October 15, 1920	Russell, L. W.	Anamosa	October 15, 1920
Johnson, E. J.	Onionville	August 7, 1920	Reedman, W.	Lenox	May 14, 1921
Johnson, F. J.	Albia	March 1, 1921	Reedman, F. P.	Cornice	August 1, 1921
Johnson, Raymond	Richland	April 14, 1921	Ross, O. W.	Cookleville	October 15, 1920
Juhl, C. E.	Osage	January 25, 1921	Rush, P. C.	Miles	October 15, 1920
Jessen, Julius A.	Sibley	August 15, 1920	Roberson, J. E.	Monona	October 15, 1920
Jorgenson, G. F.	Clermont	May 2, 1921	Ross, N. M.	Perry	September 20, 1920
Jacobs, W. F.	Nashua	May 16, 1921	Rodman, V. J.	Albia	November 4, 1921
			Rosen, T. C.	Amsholt	October 15, 1920
Kelso, R. F.	Corydon	October 15, 1920	Ricketts, R. A.	Zearing	May 5, 1921
Kulp, A. J.	Adel	September 20, 1920	Bernard, J. P.	Owocla	March 15, 1921
Klump, N. A.	Independence	December 1, 1920	Reinhardt, T. J.	Nevala	July 12, 1920
Kaderabek, A.	Pt. Dodge	January 15, 1921	Reinhardt, E. J.	Hubbard	October 15, 1920
Knight, E. L.	Waukon	May 8, 1921	Roberts, F. D.	Gilman	October 15, 1920
Koefe, J. T.	Fairley	October 15, 1920			
Koeth, C. L.	New Market	March 21, 1921			
Killip, H.	Oskaloosa	December 1, 1920			
Lodge, H. G.	Clarkville	October 1, 1920	Sayers, F. E.	Algona	October 15, 1920
Lohrer, R. A.	Sidney	November 2, 1920	Savage, C. H.	Decorah	October 15, 1920
Libby, J. M.	Sioux City	July 30, 1921	Shepard, C. E.	Chariton	January 15, 1921
Larimer, R. F.	Madrid	October 15, 1920	Shannon, H. C.	Douglas	October 15, 1920
Lovness, R. G.	Manson	March 2, 1921	Smith, V. J.	Adora	January 29, 1921
Lantz, H. A.	Exira	October 6, 1920	Steinacker, F. C.	Mt. Airy	October 15, 1920
Lingo, J. H.	Low Tree	May 21, 1921	Stuber, T. H.	Seldon	October 15, 1920
Lee, H. N.	Creston	May 15, 1920	Stewart, W. C.	West Union	June 10, 1920
Louler, B. A.	Sidney	November 2, 1921	Stoll, C. J.	Neosville	January 28, 1921
			Stoll, G. A.	Waterloo	September 1, 1920
Miller, D. W.	Council Bluffs	May 15, 1920	Stormer	Sioux City	November 1, 1921
Moore, J. J.	Lannon	October 15, 1920	Storck, C. J.	Sully	November 21, 1921
Marke, W. H.	Lake Park	June 5, 1921	Stull, L. F.	Jefferson	October 15, 1920
Miller, C. B.	Manning	March 4, 1921	Sturtevant, John	Hamburg	October 15, 1920
Malsbom, P.	New Hampton	October 15, 1920	Swain, J. H.	Clinton	October 15, 1920
Moon, S. B.	Rock Rapids	June 8, 1920	Smith, W. C.	Fairfield	October 15, 1920
Middleton, A. C.	Grundy Center	March 15, 1921	Spiker, W. A.	Melcher	October 12, 1920
Macklin, W. E.	Coon Rapids	October 15, 1920	Smith, W. A.	Rock Valley	April 1, 1921
Mason, R. G.	Tulso	December 1, 1920	Stinson, E. V.	Decorah	October 15, 1920
Mason, A. R.	Oscar Rapids	February 5, 1921	Swanson, A. C.	Nebraska City	March 1, 1921
Mosey, O. Q.	Mt. Vernon	March 6, 1921	Swanson, W. F.	Cherokee	August 19, 1921
Morris, H. B.	Omaha, Neb.	January 26, 1920	Stone, W. E.	Bedford	November 9, 1921
Madson, W. E.	Hawarden	July 12, 1921	Strandberg, J. J.	Wile Prairie	October 3, 1921
Murray, Chas.	Ames	August 2, 1920			
Murphy, H. S.	Ames	September 1, 1920	Thomas, A. J.	Lake City	October 25, 1920
Maxfield, P. M.	Tama	December 1, 1920	Thomas, H. B.	Massena	October 15, 1920
Mannion, M. C.	Hazleton	December 22, 1920	Tillot, P. I.	Sioux Rapids	June 6, 1920
			Tillot, W. W.	Pt. Madison	October 18, 1920
			Thomson, J.	Armstrong	October 15, 1920
			Thomson, H. B.	Rockwell City	November 20, 1920