

STATE OF IOWA, Dr.

To M. Stalker:

To 120 days service as State veterinary surgeon, at \$5.00 per day.....	\$ 600.00
To personal expense.....	362.57

To L. S. Butler:

To 11 days service as deputy State veterinary surgeon, at \$5.00 per day.....	55.00
To personal expense.....	57.19

To J. A. Campbell:

To 18 days service as deputy State veterinary surgeon, at \$5.00 per day.....	90.00
To personal expense.....	65.88

To E. E. Sayers:

To 52 days service as deputy State veterinary surgeon, at \$5.00 per day.....	260.00
To personal expense.....	301.70

To S. Stewart:

To 18 days service as deputy State veterinary surgeon, at \$5.00 per day.....	90.00
To personal expense.....	54.65

To L. A. Thomas:

To 2 days service as deputy State veterinary surgeon, at \$5.00 per day.....	10.00
To personal expense.....	10.70

To John Tillie:

To 5 days service as deputy State veterinary surgeon, at \$5.00 per day.....	25.00
To personal expense.....	25.85

To C. H. Flynn:

To 4 days service as deputy State veterinary surgeon, at \$5.00 per day.....	20.00
To personal expense.....	7.50

To G. A. Johnson:

To 26 days service as deputy State veterinary surgeon, at \$5.00 per day.....	130.00
To personal expense.....	111.99

To M. E. Johnson:

To 20 days service as deputy State veterinary surgeon, at \$5.00 per day.....	100.00
To personal expense.....	79.44

\$2,457.47

SEVENTH ANNUAL REPORT

OF THE

State Veterinary Surgeon

OF THE

STATE OF IOWA,

FOR THE

YEAR ENDING JUNE 30, 1891.

PRINTED BY ORDER OF THE GENERAL ASSEMBLY.

DES MOINES:

G. H. RAGSDALE, STATE PRINTER.

1891.

OFFICE OF STATE VETERINARY SURGEON, }
AMES, June 30, 1891. }

HON. HORACE BOIES, *Governor:*

In accordance with the provisions of Chapter 189, Laws of 1884, the report of the Veterinary Surgeon, for the year ending June 30, 1891, is herewith submitted.

M. STALKER,
State Veterinary Surgeon.

REPORT.

The character of the work done through this office during the past year does not differ in any material way from the work done during the previous year. The greater portion of the work has been confined to the examination of reported cases of glanders. There are still occasional cases of this disease found among the horses in this State, but the cases are growing less frequent year by year, and it has ceased to be a matter of any serious consequence. Some degree of vigilance is still required to prevent its introduction from other States and to prevent its spread from some obscure neighborhoods in our own.

Among the more serious troubles the State veterinarian has had to contend with, is a peculiar disease affecting cattle, and probably induced by the use of surface water. This is a disease, so far as I can learn, entirely unknown to veterinary literature. I have had opportunities of observing the disease during the last three or four years but it has assumed a more aggravated form during the present season than I have seen before.

The disease is highly fatal, a very large percentage of the affected animals dying within four or five days from the time of attack. The symptoms are not unlike those accompanying rabies or hydrophobia. The animal goes into a state of stupor, or more frequently, into a frenzied condition. The patient may go down in a stupor, wander in an aimless condition about the fields, or assuming a more frenzied state, rush at any living object that may come in its way. The animal refuses to eat, keeps up a hoarse, bellowing cry, till finally from exhaustion and partial paralysis it sinks down and dies. Some of the cases will live a week from the beginning of the attack, and an occasional one will live even longer, but as a rule they die in less time.

The post mortem symptoms are confined principally to inflammation of the mucous membrane of the stomach and intestines. This

in brief is a statement of what constitutes a pretty constant class of symptoms; a statement not made in scientific terms for scientific men, but a description of such conditions as any farmer might observe, and from whom I hope to obtain additional data.

While this trouble has appeared on a number of Iowa pastures, it has never assumed the epizootic type. It has, so far as I have observed, been confined to the herds in which it originated, though in numerous instances there have been repeated exposures of healthy animals to diseased ones. I believe the disease to be due to micro organisms, obtained by the animals either through food or drink. Probably in some instances through both sources. I have never seen the disease except under conditions where animals were obliged to drink surface water. The water I have not always found to be in condition to excite any special alarm in the mind of the casual observer, but have always observed that it contained much organic matter. We now have in operation a series of experiments in the bacteriological laboratory of the State experiment station, through which we hope to arrive at some facts connected with this obscure malady. On the whole, the loss to the State through this cause has been a mere trifle, but in individual instances the losses have fallen somewhat heavily.

SOME OBSERVATIONS ON CONTAMINATED WATER SUPPLY FOR LIVE STOCK.

There is no fact better known to the sanitarian, than that one of the chief sources of danger to life and health, is the contamination of drinking water. If a malignant form of fever makes its appearance in a family, which cannot be explained by the history of actual exposure to contagium, the water supply always comes in for an early and liberal share of attention. The instances are sufficiently numerous in which the investigator is enabled to trace the malady to this source, to warrant every reasonable precaution in procuring a pure water supply. Nor are these facts known to the sanitarian alone. The reading public have been sufficiently enlightened on this subject to enable them to avoid much of the danger from this source. While we are beginning to take a fairly lively interest in our personal dangers and the methods

calculated to avert them, we have yet hardly taken time to consider the economic question of how far our live stock industry may be affected by the same class of causes. We drill down into the solid rock to procure a water supply of unquestioned purity, for family use. We boil or subject to other purifying means, all suspected samples before they can be used. This is well. But all this time our helpless, dumb creatures may be compelled to drink from a shallow slough, foul with decomposing vegetation, or from a surface pond almost at boiling temperature under a summer sun, where the minute forms of animal and vegetable life gender in such profusion as to render the whole a mass of animate slime. No one who has had a glimpse of the microscopic world, would expect a human being to take a draught of such a beverage and live. But our animals are not only expected to live, but to thrive under such conditions. That these expectations are frequently disappointing, I will cite an instance or two in proof. During the latter part of the summer of 1890, I had occasion to investigate a severe outbreak of disease on a farm in one of the counties of Iowa. The animals, including horses, cattle and pigs, were all affected in the same way. The local symptoms were largely confined to the throat. There was * * * a swelling, partial paralysis of the walls of the upper air passages and painful and difficult breathing. The animals attacked, uniformly died after an illness of about two days. The disease I could not recognize as belonging to any of the well defined types with which I was acquainted. Here were horses, cattle and pigs, sick and dying with disease showing the same symptoms in all. There are few if any of the specific forms of disease that spread as epizootic among the widely differing species of domestic animals. I could not classify the disease, and at once set about the task of discovering, if possible, some common source of exposure. The pastures, buildings and water supply were each in turn subjected to careful scrutiny. The buildings were such as are to be found on ordinary Iowa farms, fairly comfortable and clean. I could find no clue in the quantity or quality of feed that promised to lead to a solution of the difficulty. On investigation of the water supply, I found that most of the animals on the farm drank from a small creek that ran a zigzag course through the premises. The stream was in part supplied from a series of springs, and in ordinary seasons afforded a fair amount of water which ran, at least for a portion of its course, over a gravelly bed. The present dry summer, with several

previous ones showing an abnormally light rain fall, had so reduced the amount of water that it had ceased to run. On making examination and conducting inquiries, I ascertained that it had been the custom on the farm to throw the carcasses of animals down the steep bluffs into the bed of the stream. I further learned that during the summer, chicken cholera had prevailed on the farm and that a large number of chickens had died and been thrown over the bank. I was also informed that the hog cholera had caused the death of a considerable number of swine, the carcasses having been treated in a similar manner. The several yards occupied by horses, cattle, pigs and barn yard fowls, were on the hillside with abrupt drainage into the creek. In addition to this, large heaps of fermenting manure were deposited about the foot of the hill near the edge of the stream, where the animals went to drink. A few of the animals on the farm had not had access to the stream, but had been watered from a well. None of these had showed signs of sickness, though they had been in daily contact with those that had their water from the pools in the bed of the stream, and even with some of the sick. On looking up the local geography of the neighborhood, I found that a * * * number of farmers had built their homes along the banks of this stream, and had been accustomed to make use of it in much the same way as the farmer above referred to. Inquiry elicited the fact that on no less than four farms situated on the banks of this stream, animals had died showing symptoms identical with those on the farm first investigated. I regarded the evidence as sufficient to make out a strong case against the impurity of the water and gave an opinion accordingly.

The above is but a single instance out of many that have come under my observation. It is one of the most glaring, but by no means one attended with the greatest degree of loss. On another occasion where a high rate of mortality had prevailed among the cattle running on the open prairie, I was able to trace the cause to contamination of surface water. An animal dead from anthrax had been drawn into a basin on the open prairie. Later the rains filled the basin with water, and about one thousand cattle on the range had access to the pond for water supply. The result was that about ten per cent of all the animals having access to the impure water, died from anthrax. The teachings of these object lessons are sufficiently obvious. These animals are endowed with organizations not unlike our own, and the manifest laws of being and of health can no more be violated with impunity by them, than by ourselves.

RULES AND REGULATIONS.

OFFICE OF THE IOWA STATE BOARD OF HEALTH, {
DES MOINES, December 28, 1884. }

PURSUANT to authority vested by Chapter 189, Laws of the Twentieth General Assembly, the State Veterinary Surgeon by and with the approval of the State Board of Health, the Governor, and the Executive Council, does hereby make and establish the following rules and regulations for the prevention and restriction of contagious diseases among domestic animals.

DISEASES.

RULE 1. All neat cattle that have been reared, or kept south of the parallel forming the north boundary of Indian Territory, or 37° north latitude, and have not subsequently been kept continuously at least one Winter north of said parallel, and which may be brought within the limits of this State between the first day of April and the first day of November following, except for transportation through the State on railways or boats, shall be subject to quarantine; and all land on which such cattle may have been kept or fed, within this State, shall in like manner be subject to quarantine.

RULE 2. All cattle, as defined in Rule 1, while in transit through this State, which may be removed from any car or boat, within this State, for the purpose of feeding, watering, re-shipment, or other cause whatsoever, shall be confined in yards, stables, or enclosures, separate and apart from all other animals, and no other cattle shall be permitted to come within such yards, stables, or enclosures, or in contact with such quarantined and enclosed cattle.

RULE 3. Between the first day of April and the first day of November following, no cattle whatsoever, except such as are defined in Rule 1, shall be placed within any stable, yard, or other enclosures where cattle have been quarantined under Rule 1, unless such yards, stables, and enclosures have been previously thoroughly cleansed and disinfected.

RULE 4. All cattle brought within this State from any county or parish within the United States where pleuro-pneumonia is known to exist, shall be subject to quarantine for a period of not less than sixty days.

RULE 5. The carcasses of all animals that have died from Anthrax, shall, without removal of the hide, or any part of said carcass, be burned, or buried not less than four feet deep in the ground, and thoroughly covered with kerosene before covering with earth.

Reasons for Rule 5. To prevent the possibility of a recurrence of this disease from germs existing in the grave, which if not destroyed by some powerful agent will retain their vitality for a number of years, so as to impart the disease.

As Anthrax is communicable by inoculation to human beings, great precaution should be used in handling animals affected with this disease.

RULE 6. No person owning or having the care or custody of any animal affected with glanders or farcy, or which there is reason to believe is affected with said disease, shall lead, drive, or permit such animal to go on or over any public grounds, unenclosed lands, street, road, public highway, lane, or alley; or permit it to drink at any public water-trough, pail, or spring; nor keep such diseased animal in any enclosure, in or from which such diseased animal may come in contact with, or close proximity to, any animal not affected with such disease.

RULE 7. Whenever notice is given to the trustees of a township, or to the health officer of a local board of health, of animals suspected of being affected with glanders or farcy, said trustees, or health officer shall immediately require such suspected animals to be isolated and kept separate and apart from all other animals until released by order of the State Veterinary Surgeon or some person acting by his authority.

RULE 8. An animal must be considered as "suspected" when it has stood in a stable with, or been in contact with an animal known to have the glanders; or if placed in a stable, yard or other enclosure where a glandered animal has been kept.

RULE 9. Whenever any animal affected with glanders or farcy, shall die, or shall be killed, the body of such animal shall be immediately burned, or buried not less than four feet deep, without removing the hide from the carcass.

RULE 10. No animal diseased with glanders or farcy shall be deemed to have any property value whatever, and no appraisal thereof will be made.

Reasons for Rule 10. Glanders is an incurable disease, and there is no warrant for expending public money in appraising property manifestly worthless, and which can be compensated for only at "its actual value in its condition when condemned." Also to prevent the introduction of diseased animals into the State, and the inoculation of worthless ones for speculative purposes.

RULE 11. Whenever the owner, or person having in charge any animal declared by the State Veterinary Surgeon or other authorized person to have the glanders, shall neglect or refuse to destroy said animal, the premises whereon such animal is kept, shall be quarantined until such animal is destroyed, and the premises thoroughly disinfected.

QUARANTINE.

RULE 12. The term "quarantine" shall be construed to mean the perfect isolation of all diseased or suspected animals from contact with healthy animals; as well as the exclusion of such healthy animals from the yards, stables, enclosures, or grounds wherever said suspected or diseased animals are, or have been kept.

DISINFECTION.

Among the most efficient and convenient agents for destroying disease germs, are heat, solutions of carbolic acid, sulphate of iron, caustic soda, or sulphate of copper; fumes of chlorine; chloride of lime, slaked lime, lime-water, whitewash and kerosene oil.

HEAT. This conveniently applied by means of boiling water or oil, and is especially recommended for disinfecting fabrics of all kinds, leather or wood. Articles of iron or other metals may be purified by heating in a fire. All bedding, litter, excrement, etc., that have accumulated about animals affected with any form of contagious disease, and the carcasses, together with all blood, or other fluid elements that have escaped from such carcasses should be burned, as surest means of eradicating the disease.

Dirt or earth floors of stables wherein animals affected with glanders or anthrax have been kept, should be removed to the depth of four inches and burned.

SOLUTIONS.

Carbolic Acid. Add one part of the acid to five or ten parts of water or oil.

Sulphate of Iron, Copper and Caustic Soda. Add as much of the substance to a given quantity of warm water as will be dissolved.

Whitewash. For disinfecting interior walls of buildings, feed-boxes, man-gers, yard fences, etc., the application of a coating of whitewash prepared from lime in the ordinary way, so thoroughly done as to completely cover every part of the surface designed to be cleansed, is an economical method.

FUMIGANTS.

Chloride of Lime. Chloride of lime and slaked lime for disinfecting floors, yards, carcasses and ground where dead or diseased animals have lain, should be scattered thickly, in fine powder over the surface of the object to be disinfected, so as to form a complete covering.

Chlorine. To generate, take peroxide of manganese (to be obtained at any drug store), place in an earthen dish and add one pound of hydrochloric acid (sometimes called muriatic acid), to each four ounces of the peroxide of manganese. Care should be taken not to inhale the gas.

After the floors, walls, etc., of a contaminated building have been cleansed, they should be fumigated by some of the foregoing agents. The doors should be closed, and the building otherwise made as tight as possible. Fumes should then be evolved in the building for not less than half a day, and the doors kept closed not less than twenty-four hours, when air and sunlight should be freely admitted.

BURIALS.

Kerosene Oil. Carcasses buried in the earth, where there is danger of ex-umination by other animals, should previous to burial, be thoroughly satu-rated with kerosene oil. This will tend to destroy the virus, and will pre-vent carnivorous animals disturbing the carcass and thereby spreading the disease.

FREEZING. It has been demonstrated repeatedly in Iowa, that the frosts of Winter thoroughly disinfect pasture lands that have been poisoned with the virus of Texas Fever by herds of Southern cattle during the Summer months. From the first of April to the first of November, the virus is likely to retain its vitality, and the strictest precaution is necessary to prevent com-munication of the disease to Northern cattle. The purifying effect of frost, however, cannot be relied upon for destroying the virus of any other disease than Texas Fever, liable to attack live stock in Iowa.

It is for the interest of every community, on the appearance of contagious or infectious disease among animals, to adopt speedy measures to eradicate the same, and to co-operate with the State Veterinary Surgeon in securing such result in the shortest possible time.

M. STALKER,
State Veterinary Surgeon.

Approved:

W. S. ROBERTSON,
President State Board of Health.

L. F. ANDREWS,
Acting Secretary State Board of Health.

B. R. SHERMAN,
Governor.

J. A. T. HULL,
J. L. BROWN, } *Executive Council,*
E. H. CONGER, }

CHAPTER 189.

VETERINARY SURGEON.

AN ACT for the appointment of a State Veterinary Surgeon and Defining his Duties.

Be it enacted by the General Assembly of the State of Iowa:

SECTION 1. The governor shall appoint a state veterinary surgeon who shall hold his office for the term of three years unless sooner removed by the governor; he shall be a graduate of some regular and established veterinary college and shall be skilled in veterinary science; he shall be a member of the state board of health, which membership shall be in addition to that now provided by law. When actually engaged in the discharge of his official duties he shall receive from the state treasury as his compensation the sum of five dollars per day and his actual expenses, which shall be presented under oath and covered by written vouchers before receiving the same.

SEC. 2. He shall have general supervision of all contagious and infectious diseases among domestic animals within or that may be in transit through the state and he is empowered to establish quarantine against animals thus diseased or that have been exposed to others thus diseased, whether within or without the state, and may with the concurrence of the state board of health, make rules and regulations, such as he may deem necessary for the prevention, against the spread, and for the suppression of said disease or diseases, which rules and regulations, after the concurrence of the governor and executive council, shall be published and enforced, and in doing said things or any of them, he shall have power to call on any one or more peace officers whose duty it shall be to give him all assistance in their power.

SEC. 3. Any person who willfully hinders, obstructs or resists said veterinary surgeon or his assistants, or any peace officer acting under him or them when engaged in the duties or exercising the powers herein conferred, shall be guilty of a misdemeanor and punished accordingly.

SEC. 4. Said veterinary surgeon shall on or before the 30th of June of each year, make a full and detailed report of all and singular his doings since his last report to the governor, including his compensation and expenses, and the report shall not exceed one hundred and fifty pages of printed matter.

SEC. 5. Whenever the majority of any board of supervisors, city council, trustees of an incorporated town or township trustees, whether in session or not, shall in writing notify the governor of the prevalence of, or probable danger from, any of said diseases, he shall notify the state veterinary surgeon who shall at once repair to the place designated in said notice and take such action as the exigencies may demand, and the governor may in case of emergency appoint a substitute or assistants with equal powers and compensation.

SEC. 6. Whenever in the opinion of the state veterinary surgeon the public safety demands the destruction of any stock under the provisions of this act he shall unless the owner or owners consent to such destruction, notify the governor, who may appoint two competent veterinary surgeons as advisers, and no stock shall be destroyed except upon the written order of the state veterinary surgeon countersigned by them and approved by the governor, and the owners of all stock destroyed under the provisions of this act, except as hereinafter provided, shall be entitled to receive a reasonable compensation therefor, but not more than its actual value in its condition when condemned, which shall be ascertained and fixed by the state veterinary surgeon and the nearest justice of the peace, who if unable to agree shall jointly

select another justice of the peace as umpire, and their judgment shall be final when the value of the stock does not exceed one hundred dollars, but in all other cases either party shall have the right to appeal to the circuit court, but such appeal shall not delay the destruction of the diseased animals. The state veterinary surgeon shall, as soon thereafter as may be, file his written report thereof with the governor, who shall, if found correct, endorse his finding thereon, whereupon the auditor of state shall issue his warrant therefor upon the treasurer of state who shall pay the same out of any moneys at his disposal under the provisions of this act; *provided*, that no compensation shall be allowed for any stock destroyed while in transit through or across the state, and that the word stock, as herein used, shall be held to include only neat cattle and horses.

SEC. 7. The governor of the state, with the state veterinary surgeon may co-operate with the government of the United states for the objects of this act, and the governor is hereby authorized to receive and receipt for any moneys receivable by this state under the provisions of any act of congress which may at any time be in force upon this subject, and to pay the same into the state treasury to be used according to the act of congress and the provisions of this act as nearly as may be.

SEC. 8. There is hereby appropriated out of any moneys not otherwise appropriated the sum of ten thousand dollars for use in 1884 and 1885, and three thousand dollars annually thereafter, or so much thereof as may be necessary for the uses and purposes herein set forth.

SEC. 9. Any person, except the veterinary surgeons, called upon under the provisions of this act shall be allowed and receive two dollars per day while actually employed.

Approved April 14, 1884.

ACTS PASSED BY THE TWENTY-FIRST GENERAL ASSEMBLY.

AN ACT to amend chapter 11, title 24 of the Code, Relating to Contagious Diseases in Domestic Animals.

Be it enacted by the General Assembly of the State of Iowa:

SECTION 1. That sections 4058 and 4059 in chapter 11, title 24 of the Code be hereby repealed, and sections 2 and 3 of this act be substituted therefor, and be known hereafter as sections 4058 and 4059 of the Code.

SEC. 4058. Any person or persons driving any cattle into this State, or any agent, servant, or employe of any railroad or other corporation who shall carry, transport or ship any cattle into this State, or any railroad company, or other corporation, or person who shall carry, ship, or deliver any cattle into this State, or the owners, controllers, lessees, or agents, or employes of any stock yards, receiving into such stock yards or in any other inclosure, for the detention of cattle in transit or shipment, or reshipment, or sale, any cattle brought or shipped in any manner into this State, which at the time they were either driven, brought, shipped or transported into this State, were in such condition as to infect with or to communicate to other cattle pleuro-pneumonia, or splenic or Texas fever, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than three hundred dollars and not more than one thousand dollars, or by both fine and imprisonment in the county jail not exceeding six months in the discretion of the court.

SEC. 4059. Any person who shall be injured or damaged by any of the acts of the persons named in section 4058, and which are prohibited by such section, in addition to the remedy therein provided, may bring an action at law against any such persons, agents, employes or corporations mentioned therein, and recover the actual damages sustained by the person or persons so injured, and neither said criminal proceedings, nor said civil action, in any stage of the same, shall be a bar to a conviction or to a recovery in the other.

ACTS PASSED BY THE TWENTY-SECOND GENERAL ASSEMBLY.

CHAPTER 67.

RELATING TO DISEASED ANIMALS.

AN ACT to amend section 1 of chapter 79 of the Acts of the Twenty-first General Assembly of Iowa, Relating to Diseased Swine.

Be it enacted by the General Assembly of the State of Iowa:

SECTION 1. That section one of chapter 79 of the acts of the Twenty-first General Assembly is hereby amended by adding at the end thereof, the following: It shall also be unlawful for any person, negligently or willfully to allow his hogs or those under his control, infested with hog cholera or other plague or contagious disease, to escape his control or run at large.

Approved April 3, 1888.

FIANCIAL EXHIBIT.

The following statement shows the amount of warrants drawn from June 30, 1890, to June 30, 1891, for which itemized bills are on file with the Auditor of State.

NAMES.	No. of days.	Per diem.	Expense.	Total.
John Wright.....	34	17.50	13.65	31.15
W. E. Watson.....	4	20.00	15.72	35.72
G. A. Johnson.....	10	50.00	50.65	100.65
M. Stalker.....	161	805.00	476.08	1,281.08
E. E. Sayers.....	0	45.00	58.99	103.99
John A. Campbell.....	35	175.00	133.13	308.13
J. H. Platt.....	18	90.00	65.00	155.00
Louis A. Thomas.....	10	50.00	54.73	104.73
A. E. Bosquitt.....	3	15.00	10.00	25.00
John McBirney.....	20	145.00	170.82	315.82
S. Stewart.....	31	155.00	111.25	266.25
Totals.....	313 1/2	1,567.50	1,161.87	2,729.37