

## Twelfth biennial report of the Kansas State Board of Agriculture, 1899-1900

### Section 23, Pages 661 - 690

This biennial report from the Kansas State Board of Agriculture includes information on dairying, road construction, livestock, and other agricultural topics. Also covered are county statistics for population, acreages, productions, livestock, assessed valuation of property, and a listing of churches for each county.

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FIG. 1. Cross-section, showing how the subgrade should be built of subsoil, properly shaped, retaining alluvial soil as top dressing; also showing outlet of tile into ditch, which outlets may alternate from either side, at intervals of 50 to 100 feet along tile line from it to the ditch on either side of roadway.



FIG. 2. Cross-section of roadway properly graded and tiled.



FIG. 3. Longitudinal section of roadway and tile connection, with pipe culvert protected with light covering of soil and macadam bridge.

tities of valuable material for road construction, which, being constantly washed and blown out, eventually brings the road to a lower level than the surrounding lands making it a canal instead of a roadway, and forcing all water from the surrounding lands into the canal and onto the road.

On comparatively flat lands, where slope is slight and water moves slowly, all grading material should be taken from the lower ditch, and culverts should be supplied wherever waterways occur. The tendency of road workers to attempt to carry water long distances in upper ditches should be discountenanced, as it seeps through and into the roadway, softening up the grade. The only obstruction to the flow of water down these slopes should be the grade, which would force the storm water into the low places, where it could be quickly put across the road with proper culverts. In fact, on flat lands there should be no upper ditch, as the dump or grade would be a sufficient obstruction to the flow of water down the slopes, forcing it into and through the culverts to the lower ditch.

The location of these culverts depends entirely upon the lay of the ground. The size of the pipe used is determined by the fall. The capacity of the pipe is determined by the velocity of the water in it. All fall should be increased, if possible, by having either no ditch, or a very shallow one, on the upper side of the roadway. Road builders should conserve fall at every opportunity, increasing it, if possible, thereby decreasing the size of the pipe required, and decreasing the cost of the culverts. It is just as economical for the road-maker to put in five 12-inch pipes at intervals along a mile of roadway, and let the water cross the road frequently, as it is for him to carry the water along the roadway, in the upper ditch a mile or more, and be compelled to use a 24-inch pipe. If he were to put the water across the roadway in short runs, where low places existed, he would then prevent that much seepage from softening his road. In fact, a well-drained road is usually a good road, excepting where sand occurs.

In completing a roadway, great care should be taken not to leave depressions on its surface, where water could accumulate and settle, softening up that particular place. The surface should be as smooth and compact as possible. The use of a harrow to finish off and smooth the surface should not be resorted to, unless followed by a roller. With modern road-making machinery, such as any of the good road graders which we now have, the soil can be evenly distributed over the whole surface of the road, leaving a small fall to the

ditches, without depressions. Thorough drainage is the essential of good road making.

Only the best grades of culvert pipe should be used, and these so placed as to take every advantage of obtainable fall, and quickly handle the storm water that

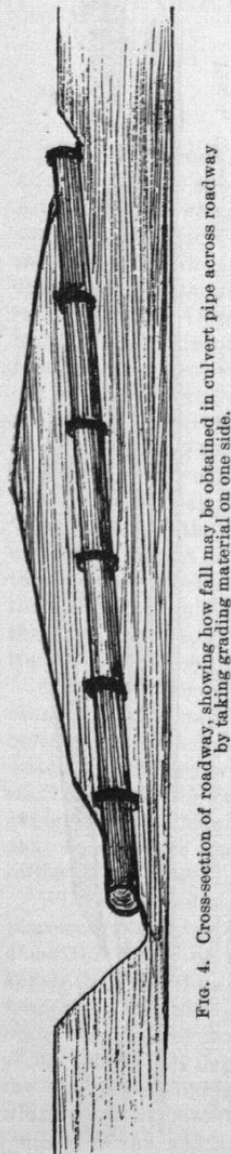


FIG. 4. Cross-section of roadway, showing how fall may be obtained in culvert pipe across roadway by taking grading material on one side.



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accumulates on the upper side of the roadway. The placing of pipe in a mud-hole and filling by dumping upon it has made more trouble for road builders than any other one practice. If necessary to build a pipe culvert where a mud-hole exists, it is better to go to one side on the hard, firm ground and excavate there a place for the pipe, rather than to attempt to fill the mudhole so as to obtain solid bearing for the pipe. In most places where it is necessary for a culvert to cross the roadway, a slight change can be made at nominal expense to divert the course of the water so as to go through the culvert wherever the ground is most suitable for it to be placed.

In excavating for culverts, the upper end or intake should be kept as high as possible, in order to retain all the fall obtainable. The lower end should not be lower than the ditch into which it empties, and the outfall of the ditch should be such as will thoroughly drain all storm water delivered by the culvert out of it. The excavation should have sloping banks, the bottom being shaped to the contour of the pipe. Excavations should be made where the sockets come, so that the pipe will seat the entire length and not rest on the socket end alone, thereby giving an even bearing on the pipe.

In laying pipe for culverts, the road builder should commence at the lower ditch, with sockets up, and continue laying section after section until the culvert is across the roadway. Then good abutments of large enough stone so as to not be easily displaced should be built around the end, the stone being carried from under, up and around over the pipe. At the lower end, if much fall is obtained, a spillway should be riprapped, or paved with stone, to prevent the water from washing out the lower section of pipe. In filling in the cover over the pipe, care should be taken to preserve the alignment of the flow line on the inside of the pipe, so as to have a regular, even fall from the upper to the lower side. The dirt should be carefully tamped under and around the pipe in layers. There should not be less than two tampers to four shovels, when dirt is being filled in. All dirt filled in after the pipe is placed should be tamped as compactly as possible, and built up high enough in the center, with long slopes back onto the roadway, to prevent the accumulation of water in the ruts near the culvert. Avoid all abrupt slopes. Covers on culverts should be so placed that one could drive along at a good gait without knowing he was going over a culvert. The filling in on top of the pipe of a ridge of dirt that is an obstruction in the road should never be permitted, as it is a menace to the life of the culvert. These abrupt slopes do not drain the water off or away from the culvert, but permit it to accumulate in the ruts and soften up the roadway. The majority of culvert pipe broken in roadways is not from the weight of the vehicle on the pipe but from a side blow in a deep rut, where the momentum, added to the load by the team, fractures the pipe on the side, as with a blow from a hammer. Long, sloping covers should be placed on all pipe culverts, thoroughly draining the storm water away from the pipe, except where macadam covers are resorted to, as shown in figure 6.

The method of protecting pipe culverts in roadways with macadam covers, where it is not possible to obtain dirt covers of sufficient depth, is as follows: Proceed with the excavating and back filling as already described, tamping the dirt in thoroughly two or three inches over the pipe, shaping it like a roof, to an apex, as in figure 6. After this alternate layers of macadam or broken stone and clay that will tamp well should be placed over the pipe, and thoroughly tamped, bringing the macadam up to and slightly above grade, so, when settled, it will not be below the surface of the grade, as shown in figure 7.

In making the excavation for the macadam cover, the sides of the excavation



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FIG. 5. Showing proper excavation for culvert pipe.



FIG. 6. Showing position of soil and macadam over a properly covered culvert pipe.

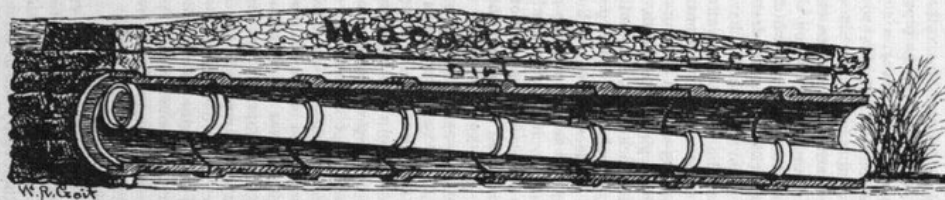


FIG. 7. Showing cross-section of road with a 24-inch pipe culvert, twenty feet long, laid on one inch fall to the hundred feet; capacity per minute, 2396 gallons. Illustrates how a 12-inch pipe could be placed inside the 24-inch pipe culvert and a fall of thirty-six inches to the hundred feet obtained, with a capacity per minute of 2554 gallons.



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should be more sloping than when making excavations for dirt covers, approximately on the following slope: If the excavation is two feet deep the opening at the top of the grade should be five or six feet across, leaving a long, sloping bank on either side. Care should be taken not to disturb the dirt under and around the pipe, but the bottom of the excavation should be carefully shaped to the contour of the pipe with a round-pointed shovel.

The road-maker who does not understand the value of fall would simply figure on the area of the pipe, and in placing a culvert twenty feet long, of 24-inch pipe, on one inch of fall to the hundred feet, would only obtain a capacity of 2396 gallons per minute, whereas, a road builder who thoroughly understood the value of fall could place, instead of this 20-foot culvert of 24-inch pipe, a 12-inch pipe, and would obtain a fall of thirty-six inches to the hundred feet, and a capacity of 2554 gallons per minute, at one-fifth the outlay for pipe, thus verifying the axiom that "fall is the factor that handles water."

The road-maker will frequently find it impossible to place a large-sized culvert pipe in position and obtain proper cover. By referring to the capacity table of pipe on different falls, he can readily find the number of smaller pipe, two or more, that will equal the capacity of the larger pipe, and obtain a proper cover, at the same expense. If he were attempting to put in a 24-inch pipe, and found that he would only have six inches of cover, he could substitute two 18-inch pipes, and obtain the same capacity, with twelve inches of cover, without increasing the height of the grade. An element in his favor would now develop; he would find that, when the water was eighteen inches high, these two 18-inch pipes would have the same capacity as the 24-inch pipe, while the 24-inch pipe would still lack six inches of being full, or, if the water was high enough to fill the 24-inch pipe, the 18-inch pipes would be running under a six inch head or pressure, thereby adding to their capacity. In any event, better results can be obtained by using two or more pipes rather than one large pipe of equal capacity.

In placing pipe in culverts, where two or more are used, care should be taken to thoroughly tamp the dirt between the two, which is facilitated by leaving six inches to a foot of space between them. In fact, they would be better if separated by a greater distance, as where placed close together they have one flow with a bar or obstruction between, while if separated by a distance of even two three feet they would have separate flows, and not be so apt to become clogged by debris or floating trash.

The road builder will frequently find in repairing roads that it becomes necessary to take out wooden boxes, or culverts with stone walls, and replace them with culvert pipe, and will attempt to replace them with pipe of equal area. We will state, as a fact, that the size of the port or opening of the culvert does not determine the capacity; it is wholly determined by the fall obtained. In determining the size of pipe required to replace a box culvert, we first find the area of the port or opening in square inches; then by referring to the capacity table we find the area of any size of pipe that multiplied will give the area of the culvert to be replaced; then from the tables ascertain the capacity in gallons per minute of these pipes so multiplied on the fall obtained per hundred feet in the culvert to be replaced. The result will be the approximate capacity of the culvert to be replaced in gallons per minute; then ascertain what fall can be obtained per hundred feet for the pipe when in position across the roadway with proper cover, and from the table of capacities in gallons per minute on fall obtained determine how many pipes will be necessary to equal the capacity of the culvert to be replaced.

It is not a question of AREA but a question of *velocity* that determines the size of pipe required to replace a culvert. From the best obtainable infor-





FIG. 8. Bad roads are conducive to sinful thoughts and profanity.

mation, we find that a fall of one inch to the hundred feet would give a velocity equal to four miles per hour, and a fall of thirty-six inches to the hundred feet would give a velocity of approximately twenty miles per hour. Hence, a pipe laid on a fall of thirty-six inches to the hundred feet would have five times the capacity of a pipe of equal diameter laid on a fall of one inch to the hundred feet.

It is of great importance to the road builder to appreciate the value of fall as a factor in handling water, and his knowledge and its use will in a great degree determine his value as a road builder.

The road builder, in the future maintenance of his roads, will find that constant attention to the little depressions that collect storm water, and the drainage of these into the side ditches, will do much to prevent the cutting up of the roadway, and I suggest that, instead of housing himself up during long periods of rainy weather, this is the exact time the roads most need his attention. A few minutes' attention at the right time would nearly always prevent serious damage to grades, by opening drainage from the ruts, so that the storm water could readily reach the ditches.

The maintenance of dirt roads, after being properly constructed, is usually left to the elements; consequently the road-maker is compelled to rebuild his road annually; while the employment of a caretaker or overseer at all times, on all roads, would maintain our dirt roads in fair condition with present taxation. It has been stated that, even with our multitude of road overseers, our roads are in worse condition now than when first built. All this is due to present methods. It is a fact that we do not have too many roads for the overseers, but we have too many overseers for the roads, whose compensation is not sufficient to enable them to give the work undivided attention. The fact is that every six square miles of country needs the constant attention of at least one overseer, properly compensated, to devote his time to maintenance of its roadways. Suffi-

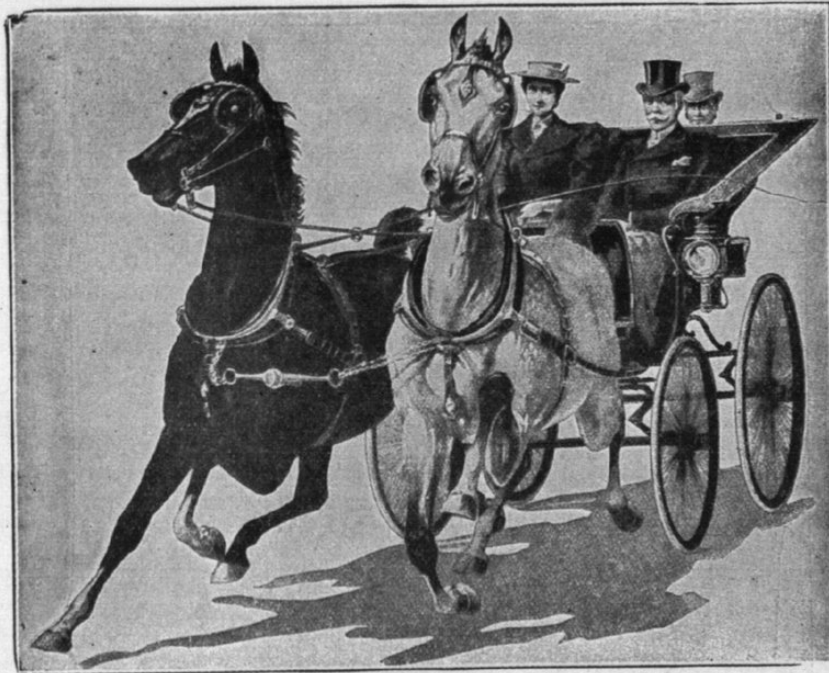


FIG. 9. Good roads are promotive of churchgoing and piety.

cient funds should be provided so that he could complete a section of roadway annually, doing permanent work at all times. To the present system is due present condition of our roads. The paying of road tax in labor makes it well-nigh impossible for an overseer to accomplish anything. He is obliged to spread a small sum so thinly over his district that it will not cover anything, when the same money, paid in cash, would place funds at his command to complete a piece of work instead of patching it.

The fact is that the taxpayer now pays enough to build and maintain good roads, but by being annually expended in small sums it is not sufficient to complete any one piece of work. The conclusion reached by nearly all who have given the maintenance and construction of country roads a thought is, that we have too many road districts and too many road overseers, each of whom attempts to carry out his particular idea. If we were able to collect all road taxes now levied in cash, and expend it under the supervision of one road commissioner or overseer in each township, according to plans and specifications made by the county engineer, we could, without any increase in our taxation for road purposes, secure such results as we would hope to attain; in fact, we would have good roads with our present taxes. The estimate made by experts, that not to exceed twenty-five cents of each dollar levied and collected ever reaches the roads, is not an exaggeration.

For the maintenance of country roads, we would suggest a change in our laws that would make it the duty of some one to give them constant care, doing the necessary work as needed, and not spasmodically every spring and fall, as is now done. It would be impossible to advise the road builder how to best maintain his roads under present conditions, as he has no authority to work as he should work, but is compelled by law to work at stated periods, and is without funds to do that which should be done.



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FIG. 10. Loads on macadamized road in Mecklenburg county, North Carolina, where formerly on earth road two bales of cotton made a good load for two mules in fairly good weather; now on macadamized road the same two mules haul ten bales of cotton in any weather.

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### PROCEEDINGS

OF THE TWENTY-EIGHTH ANNUAL MEETING OF THE KANSAS  
STATE BOARD OF AGRICULTURE, HELD IN TOPEKA,  
JANUARY 11, 12, AND 13, 1899.

WEDNESDAY, January 11, 1899.

The meeting was summoned to order by Pres. G. W. Glick, in the new State Library hall, at four o'clock P. M. A roll of members was called by the secretary, and a quorum declared present.

On motion, the chair appointed a committee on credentials, consisting of Messrs. A. C. Shinn, I. L. Diesem, and A. W. Smith.

A recess of fifteen minutes was taken, that the committee on credentials might prepare its report.

After the recess the committee on credentials made its report, which was read by the clerk, Miss Tina Louise Coburn, showing the following named as entitled to sit as delegates: J. T. Tredway, Allen county; C. H. Rice, Anderson county; E. Harrington, Brown county; Robt. Matti, Chase county; Dr. W. J. Workman, Clark county; E. E. Hoopes, Clay county; W. J. Armstrong, Coffey county; P. H. Albright, Cowley county; Joseph Ennis, Crawford county; E. Baldwin, Douglas county; A. H. Warner, Finney county; Nicholas Mayrath, Ford county; Wm. H. Moherman, Franklin county; H. E. Evans, Grant county; W. M. Glenn, Greeley county; D. W. Stanley, Jackson county; E. L. Carter, Jefferson county; V. R. Ellis, Johnson county; I. C. Dent, Johnson county; H. H. Woy, Linn county; T. J. Lawhead, Linn county; C. E. Westbrook, Marion county; R. H. Tilley, Marshall county; D. M. Ferguson, Miami county; D. W. Kingsley, Montgomery county; W. H. White, Morris county; J. J. Knepp, Nemaha county; J. C. Bell, Neosho county; Z. T. Postlewaite, Neosho county; Sam G. Sheaffer, Ness county; Thos. Cain, Osage county; S. P. Crampton, Osborne county; S. H. Tindell, Rawlins county; F. P. Maguire, Reno county; S. D. Dyer, Riley county; J. B. Kelly, Rooks county; F. B. Smith, Rush county; H. M. Laing, Russell county; Thos. Anderson, Saline county; H. G. Toler, Sedwick county; Hoyt Andrews, Sherman county; C. R. Cantrall, Wilson county; J. T. Cooper, Wilson county.

On motion of A. W. Smith, the chair was authorized to appoint a committee on carrying out the program for the meeting as already prepared, that it be declared the official program, and that any suggested variations from it be referred to that committee, of which Secretary Coburn should be chairman.

President Glick named as the committee: A. W. Smith and E. Harrington, with F. D. Coburn as chairman.

Adjourned until 7:30 P. M.

#### WEDNESDAY EVENING SESSION.

The meeting convened in Representative hall, pursuant to adjournment; President Glick in the chair.

Prayer was offered by Rev. M. E. Harlan.

Roll-call showed a quorum present.





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Minutes of the previous meeting were read by the secretary and approved.

Secretary Coburn read his report, as follows:

*Gentlemen of the State Board of Agriculture:* The work in the office of the Board of Agriculture since your last meeting has progressed along much the same lines as before, to the same ends, and has been pushed with all their time and strength by the same office force who have assisted in its doing since your present secretary has been in charge.

The usual comprehensive and complete statistics of our agricultural, horticultural and live-stock productions—statistics which by their completeness have attracted commendation wherever figures are read—have been collected, compiled, and published, and exhaustive effort constantly made to improve the service through greater thoroughness and accuracy. No such work was ever perfect; none ever will be. Kansas' statistics have for twenty-five years been cited as the best of their kind. They were better in 1898 than in 1897; they will be better in 1899 than in 1898. As showing the conditions in and the resources and productions of our state, the business world has come to accept and rank them so far above those issued by the national government, covering the same subjects, as to make comparison well-nigh out of the question.

Aside from numerous press bulletins giving many facts of public interest as to the growing crops, the numbers and values of live stock, population statistics, etc., the principal publications for the year have been, first, the March quarterly, of 200 pages, devoted to soil and crop culture, as found most suitable in Kansas, together with information as to better utilizing the cow and her product, the more profitable production of beef, wool, mutton, and poultry, and a higher order of home-making; also containing papers, addresses and discussions at the Board's twenty-seventh annual meeting. Of this 10,000 copies were issued. Secondly, the September quarterly, of 10,000 copies, given over entirely to a discussion of modern swine, swine rearing, and economical and profitable pork production, particularly under conditions existing in Kansas. This publication has met with especially great favor, and is being called for by every mail. Third, the eleventh biennial report, containing 850 pages and 130 illustrations. This volume will probably begin coming from the bindery within the present week, and it is hoped the legislature will not be tardy in providing postage wherewith to place the 15,000 copies early in the hands of our people, whom it is intended to benefit and help, and those in other states whom it should enlighten. It is, like its predecessor, an agricultural, or rather live-stock book, and deals with cattle, swine and poultry from nearly every practical standpoint, but contains also an account of the state's underground treasures, or mineral resources, specially prepared by Prof. G. P. Grimsley, along with the full statistics for the biennial period of 1897-'98. If none of the volumes of this edition were sent to applicants and inquirers in other states, or to the press, as required by law, there would be one copy available for about each twelve of our own population who are engaged in agriculture, as enumerated by the last census.

The committee of state officers, consisting of Attorney General Boyle, Secretary Bush, and Treasurer Heflebower, who controlled the orders for printing, have treated the Board's requisitions with more than usual consideration and given to them fully a fair share of the total available printing fund.

Your secretary desires to say that no officer or member of the Board has interfered or attempted to interfere with his conduct of the office, and hence, if mistakes have been made he is blameworthy, and not they. For the uniform courtesy shown and the generous confidence reposed in him, along with the kindly appreciation given his every effort, by both the Board and the public, he is profoundly grateful.





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An address of welcome was delivered by Gov. W. E. Stanley; Mayor C. A. Fellows likewise welcomed the delegates and members, on behalf of the city of Topeka, and response was made by President Glick, in part as follows:

The annual meeting of the State Board of Agriculture is the bright oasis in the year's events. It is the occasion when the results of experimentation, scientific research, improved methods of the husbandman and the results of the harvest are brought to the view of those who are engaged in the laudable and patriotic effort to better the condition of the people of our young and growing state. These meetings furnish an opportunity for all to learn much of what has been accomplished in the preceding twelve months. It welcomes all who, by efforts in various directions of agricultural research, have made discoveries useful and beneficial to the stock-breeder, the horticulturist, and the farmer. Its records are a storehouse of information, and sought by innumerable persons beyond the limits of our state, and in many foreign countries. The state has made no other effort during its existence that has done so much to build up her great industries, disseminate valuable and paying information, or added more to the general prosperity, than in organizing the work of the State Board of Agriculture. The work of the Board does not stop at the purposes of money-making or increasing the wealth of the people by disseminating information pertaining only to agriculture and cognate subjects. It seeks to dignify and elevate the calling of the husbandman and the stock-breeder—to place him on a higher plane, where he properly belongs.

The foundation of our national prosperity is based on the success of the agriculturist, and the men who thus lay the foundation of an enduring prosperity are deserving of a place in the hearts of those who are the recipients of the benefits secured by efforts of those who till the soil, feed the people, and place the balance of trade on America's side of the ledger. The efforts of the Board have been to ennoble the work of the farmer; to add to the happiness and comforts of farm life; to build up and secure a permanent prosperity in our state that will command the love and admiration of her citizens, that patriotism and loyalty to our institutions shall find a safe and permanent lodgment in the hearts of our people.

The aim of the Board is to educate the farmer, enable him to become an expert in his calling; teaching him how to apply new discoveries in science to his farm work; to adopt new methods; to apply new rules to old methods; to change old methods for newer or better ones; to make the farm a local experiment station for its owner and an agricultural school for the boys; to accomplish better results with less work; to reduce cost of production to the minimum, and secure a maximum production without an increase of expense; to make the labor on the farm and in the field a pleasure; to add comfort, happiness and contentment to rural life; to make the home on the farm and its surroundings so pleasant and attractive that the boys and girls will not sigh for the mistaken pleasures of city life and seek to leave the old homestead with all its happy surroundings.

A paper entitled "The Southwest Corner," was presented by Mr. C. M. Davis, of Hugoton, Stevens county, followed by one entitled "European Contributions to Kansas Agriculture," by Prof. W. H. Carruth, of the state university.

Adjourned until 9:30 A. M.

THURSDAY MORNING, JANUARY 12, 1899.

The meeting was called to order by President Glick, in Library hall, and a prayer made by the Rev. J. D. Counterline.

Roll-call by the secretary.





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A paper entitled "Swine-plague and Blackleg Protective Inoculation" was read by Prof. Paul Fischer, of the state agricultural college.

Dr. M. Stalker, of the Iowa Agricultural College, read a paper upon the subject of "The Farmer his own Veterinarian."

Adjourned until 1:30 P. M.

#### THURSDAY AFTERNOON SESSION.

Meeting convened pursuant to adjournment; President Glick in the chair.

On motion, the chair appointed a committee, consisting of W. B. Sutton, A. W. Smith, T. A. Hubbard, C. E. Westbrook, and A. C. Shinn, to confer with a like committee from the Improved Stock-breeders' Association in reference to promoting legislation in behalf of a state exposition.

A paper was presented by J. N. Grau, of Asherville, Mitchell county, entitled "Sheep Raising in North-central Kansas," and one by Prof. John A. Craig, of the Iowa Agricultural College, on "Sheep—Good and Bad."

Adjourned until 7:30 P. M.

#### THURSDAY EVENING SESSION.

Meeting convened in Representative hall, pursuant to adjournment; President Glick in the chair.

Senator Geo. W. Hanna, of Clay Center, read a paper entitled "The Kansas Cow and Creamery."

Mrs. Frances M. Sherman read a paper on "Life Among the Germans," and a paper by Pres. Geo. E. Morrow, of the Oklahoma Agricultural College, on "Modifying the Characteristics of Farm Animals," was read by Clerk E. W. Longshore, President Morrow having been detained away by sickness.

Adjourned until 9:30 Friday morning.

#### FRIDAY MORNING, JANUARY 13, 1899.

The Board met pursuant to adjournment, in Library hall; President Glick in the chair.

Prayer was offered by the Rev. Linus Blakesley.

The secretary called the roll, and a quorum was present.

"Practical Lessons in Apiculture" was the title of an illustrated paper by Mr. E. Whitcomb, of Friend, Neb., and one by Mr. H. D. Watson, of Kearney, Neb., entitled "What I Know about Alfalfa," was read by Treasurer Edwin Taylor, Mr. Watson not being able to be present.

The committee appointed to consider the subject of a state fair made its report, through Chairman Sutton, recommending the passage of a bill by the legislature appropriating \$20,000 per annum, for the ensuing two years, as a guarantee fund toward the payment of premiums and expenses, and presented the draft of a bill for such purpose. The report of the committee was accepted.

Adjourned until 1:30 P. M.

#### FRIDAY AFTERNOON SESSION.

The meeting convened; President Glick in the chair.

The meeting proceeded to the election of officers and members, President Glick calling Vice-president Shinn to the chair.

A. W. Smith and E. Harrington were appointed tellers.

G. W. Glick placed in nomination of T. A. Hubbard for president.

On motion of A. W. Smith, the rules were suspended and the secretary instructed to cast the entire vote of the meeting for Mr. Hubbard, which was done, and he was declared duly elected president.

On motion of Ed. R. Smith, Edwin Taylor was, in the same manner, elected vice-president; and, on motion of Mr. Diesem, Edwin Snyder was elected treasurer.



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T. A. Hubbard nominated Chas. E. Sutton to succeed Wm. B. Sutton, and Geo. W. Crane nominated Geo. W. Hanna to succeed Geo. W. Hanna. The rules were suspended in each instance, and Messrs. Sutton and Hanna were each declared unanimously elected.

W. M. Glenn nominated G. M. Munger to succeed T. A. Hubbard; G. W. Glick was nominated by A. W. Smith. Later Mr. Glenn withdrew the name of Mr. Munger, and moved that G. W. Glick be declared elected, which motion carried unanimously.

Edwin Taylor nominated Ed. R. Smith to succeed Ed. R. Smith. The rules were suspended and the secretary instructed to cast the ballot of the meeting for Mr. Smith, who was declared unanimously elected.

To succeed W. J. Bailey, W. M. Glenn nominated G. M. Munger; J. H. Churchill nominated W. J. Bailey, who declined a reelection, and asked that his name be not considered. Mr. Churchill then nominated W. H. White; W. B. Sutton nominated M. S. Babcock; J. C. Bell nominated J. T. Cooper; E. Harrington nominated A. C. Shinn. The meeting proceeded to ballot. Upon counting the ballots no one was found to have a majority. The names of Messrs. Shinn, Munger and Babcock were withdrawn by their nominators, and a second ballot taken. Mr. Cooper received twenty-five votes, and Mr. White thirteen, whereupon Mr. Cooper was declared duly elected.

Treasurer Taylor offered the following preambles and resolutions, which were unanimously adopted:

WHEREAS, Kansas is preeminently an agricultural state, and much the largest measure of any prosperity or progress she attains must be through and by the most intelligent promotion and encouragement of her agricultural interests, as becomes a state possessing such possibilities as hers; and

WHEREAS, The State Board of Agriculture, through its publications, has from the first proven itself the foremost instrument in the successful helping of our own people and enlightening others, in all parts of the world, as to what Kansas is, has, and promises to be; and

WHEREAS, The volume of this work, as well as the needs for it, by very force of circumstances has grown and is growing each year, and cannot be properly cared for except the legislature makes adequate provision to that end: therefore,

*Resolved*, By the State Board of Agriculture, the immediate and direct representative of the Kansas farming and live-stock interests, in its twenty-eighth annual meeting assembled, that we earnestly urge our legislature to provide for the Board's office equipment, postage and printing such appropriations as will make possible the best work, and also place the secretary, who is the executive of this department, on an equality in the matter of salary with the best of the better-paid heads of other state departments, whose duties are neither so arduous nor important.

*Resolved*, That the president of this Board be requested to transmit copies of the foregoing preamble and resolution over his official signature to the chairman of the ways and means committee of each branch of our present legislature, and solicit their hearty efforts in behalf the interests named.

Thereupon it was moved by Ed. R. Smith, and adopted, that the president appoint a committee of five to wait upon Governor Stanley, to present the thanks of the meeting to his excellency for the appreciative mention of the work of this Board in his recently encouraging message delivered to the legislature, and urgently solicit his aid in carrying out the provisions of the resolutions. The chair named as this committee: Ed. R. Smith, W. B. Sutton, Geo. A. Clark, Edwin Taylor, and T. A. Hubbard.

A. W. Smith offered the following preamble and resolution, which were adopted without dissent:

WHEREAS, It is with pleasure that we, the members of the State Board of Agriculture, note the fact that a member of our Board has been elected to a seat





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### *Kansas State Board of Agriculture.*

in the American congress, and believing that his usefulness to the farmers and stock-raisers of America would be greatly augmented by his occupying a place upon the committee on agriculture: therefore,

*Resolved*, By the State Board of Agriculture, in its twenty-eighth annual session, that the honorable secretary of agriculture, at Washington, be requested to urge the appointment of Hon. W. J. Bailey, of Kansas, to a prominent place upon the congressional committee on agriculture.

*Resolved*, That the secretary of the State Board of Agriculture be authorized to properly engross the above resolution and present it to the Hon. W. J. Bailey.

A paper was presented by J. H. Neff, editor of the *Kansas City Drovers Telegram*, entitled "Kansas as a Stock-growing State," and one by W. S. Hannah, of Kansas City, entitled "As Seen by the Commission Man."

Resolutions offered by J. H. Churchill in reference to tuberculosis were discussed at some length, and finally a motion to lay them on the table was adopted.

Adjourned until 7:30 P. M.

#### FRIDAY EVENING SESSION.

Meeting convened at 7:30 P. M. in Representative hall; President Glick in the chair.

Mr. J. Logan Jones, of Kansas City, Mo., read a paper upon the subject of "The Farmer and his Wife as Seen by the Merchant," and Mrs. C. F. Wilder, of Manhattan, presented a paper entitled "Another Point of View."

On motion of Ed. R. Smith and A. W. Smith, a vote of thanks was extended to each of the ladies and gentlemen who had honored the Board by preparing papers and addresses and presenting them at this, its twenty-eighth annual meeting.

On motion of Edwin Taylor, the meeting adjourned *sine die*.

#### MEETING OF THE NEW BOARD.

FRIDAY, January 13, 1899.

The Board met in the secretary's office at seven o'clock P. M., and was called to order by President Glick.

Roll-call; a quorum present.

The oath of office was administered to the newly elected officers and members by Notary E. W. Longshore, as follows: T. A. Hubbard, president; Edwin Taylor, vice-president; Edwin Snyder, treasurer; and Chas. E. Sutton, Ed. R. Smith and G. W. Glick, members. Members elect Geo. W. Hanna and J. T. Cooper were absent.

Appointive officers for the ensuing year were named, as follows: Geologists, Prof. Erasmus Haworth, Lawrence, and Prof. G. P. Grimsley, Topeka; entomologists, Profs. F. H. Snow and S. J. Hunter, Lawrence, Prof. E. A. Popenoe, Berryton, and Prof. ———, Manhattan; meteorologists, Prof. J. T. Lovewell and T. B. Jennings, Topeka; botanists, Prof. L. E. Sayre, Lawrence, and Prof. A. S. Hitchcock, Manhattan; chemists, Prof. E. H. S. Bailey, Lawrence, and Prof. J. T. Willard, Manhattan; honorary veterinarian, Dr. Paul Fischer, Manhattan.

Secretary F. D. Coburn, G. W. Glick and Ed. R. Smith were continued as a committee on printing and program.

On needed legislation, the following were appointed as the committee: Pres. T. A. Hubbard, G. W. Glick, Edwin Snyder, Ed. R. Smith, I. L. Diesem, Edwin Taylor, Geo. W. Hanna, J. H. Churchill, and A. W. Smith.

Thereupon the Board voted to take a recess, to meet subject to call by the secretary, if he should deem it necessary.



## PROCEEDINGS

OF THE TWENTY-NINTH ANNUAL MEETING OF THE KANSAS  
STATE BOARD OF AGRICULTURE, HELD IN TOPEKA,  
JANUARY 10, 11, AND 12, 1900.

WEDNESDAY, January 10, 1900.

The meeting was called to order by President Hubbard, in Representative hall, at four o'clock P. M.

The roll was called by Secretary Coburn, and a quorum declared present.

On motion, the chair appointed a committee on credentials, consisting of Messrs. Ed. R. Smith, G. W. Glick, Nicholas Mayrath, E. Harrington and H. G. Toler.

The minutes of the proceedings of the twenty-eighth annual meeting were read and approved.

Treasurer Edwin Snyder then made his report, which was adopted.

On motion, the president appointed the following committee on program: A. W. Smith, Chas. E. Sutton, and G. W. Roberts.

The committee on credentials made its report, naming the following as duly authorized delegates to the twenty-ninth annual meeting of the Kansas State Board of Agriculture:

J. T. Tredway, Allen county; C. H. Rice, Anderson county; E. Harrington, Brown county; J. W. Robison, Butler county; Arch Miller, Chase county; Robert Mayse, Clark county; E. E. Hoopes, Clay county; A. L. Hitchins, Coffey county; Ed. E. Reed, Cowley county; George E. Cole, Crawford county; Eben Baldwin, Douglas county; G. S. Knox, Finney county; Nicholas Mayrath, Ford county; E. W. Hume, Franklin county; B. C. Henshaw, Grant county; W. M. Glenn, Greeley county; George M. Munger, Greenwood county; D. W. Stanley, Jackson county; G. Davis, Jefferson county; J. M. Warren, Johnson county; E. W. Baker, Lincoln county; Henry C. Reese, Linn county; T. J. Lawhead, Linn county; G. H. Cooper, Marion county; W. H. Auld, Marshall county; D. M. Ferguson, Miami county; G. W. Roberts, Montgomery county; J. J. Moberly, Montgomery county; W. H. White, Morris county; John Fuller, Nemaha county; E. I. Holley, Neosho county; J. C. Biles, Neosho county; B. F. Herman, Ness county; T. W. Mitchell, Osage county; M. E. Smith, Osborne county; F. P. Maguire, Reno county; S. D. Dyer, Riley county; E. A. Kramer, Rooks county; F. B. Smith, Rush county; J. T. Hastings, Russell county; B. B. Stimmel, Saline county; H. G. Toler, Sedgwick county; Hoyt Andrews, Sherman county; Chas. M. Johnston, Sumner county; C. R. Cantrall, Wilson county; Isaac Hudson, Wilson county.

On motion, a committee consisting of the president, Ed. R. Smith and A. W. Smith was appointed to wait upon the governor, to request that the capitol elevator be run during the evening sessions of the meetings.

The chairman of the committee on program reported that the program as prepared by the secretary had been adopted by the committee as the official program of the meeting.

The meeting adjourned until 7:30 P. M.



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#### WEDNESDAY EVENING SESSION.

President Hubbard called the meeting to order in Representative hall at eight o'clock P. M.

Prayer was offered by Bishop F. R. Millsbaugh.

Roll-call showed a quorum present.

Secretary Coburn read his report, as follows:

*Gentlemen of the State Board of Agriculture:* There is no adequate report of your secretary except the record found in the files of the office; the letters written and received; the statistics gathered, compiled, edited, and published; the volumes prepared, printed and distributed to whomsoever sought them most or had greatest need, whether in Kansas or Canada, in Mexico or Manitoba, in Scandinavia or Skowhegan, in Africa or Arkansas; the record of salaries paid and oil burned; of requests for red-headed books, of which the supply is always short.

The office work has been done without friction, and, with one exception, by the same force as in the later previous years; in March the lady clerk went with a handsomer man, and, to guard against a possible repetition of this, her place has since been occupied by a clerk who is not a lady.

Appropriations for the Board were not increased by the late legislature beyond those given in previous years, but were restored to equal those made prior to the last two years—a period in which all but the truly good were made to feel what a great money-saver General Retrenchment was when once fairly in the saddle.

Much active effort was put forth by friends of the measure to have the Board's expressed desires in the matter of a state fair substantially supported by the legislature, but without tangible result.

The secretary has not been advised that your earnestly expressed wishes, that the executive council officially take such steps as would make secure to the state the assignment, finish and equipment of the capitol's first-floor rotunda for a permanent exposition of our resources, had been given consideration, favorable or otherwise. It is doubtless true that the council is not in position to so finish or equip this rotunda at this time, but I have no doubt as to its being in their power to officially declare and record, on the second Wednesday of any month, for the benefit of all comers, architects included, that this rotunda is forever set apart for and shall be so finished and equipped as to display artistically, to the best possible advantage, the products of Kansas soil, Kansas industry, and Kansas brains; not alone because it would be a good and proper and profitable thing to do, but, if you please, because formally asked for by the agricultural people of the state, who, as our worthy governor said from this desk one year ago to-night, "have contributed more towards laying these foundations and the building of these massive walls and this magnificent state capitol than all other interests combined." He further well said, at the same time, "you have more interest in this place than any other class of people in the state of Kansas."

Officials of the various state departments have accorded the Board of Agriculture and your secretary the best of treatment, and I am persuaded the Board has in each of them an appreciative friend. The governor and the gentlemen constituting the printing committee have shown their friendly interest in various ways, and all seem glad of opportunity to do as much.

At the request of and by appointment from the governor, your secretary attended as a delegate—the only one present from Kansas—the Farmers' National Congress, in Boston, in October. Upon his motion, one of our valued members, Mr. Thos. M. Potter, is now a vice-president of that body.

The report was adopted unanimously.



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Gov. W. E. Stanley delivered an address of welcome on behalf of the state, and W. A. S. Bird, city attorney, for the city of Topeka, to which President Hubbard responded.

A paper entitled "The Agricultural Future of Western Kansas" was read by Mr. George R. Allaman, of Wallace, and Dr. Carl. Swensson, president of Bethany College, Lindsborg, delivered an address on the subject "The Farmer Boy—the Prince of the Twentieth Century."

Adjourned until 9:30 A. M.

#### THURSDAY MORNING, JANUARY 11, 1900.

The meeting was called to order in Representative hall by President Hubbard, at 9:30 A. M.

Prayer by Rev. A. M. Reynolds, of Westminster Presbyterian Church.

Roll-call by the secretary.

"The Implement Dealer and his Relation to the Farmer" was discussed in a paper by Mr. J. C. Bell, of Erie.

Mr. J. C. Norton, of Morantown, read a paper on "Treatment and Use of the Corn Plant," and Mr. Edwin Snyder, of Oskaloosa, about "The Farmer's Orchard."

Adjourned until 1:30 P. M.

#### THURSDAY AFTERNOON SESSION.

Meeting convened pursuant to adjournment; President Hubbard in the chair.

F. J. Berry, of Chicago, presented a paper entitled "The Horse Situation and its Future," and Dr. Henry Wallace, editor of *Wallaces' Farmer*, of Des Moines, Iowa, treated the subject of "Rotation of Crops."

Adjourned until 7:30 P. M.

#### THURSDAY EVENING SESSION.

Meeting convened pursuant to adjournment; President Hubbard in the chair.

Gen. J. K. Hudson, of Topeka, read a paper on "The Cost to the Pioneer Builders," and the subject "Boys—and Citizens" was treated in an essay by Mrs. Mary T. Gray, of Kansas City, Kan.

Adjourned to convene at 9:30 A. M. Friday.

#### FRIDAY MORNING, JANUARY 12, 1900.

Called to order in Representative hall, at 9:30 o'clock; President Hubbard in the chair.

Prayer by Rev. Charles M. Sheldon.

Roll-call by the secretary.

Dr. D. E. Salmon, chief of the bureau of animal industry, of Washington, D. C., presented an address on the subject "Some Live-stock Problems from an Official Point of View."

The president appointed a committee, consisting of Messrs. Churchill, Potter, Glick, Robison, Doctor Wallace, and F. D. Coburn, to draft a suitable resolution on the work of the United States bureau of animal industry and Doctor Salmon. The committee reported the following, which was unanimously adopted:

*Resolved*, That the Kansas State Board of Agriculture tender to the United States department of agriculture, through Dr. D. E. Salmon, our approval of the efficient services of the bureau of animal industry in the matter of quarantine regulations and inspection, and the preparation and introduction of blackleg and swine-plague vaccine, and we pledge to the department of agriculture our hearty support in furtherance of its work.

Dr. Henry Wallace was unanimously elected an honorary life member of the Board.



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Col. Richard J. Hinton, of Brooklyn, N. Y., read a paper on "Intensive Cultivation, Small Farms, and Irrigation as Security."

Adjourned until 1:30 P. M.

#### FRIDAY AFTERNOON SESSION.

The meeting convened in Representative hall, pursuant to adjournment, by call of President Hubbard, and proceeded at once to the election of officers and members, roll-call being dispensed with. The president appointed as tellers G. M. Munger, J. T. Tredway and W. M. Glenn.

On motion of A. W. Smith, the rules were suspended and the secretary instructed to cast the ballots of the entire board for T. A. Hubbard for president for the ensuing year, and Mr. Hubbard was declared duly elected.

On motion of A. W. Smith, Edwin Taylor was in the same manner elected vice president; and, on motion of G. Davis, Edwin Snyder was elected treasurer for the ensuing year.

On motion of Ed. R. Smith, F. D. Coburn was elected in similar manner to the office of secretary for the ensuing term of two years.

Thos. M. Potter, A. W. Smith, I. L. Diesem and J. H. Churchill were unanimously elected to succeed themselves as members of the Board for the ensuing two years. W. M. Glenn placed George R. Allaman, of Wallace, in nomination to succeed George W. Crane, of Sheridan county. I. L. Diesem placed in nomination J. H. Sayles, of Decatur county. The ballots being counted, thirty-six were found for J. H. Sayles and six for G. R. Allaman. Mr. Sayles was declared duly elected, and, on motion of W. M. Glenn, the election was made unanimous.

Ed. R. Smith offered the following resolution, and moved its adoption:

WHEREAS, This Board is not advised of any action by the executive council in the matter of assigning or assuring the first-floor rotunda of the capitol building for a permanent agricultural, horticultural and mineral display of the state's resources under auspices of the Board, as urged heretofore in formal resolutions by us; and

WHEREAS, The producers of Kansas have urgently expressed themselves through our Board, their legally authorized mouthpiece, as earnestly desiring this modest, yet very important, recognition of their interests: be it

*Resolved*, That the president of the Board appoint a committee of five, who shall call upon each member of the executive council during our present meeting, and urge upon his attention our earnest desire in the matter of this proposed artistic, permanent Kansas exposition, and request his active support to its early promotion and settlement; also, in the matter of providing our executive officers with as comfortable, convenient and accessible quarters as are provided for the heads of other departments; further,

*Resolved*, That Governor Stanley and Secretary of State Clark, who are *ex officio* members of this Board, are hereby appointed a standing committee to urge the interests of the Board in general, and in the matter of a rotunda museum and better office quarters in particular, upon the honorable executive council.

*Resolved*, That the secretary of the Board is hereby instructed to furnish Governor Stanley and Secretary of State Clark each with a copy of the preambles and resolutions.

The resolutions were unanimously adopted, and the president appointed Ed. R. Smith, J. W. Robison, Geo. W. Hanna, F. D. Coburn and E. Harrington members of the committee called for in the resolution.

Ed. R. Smith offered the following resolution, which was unanimously adopted:

*Resolved*, That the State Board of Agriculture heartily indorses the resolution of the Improved Stock-breeders' Association of Kansas in recommending to Governor Stanley O. P. Updegraff, of Topeka, for appointment as a member of the Kansas Live-stock Sanitary Commission.

On motion of G. W. Glick, all persons present interested in the subject-matter of any of the papers presented were invited to take part in their discussion.



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Emerson T. Abbott read the following resolution, which, on motion of J. T. Tredway, was unanimously adopted:

WHEREAS, There is a body known as the National Pure Food and Drug Congress, composed of representatives of the various productive industries in the United States; and

WHEREAS, The Kansas State Board of Agriculture believes that every man who pays money for an article is entitled to know what he is getting, and to get what he calls for: therefore,

*Resolved*, That we indorse the pure-food bill, known as the Brosius bill, which is backed by the National Pure Food and Drug Congress, and that we respectfully urge upon the national representatives, and especially upon the members of congress from the state of Kansas, the importance of giving this bill their hearty support.

*Resolved*, That a copy of these resolutions be given to the press, with the request that every paper in Kansas copy them.

*Resolved*, That the secretary be ordered to engross a copy of this resolution, and forward same to Senator Harris and Congressman Bailey.

On motion of G. W. Glick, Congressman W. J. Bailey was named as the delegate from the Kansas State Board of Agriculture to the pure-food congress.

Prof. D. H. Otis, of Manhattan, presented a paper on "Dairy Expansion."

Adjourned until 7:30 P. M.

#### FRIDAY EVENING SESSION.

Called to order at 7:30 by President Hubbard.

Prof. S. J. Hunter, of the state university, delivered a lecture on "Alfalfa Culture and Insect Life," illustrated by stereopticon views, and Miss Minnie A. Stoner, of Manhattan, read a paper on the subject "Girls at the Agricultural College."

On motion of Ed. R. Smith, a vote of thanks was tendered to the speakers on the program of the meeting.

On motion of A. W. Smith, a vote of thanks was given to the citizens of Topeka by the State Board of Agriculture for the generous and kind hospitality which they have extended from year to year.

Adjourned *sine die*.

#### MEETING OF THE NEW BOARD.

JANUARY 13, 1900.

The Board was called to order in the secretary's office at 9:30 A. M., by President Hubbard.

Roll called; quorum declared present.

The oath of office was administered to the newly elected officers and members present by Notary E. W. Longshore.

Minutes of the last meeting were read and approved.

The appointive officers of the Board for 1899 were continued.

Upon motion, the chair was authorized and instructed to appoint all standing committees for the ensuing year, which was done, as follows:

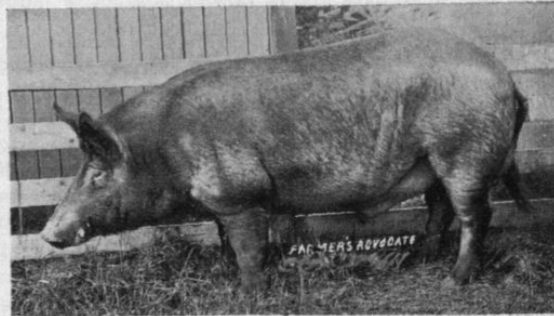
Committee on Program and Printing: Sec. F. D. Coburn, Geo. W. Glick, and Ed. R. Smith.

Committee on Needed Legislation: Thos. M. Potter, J. H. Churchill, J. T. Cooper, Edwin Taylor, Geo. W. Hanna, A. W. Smith, and Chas. E. Sutton.

On motion, the Board directed that hereafter the remainder of the afternoon following the election of officers and members be set apart in the program for a "query box," instead of the customary address.

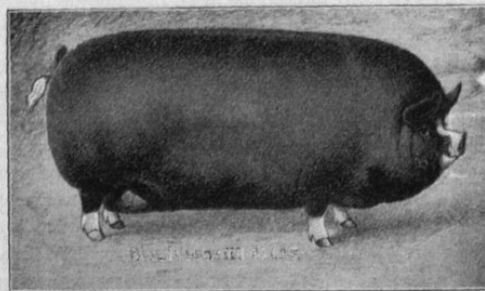
Adjourned.





The two illustrations on this page quite fairly represent types of two extremes in swine breeding. The upper one is an excellent showing, from a photograph, of a young Tamworth boar, the first-prize winner in his class at the Toronto and London, Canada, shows in 1900. He belongs to the sort doted on by those who insist that most hogs of other breeds reared in the United States, such as Poland-Chinas, Berkshires, Chester Whites, and Durocs, make a meat product unprofitable, unpalatable and unwholesome because too fat.

The lower illustration is of a Kansas-reared Berkshire, found by competitors well-nigh invincible in the show-ring. She belongs to a quick-growing, easy-fat-tening type that attains heavy weights on Kansas corn and alfalfa.





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PART V.  
GENERAL STATISTICS, 1899-1900.





FIVE SOUTHWESTERN KANSAS HEREFORDS.

## Twelfth biennial report of the Kansas State Board of Agriculture, 1899-1900

### POPULATION, ACREAGES, PRODUCTION, ASSESSED VALUATION, ETC.

#### ALLEN COUNTY.

Organized in 1855; area, 504 square miles; population, 19,923; rank in population, 28; assessed valuation, \$5,636,323; miles of railroad, main track, 83.36; county-seat, Iola, population, 6,153.

#### POPULATION AND VALUATION.—ALLEN COUNTY.

Table showing total population, by townships and cities, for 1899 and 1900, and the assessed valuation of the municipal townships and cities for 1900.

Townships and cities.	Population.		Assessed valuation of property.				
	1899.	1900.	Land.	Personal	City lots.	Railroad	Total.
The county .....	17,483	19,923	\$2,912,801	\$1,057,755	\$1,089,595	\$576 172	\$5,636,323
Carlyle twp. ....	636	662	\$142,250	\$45,425	.....	\$15,360	\$33,035
Cottage Grove twp. ....	748	737	175,780	45,840	.....	21,820	243,440
Deer Creek twp. ....	542	559	187,545	54,120	.....	132	241,797
La Harpe city. ....	592	636	.....	.....	.....	.....	.....
Lanyonville city. ....	215	353	.....	.....	.....	.....	.....
Gas City. ....	107	318	.....	.....	.....	.....	.....
Elm twp. ....	893	830	.....	.....	.....	.....	.....
Savonburg city. ....	223	261	.....	.....	.....	.....	.....
Elsmore city. ....	211	210	.....	.....	.....	.....	.....
Elsmore twp. ....	1,326	1,204	.....	.....	.....	.....	.....
Geneva twp. ....	543	575	.....	.....	.....	.....	.....
Humboldt city. ....	1,682	1,741	.....	.....	.....	.....	.....
Humboldt twp. ....	436	493	.....	.....	.....	.....	.....
Iola city. ....	4,112	6,153	.....	.....	.....	.....	.....
Iola twp. ....	1,468	1,365	.....	.....	.....	.....	.....
Logan twp. ....	494	462	.....	.....	.....	.....	.....
Moran city. ....	486	511	.....	.....	.....	.....	.....
Marmaton twp. ....	1,012	1,036	.....	.....	.....	.....	.....
Osage twp. ....	917	964	.....	.....	.....	.....	.....
Salem twp. ....	840	833	.....	.....	.....	.....	.....

#### FARM AND CROP STATISTICS.—ALLEN COUNTY.

Table showing acres, product and value of field crops in the county for 1899 and 1900.

Crops.	1899.			1900.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat. .... bu.	5,739	80,346	\$44,993 76	3,560	74,760	\$16,351 20
Spring wheat. .... bu.	20	140	70 00	.....	.....	.....
Corn. .... bu.	87,631	1,664,989	416,247 25	84,783	2,034,792	590,089 68
Oats. .... bu.	4,557	95,697	20,096 37	7,688	184,512	46,128 00
Rye. .... bu.	143	2,145	1,072 50	42	798	399 00
Barley. .... bu.	.....	.....	.....	.....	.....	.....
Buckwheat. .... bu.	12	144	93 60	18	180	135 00
Irish potatoes. .... bu.	717	50,907	21,380 94	871	69,680	25,084 80
Sweet potatoes. .... bu.	5	500	265 00	4	600	360 00
Castor-beans. .... bu.	10	80	72 00	.....	.....	.....
Cotton. .... lbs.	.....	.....	.....	.....	.....	.....
Flax. .... bu.	16,790	117,530	105,777 00	16,479	131,832	171,381 60

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### Kansas State Board of Agriculture.

#### FARM AND CROP STATISTICS.—ALLEN COUNTY—Concluded.

Crops.	1899.			1900.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Hemp.....lbs.						
Tobacco.....lbs.						
Broom-corn.....lbs.	1,602	600,750	\$19,524 37	1,832	1,099,200	\$43,968 00
Millet & hungarian.....tons	8,350	16,700	50,100 00	8,707	19,591	58,773 00
Sorghum :						
For syrup or sugar, gals.	172	6,538	2,091 52	165	5,445	1,851 30
For forage or grain.....	532		3,724 00	1,024		6,144 00
Milo maize.....tons				12	36	108 00
Kafir-corn.....tons	8,593	30,076	75,190 00	6,761	20,283	60,849 00
Jerusalem corn.....tons						
Timothy.....tons	6,605			5,546		
Clover.....tons	2,702			3,203		
Blue-grass.....tons	1,601	* 10,345	43,966 25	1,399	† 6,317	30,005 75
Alfalfa.....tons	466			218		
Orchard-grass.....tons	7			16		
Other tame grasses.....tons	269			170		
Prairie-grass fenced, tons	62,818	24,798	74,394 00	50,465	18,845	65,957 50
Totals.....	209,341		\$879,058 56	192,963		\$1,147,585 83

Wheat on hand March 1, 1899, 13,801 bushels; March 1, 1900, 10,707 bushels.  
Corn on hand March 1, 1899, 451,506 bushels; March 1, 1900, 288,292 bushels.

\* Product of 1898. † Product of 1899.

#### SUMMARY.—ALLEN COUNTY.

Showing quantity and value of farm products, years ending March 1, 1899, and March 1, 1900.

Products.	1899.		1900.	
	Quantity	Value.	Quantity	Value.
Field crops.....acres	209,341	\$879,058 56	192,963	\$1,147,585 83
Animals slaughtered and sold for slaughter.....		382,405 00		412,466 00
Poultry and eggs sold.....		63,067 00		68,265 00
Wool clip.....lbs.	1,631	244 65	4,605	7 6 80
Cheese.....lbs.	55,615	5,005 35	48,940	4,894 00
Butter.....lbs.	420,997	54,301 67	395,505	61,759 70
Milk sold.....		4,071 00		8,765 00
Garden products marketed.....		5,823 00		10,751 00
Horticultural products.....		1,961 00		890 00
Honey and beeswax.....lbs.	2,550	382 75	9,960	594 00
Wine manufactured.....gals.	400	300 00	962	721 50
Wood marketed.....		299 00		144 00
Totals.....		\$1,396,918 98		\$1,717,572 89

#### LIVE STOCK.—ALLEN COUNTY.

Table showing the number, value and mortality of live stock for 1899 and 1900.

Live stock.	1899.		1900.		Mortality.	
	Number.	Value.	Number.	Value.	1899.	1900.
Horses.....	8,726	\$349,040 00	8,284	\$414,200 00	70	291
Mules and asses.....	1,103	50,738 00	1,155	69,300 00	5	16
Milch cows.....	7,813	250,016 00	7,428	245,124 00	61	105
Other cattle.....	18,465	480,090 00	17,618	405,214 00	219	389
Sheep.....	735	2,205 00	1,093	3,279 00	7	6
Swine.....	25,853	129,265 00	20,752	124,512 00	2,827	970
Total.....	62,695	\$1,261,354 00	56,330	\$1,261,629 00	3,189	1,777

Number of dogs in county March 1, 1899, 1,928; March 1, 1900, 1,975.  
Number of sheep killed by dogs, year ending March 1, 1899, 2.  
Number of sheep killed by wolves, year ending March 1, 1899, 2.



## Twelfth biennial report of the Kansas State Board of Agriculture, 1899-1900

### Twelfth Biennial Report.—Part V.

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#### ANDERSON COUNTY.

Organized in 1855; area, 576 square miles; population, 13,988; rank in population, 47; assessed valuation, \$3,480,263; miles of railroad, main track, 130.77; county-seat, Garnett, population, 2,118.

#### POPULATION AND VALUATION.—ANDERSON COUNTY.

Table showing total population, by townships and cities, for 1899 and 1900, and the assessed valuation of the municipal townships and cities for 1900.

Townships and cities.	Population.		Assessed valuation of property.				
	1899.	1900.	Land.	Personal	City lots.	Railroad	Total.
The county.....	14,227	13,988	\$1,802,845	\$591,255	\$358,590	\$727,573	\$3,480,263
Indian Creek twp..	677	677	\$128,130	\$12,835	\$725	\$34,248	\$175,938
Jackson twp.....	835	768	117,390	38,770	1,510	43,961	201,631
Lincoln twp.....	777	786	151,945	22,830	1,575	32,790	209,140
Lone Elm twp.....	865	898	143,890	43,385	5,005	27,145	219,425
Garnett city.....	2,293	2,118	133,170	96,140	228,085	106,730	564,125
Monroe twp.....	872	882	3,000				
Colony city.....	504	494	1,079	108,120	35,035	38,155	267,705
Ozark twp.....	502	585	578	107,660	44,890	28,969	181,519
Putnam twp.....			1,226	220,720	81,720	6,060	342,835
Reeder twp.....	1,188			178,815	52,915	23,250	374,441
Kincaid city.....	366	354	518	89,025	18,355		107,380
Rich twp.....	844	812		50,805	30,730	29,980	136,694
Union twp.....		446	705	15,085	4,225	84,327	197,177
Greeley city.....	463	605	608	93,540	15,085	4,225	199,626
Walker twp.....	271	259	799	129,165	22,700	4,325	302,627
Washington twp....				75,865	15,695	60,597	
Welda twp.....	834						
Westphalia twp....	1,224	1,180	150,470				

#### FARM AND CROP STATISTICS.—ANDERSON COUNTY.

Table showing acres, product and value of field crops in the county for 1899 and 1900.

Crops.	1899.			1900.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	3,694	55,410	\$32,691 90	1,796	30,532	\$19,235 16
Spring wheat.....bu.						
Corn.....bu.	97,274	2,140,028	535,007 00	92,062	2,025,364	587,355 56
Oats.....bu.	3,271	65,420	13,738 20	5,538	155,064	37,215 36
Rye.....bu.	237	4,977	2,140 11	74	1,480	740 00
Barley.....bu.						
Buckwheat.....bu.	2	30	19 50			
Irish potatoes.....bu.	553	40,369	17,358 67	736	67,712	23,699 20
Sweet potatoes.....bu.	3	240	153 60	17	1,955	782 00
Castor-beans.....bu.				5	40	40 00
Cotton.....lbs.						
Flax.....bu.	14,141	98,987	89,088 30	14,175	127,575	165,847 50
Hemp.....lbs.						
Tobacco.....lbs.	1	250	25 00	1	200	20 00
Broom-corn.....lbs.	137	54,800	1,781 00	30	18,000	720 00
Millet & hungarian..tons	1,950	4,388	13,164 00	1,802	4,500	18,020 00
Sorghum:						
Forsyrup or sugar, gals.	143	6,864	2,196 48	183	10,980	3,783 20
For forage or grain....	1,782		10,692 00	3,012		15,060 00
Milo maize.....tons	32	80	240 00	5	23	69 00
Kafir-corn.....tons	9,049	36,196	90,490 00	7,128	32,076	96,228 00
Jerusalem corn.....tons				74	296	888 00
Timothy.....tons	9,375			9,352		
Clover.....tons	7,270			6,511		
Blue-grass.....tons	2,146	* 10,942	46,503 50	1,713	† 11,465	54,458 75
Alfalfa.....tons	133			141		
Orchard-grass.....tons	50			5		
Other tame grasses..tons	1,211			173		
Prairie-grass fenced,tons	61,763	25,196	75,588 00	73,073	31,595	110,582 50
Totals.....	214,217		\$980,877 26	217,606		\$1,134,694 23

Wheat on hand March 1, 1899, 3,085 bushels; March 1, 1900, 5,624 bushels.  
Corn on hand March 1, 1899, 417,773 bushels; March 1, 1900, 355,525 bushels.

\* Product of 1898. † Product of 1899.



## Twelfth biennial report of the Kansas State Board of Agriculture, 1899-1900

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### Kansas State Board of Agriculture.

#### SUMMARY.—ANDERSON COUNTY.

Showing quantity and value of farm products, years ending March 1, 1899, and March 1, 1900.

Products.	1899.		1900.	
	Quantity	Value.	Quantity	Value.
Field crops .....	214,217	\$930,877 26	217,606	\$1,134,694 23
Animals slaughtered and sold for slaughter.....		449,310 00		531,920 00
Poultry and eggs sold.....		49,702 00		55,105 00
Wool clip .....	2,575	386 25	3,515	562 40
Cheese.....lbs.	1,600	144 00	1,500	150 00
Butter.....lbs.	377,526	47,629 56	385,810	58,972 65
Milk sold.....		7,586 00		8,367 00
Green products marketed .....		1,395 10		2,729 00
Horticultural products.....		589 00		251 00
Honey and beeswax.....lbs.	3,793	568 95	2,288	347 40
Wine manufactured.....gals.	577	432 75	288	216 00
Wood marketed.....		1,264 00		3,866 00
Totals .....		\$1,489,884 77		\$1,797,180 68

#### LIVE STOCK.—ANDERSON COUNTY.

Table showing the number, value and mortality of live stock for 1899 and 1900.

Live stock.	1899.		1900.		Mortality.	
	Number.	Value.	Number.	Value.	1899.	1900.
Horses .....	8,701	\$365,442 00	8,091	\$404,550 00	129	380
Mules and asses.....	1,301	65,050 00	1,339	80,340 00	21	25
Milch cows.....	8,876	275,156 00	8,353	275,649 00	92	199
Other cattle.....	20,300	527,800 00	24,478	611,950 00	285	434
Sheep.....	1,013	3,039 00	1,352	4,055 00	10	4
Swine.....	28,645	171,870 00	29,967	179,802 00	3,975	1,329
Totals.....	68,836	\$1,408,357 00	73,580	\$1,556,347 00	4,512	2,371

Number of dogs in county March 1, 1899, 1,955; March 1, 1900, 2,005.

Number of sheep killed by dogs, year ending March 1, 1899, 1; March 1, 1900, 6.

Number of sheep killed by wolves, year ending March 1, 1899, 5; March 1, 1900, 11.

#### ATCHISON COUNTY.

Organized in 1855; area, 423 square miles; population, 30,369; rank in population, 8; assessed valuation, \$4,921,338; miles of railroad, main track, 90.54; county-seat, Atchison, population, 16,617.

#### POPULATION AND VALUATION.—ATCHISON COUNTY.

Table showing total population, by townships and cities, for 1899 and 1900, and the assessed valuation of the municipal townships and cities for 1900.

Townships and cities.	Population.		Assessed valuation of property.				
	1899.	1900.	Land.	Personal	City lots.	Railroad	Total.
The county.....	30,369	30,369	\$1,808,041	\$694,430	\$1,597,390	\$821,427	\$4,874,248
Benton twp.....	2,060	2,060	\$248,476	\$46,830	\$31,745	\$43,885	\$370,936
Center twp.....	1,647	1,647	213,911	26,597		99,395	339,903
Grasshopper twp.....	1,897	1,897	257,671	31,730	20,280	43,566	353,247
Kapioma twp.....	1,107	1,107	143,083	19,230		32,378	194,691
Lancaster twp.....	1,680	1,680	285,952	44,120	21,925	76,640	428,637
Mount Pleasant tp.....	1,697	1,697	189,168	14,010		109,225	312,403
Shannon twp.....	2,387	2,387	361,291	31,393		144,931	537,615
Walnut twp.....	1,277	1,277	108,489	11,880		143,942	264,311
Atchison city:							
1st ward.....	1,629	1,629					
2d ward.....	2,516	2,516					
3d ward.....	4,288	4,288					
4th ward.....	3,084	3,084					
5th ward.....	5,100	5,100					
	16,617	16,617*		468,690	1,476,350	127,465	2,072,505

\* Population for 1899.



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### Twelfth Biennial Report.—Part V.

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#### FARM AND CROP STATISTICS.—ATCHISON COUNTY.

Table showing acres, product and value of field crops in the county for 1899 and 1900.

Crops.	1899.			1900.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	25,022	225,198	\$135,118 80	18,806	376,120	\$225,672 00
Spring wheat.....bu.	78	380	214 50	15	180	99 00
Corn.....bu.	80,809	2,747,506	686,876 50	67,693	1,760,018	528,005 40
Oats.....bu.	14,209	369,434	77,581 14	19,409	543,452	108,690 40
Rye.....bu.	154	2,618	1,256 64	196	4,508	1,938 44
Barley.....bu.	31	899	359 60	25	700	210 00
Buckwheat.....bu.	1	8	5 20	4	40	30 00
Irish potatoes.....bu.	1,594	191,280	42,081 60	1,690	118,300	36,673 00
Sweet potatoes.....bu.	88	11,000	4,730 00	72	5,328	2,131 20
Castor-beans.....bu.						
Cotton.....lbs.	12	3,000	150 00			
Flax.....bu.	1,144	9,152	8,236 80	730	7,300	9,490 00
Hemp.....lbs.	2	800	40 00	2	400	20 00
Tobacco.....lbs.	5			1	200	20 00
Broom-corn.....lbs.	20	10,000	325 00	16	9,600	384 00
Millet & hungarian..tons	1,393	3,134	9,402 00	1,461	2,922	11,688 00
Sorghum:						
For syrup or sugar, gals.	141	8,460	2,707 20	101	7,070	2,403 80
For forage or grain....	923		5,538 00	1,089		6,534 00
Milo maize.....tons	57	114	285 00			
Kafir-corn.....tons	899	3,596	8,990 00	1,117	5,027	20,108 00
Jerusalem corn.....tons						
Timothy.....tons	24,254			24,039		
Clover.....tons	7,343			9,553		
Blue-grass.....tons	18,422	* 15,442	65,628 50	19,957	† 19,516	92,701 00
Alfalfa.....tons	57			53		
Orchard-grass.....tons	31			9		
Other tame grasses.....tons	353			1,439		
Prairie-grass fenced, tons	6,594	5,515	16,545 00	5,354	4,510	15,785 00
Totals.....	183,636		\$1,066,071 48	172,831		\$1,062,583 24

Wheat on hand March 1, 1899, 24,687 bushels; March 1, 1900, 20,749 bushels.

Corn on hand March 1, 1899, 468,840 bushels; March 1, 1900, 613,992 bushels.

\* Product of 1898. † Product of 1899.

#### SUMMARY.—ATCHISON COUNTY.

Showing quantity and value of farm products, years ending March 1, 1899, and March 1, 1900.

Products.	1899.		1900.	
	Quantity	Value.	Quantity	Value.
Field crops.....acres	183,636	\$1,066 071 48	172,831	\$1,062,583 24
Animals slaughtered and sold for slaughter.....		530,917 00		393,667 00
Poultry and eggs sold.....		34,970 00		40,551 00
Wool clip.....lbs.	880	132 00	3,310	529 60
Cheese.....lbs.	27,900	2,511 00	9,900	990 00
Butter.....lbs.	328,856	44,954 68	410,364	63,230 46
Milk sold.....		12,445 00		11,137 00
Garden products marketed.....		11,089 00		10,702 00
Horticultural products.....		7,028 00		9,799 00
Honey and beeswax.....lbs.	7,117	1,071 55	12,217	1,835 95
Wine manufactured.....gals.	3,120	2,340 00	2,860	2,145 00
Wood marketed.....		5,938 00		6,365 00
Totals.....		\$1,719,467 71		\$1,603,535 25



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### Kansas State Board of Agriculture.

#### LIVE STOCK.—ATCHISON COUNTY.

Table showing the number, value and mortality of live stock for 1899 and 1900.

Live stock.	1899.		1900.		Mortality.	
	Number.	Value.	Number.	Value.	1899.	1900.
Horses .....	6,245	\$287,270 00	5,879	\$293,950 00	104	100
Mules and asses .....	1,241	63,291 00	1,027	61,620 00	19	15
Milch cows .....	7,338	249,492 00	7,153	236,049 00	164	129
Other cattle .....	11,689	327,292 00	11,490	310,230 00	512	397
Sheep .....	140	490 00	548	1,644 00	66	21
Swine .....	23,322	139,932 00	21,677	130,062 00	2,751	1,654
Totals .....	49,975	\$1,067,767 00	47,774	\$1,033,555 00	3,616	2,316

Number of dogs in county March 1, 1899, 1,789; March 1, 1900, 1,743.

Number of sheep killed by dogs, year ending March 1, 1899, 1; March 1, 1900, 6.

Number of sheep killed by wolves, year ending March 1, 1900, 10.

#### BARBER COUNTY.

Organized in 1873; area, 1,134 square miles; population, 6,430; rank in population, 71; assessed valuation, \$1,805,302; miles of railroad, main track, 44.87; county-seat, Medicine Lodge, population, 946.

#### POPULATION AND VALUATION.—BARBER COUNTY.

Table showing total population, by townships and cities, for 1899 and 1900, and the assessed valuation of the municipal townships and cities for 1900.

Townships and cities.	Population.		Assessed valuation of property.				
	1899.	1900.	Lands.	Personal	City lots.	Railroad	Total.
The county .....	6,614	6,340	\$983,742	\$534,550	\$90,337	\$196,673	\$1,805,302
Etna twp. ....	89	66	\$83,400	\$20,064	\$377		\$103,841
Cedar twp. ....	301	315	38,250	16,126		\$7,506	61,882
Deerhead twp. ....	86	71	44,885	7,678	21		52,584
Eagle twp. ....	207	184	70,110	28,842			98,952
Elm Mills twp. ....	244	241	49,910	19,294			69,204
Elwood twp. ....	275	279	90,900	48,107	204		139,211
Hazelton city. ....	150 } 556	164 } 458	40,161	25,084	8,410	58,902	132,557
Hazelton twp. ....	406 }	294 }					
Kiowa city. ....	934 } 1,116	9 86	53,070	68,767	22,959	39,056	183,852
Kiowa twp. ....	182 }						
Lake City twp. ....	195	183	33,735	44,297	1,618		79,650
McAdoo twp. ....	103	106	30,870	12,809			43,679
Medicine Lodge city	1,031 } 1,391	946 } 1,617	110,844	72,431	53,591	40,116	276,982
Medicine Lodge tp. ....	560 }	671 }					
Mingona twp. ....	249	254	55,055	23,159	349		78,563
Moore twp. ....	310	316	45,645	41,122		165	86,932
Nippawalla twp. ....	214	216	53,765	24,035			77,800
Sharon twp. ....	595	619	70,491	29,299	1,949	26,311	128,050
Sun City twp. ....	111	123	53,250	7,893	672		41,815
Turkey Creek twp. ....	160	185	40,275	26,103			66,378
Valley twp. ....	209	211	39,126	19,440	187	24,617	83,370

## Twelfth biennial report of the Kansas State Board of Agriculture, 1899-1900

### Twelfth Biennial Report.—Part V.

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#### FARM AND CROP STATISTICS.—BARBER COUNTY.

Table showing acres, product and value of field crops in the county for 1899 and 1900.

Crops.	1899.			1900.		
	Acres.	Product.	Value.	Acres.	Product.	Value.
Winter wheat.....bu.	15,191	136,719	\$73,828 26	7,858	141,644	\$75,071 32
Spring wheat.....bu.						
Corn.....bu.	43,285	865,760	190,467 20	57,833	1,068,827	296,583 29
Oats.....bu.	1,190	33,320	5,997 60	2,789	89,248	17,849 60
Rye.....bu.	715	7,865	3,146 00	1,814	30,838	11,410 06
Barley.....bu.	685	12,330	2,959 20	298	8,046	2,011 50
Buckwheat.....bu.						
Irish potatoes.....bu.	78	5,460	3,003 00	112	7,840	3,920 00
Sweet potatoes.....bu.	15	1,350	742 50	11	660	330 00
Castor-beans.....bu.						
Cotton.....lbs.						
Flax.....bu.						
Hemp.....lbs.						
Tobacco.....lbs.						
Broom-corn.....lbs.						
Millet & hungarian..tons	862	2,155	6,465 00	1,895	3,780	11,340 00
Sorghum:						
For syrup or sugar,gals.	314	18,840	6,028 80	168	8,400	2,856 00
For forage or grain....	16,597		49,791 00	16,577		66,308 00
Milo maize.....tons	39	117	234 00	41	123	308 00
Kafir-corn.....tons	40,073	120,219	240,438 00	30,062	90,186	225,465 00
Jerusalem corn.....				20	50	125 00
Timothy.....tons						
Clover.....tons						
Blue-grass.....tons		* 21,823	92,747 75	38	† 5,642	28,799 50
Alfalfa.....tons	841			648		
Orchard-grass.....tons				225		
Other tame grasses..tons						
Prairie-grass fenced,tons	69,684	3,368	10,104 00	92,852	3,204	11,214 00
Totals.....	189,572		\$685,952 31	213,241		\$751,591 27

Wheat on hand March 1, 1899, 18,597 bushels; March 1, 1900, 1,760 bushels.  
Corn on hand March 1, 1899, 80,000 bushels; March 1, 1900, 137,350 bushels.

\* Product of 1898. † Product of 1899.

#### SUMMARY.—BARBER COUNTY.

Showing quantity and value of farm products, years ending March 1, 1899, and March 1, 1900.

Products.	1899.		1900.	
	Quantity	Value.	Quantity	Value.
Field crops.....acres	189,572	\$685,952 31	213,241	\$751,591 27
Animals slaughtered and sold for slaughter.....		294,868 00		442,170 00
Poultry and eggs sold.....		16,703 00		14,253 00
Wool clip.....lbs.	10,500	1,575 00	11,500	1,840 00
Cheese.....lbs.	2,492	224 28	2,360	236 00
Butter.....lbs.	93,161	10,247 71	91,260	12,873 90
Milk sold.....		1,105 00		1,643 00
Garden products marketed.....		3,436 00		4,202 00
Horticultural products.....		497 00		3,633 00
Honey and beeswax.....lbs.	174	26 10		
Wine manufactured.....gals.	165	123 75	300	225 00
Wood marketed.....		555 00		531 00
Totals.....		\$1,015,313 15		\$1,233,198 17



## Twelfth biennial report of the Kansas State Board of Agriculture, 1899-1900

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### Kansas State Board of Agriculture.

#### LIVE STOCK.—BARBER COUNTY.

Table showing the number, value and mortality of live stock for 1899 and 1900.

Live stock.	1899.		1900.		Mortality.	
	Number.	Value.	Number.	Value.	1899.	1900.
Horses.....	5,233	\$188,388 00	5,583	\$279,150 00	122	46
Mules and asses.....	915	35,685 00	1,022	61,320 00	13	4
Milch cows.....	3,263	97,890 00	3,332	109,956 00	56	40
Other cattle.....	65,806	1,710,956 00	58,190	1,396,560 00	1,052	336
Sheep.....	3,021	9,063 00	634	1,902 00	.....	6
Swine.....	7,252	36,260 00	7,347	44,082 00	256	128
Totals.....	85,490	\$2,078,242 00	76,108	\$1,892,970 00	1,499	560

Number of dogs in county March 1, 1899, 921; March 1, 1900, 1,003.  
Number of sheep killed by wolves, year ending March 1, 1900, 40.

#### BARTON COUNTY.

Organized in 1872; area, 900 square miles; population, 13,179; rank in population, 49; assessed valuation, \$3,950,974; miles of railroad, main track, 94.01; county-seat, Great Bend, population, 2,495.

#### POPULATION AND VALUATION.—BARTON COUNTY.

Table showing total population, by townships and cities, for 1899 and 1900, and the assessed valuation of the municipal townships and cities for 1900.

Townships and cities.	Population.		Assessed valuation of property.				
	1899.	1900.	Land.	Personal	City lots.	Railroad	Total.
The county.....	13,601	13,179	\$2,307,357	\$495,740	\$457,548	\$690,329	\$3,950,974
Albion twp.....	288	304	\$81,483	\$7,872	.....	\$10,822	\$100,177
Beaver twp.....	382	361	94,521	5,379	.....	.....	99,900
Buffalo twp.....	362	359	106,893	15,511	\$1,396	26,946	150,746
Cheyenne twp.....	623	607	153,530	14,093	.....	39,204	206,827
Clarence twp.....	319	305	101,580	18,797	.....	.....	120,377
Cleveland twp.....	353	346	93,953	6,984	.....	.....	100,937
Comanche twp.....	702	691	138,620	21,479	.....	.....	160,099
Eureka twp.....	297	312	98,431	10,538	.....	35,094	144,063
Fairview twp.....	291	321	85,780	8,142	.....	.....	93,922
Grant twp.....	314	330	85,143	2,005	8,245	19,280	114,673
Great Bend city.....	2,928	2,495	130,444	162,690	268,932	127,219	689,285
Great Bend twp.....	374	411	.....	.....	.....	.....	.....
Hoisington city.....	625	796	156,288	44,487	71,957	73,581	346,313
Homestead twp.....	406	390	.....	.....	.....	.....	.....
Claffin city.....	*	225	100,501	26,331	12,824	15,137	154,793
Independent twp.....	849	340	.....	.....	.....	.....	.....
Ellinwood city.....	767	734	211,693	64,348	70,110	152,481	498,632
Lakin twp.....	748	697	.....	.....	.....	.....	.....
Liberty twp.....	433	472	91,582	11,542	.....	76,674	179,798
Logan twp.....	476	479	118,075	8,093	.....	23,567	149,735
Pawnee Rock city.....	191	207	99,071	17,351	20,267	45,460	182,149
Pawnee Rock twp.....	351	343	.....	.....	.....	.....	.....
South Bend twp.....	347	402	99,949	12,889	.....	.....	112,838
Union twp.....	242	288	74,713	6,989	.....	.....	81,702
Walnut twp.....	597	579	102,179	26,426	3,817	44,864	177,286
Wheatland twp.....	396	385	82,928	3,794	.....	.....	86,722

\* Population not returned separately from township in 1899.