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Hog Cholera and Preventive Treatment.

WALTER E. KING, M. SC.,

Bacteriologist Kansas Agricultural College and Experiment Station.

mong the problems which relate to study of hog cholera there are two ch are of intense importance: (1) nature of the caustive factor, and preventive treatment. Investiga- s strongly suggest that some liv- organism is present in the filterable s and that this organism is ultra- roscopic in size. One cannot abso- ly eliminate the possibility, never- less, that the failure to find the in- ting agent depends upon such con- ions as the uncultivatibility or in- inability of the possible organism. he study of hog cholera, in all its ious phases, centers in the one ctical problem of serum immuniza- n. For the past two years the Kan- Experiment Station has been ac- ly engaged in conducting a series experiments on hog cholera and ventive treatment. The character this line of work involves the ex- imental use of the horse as a me- m for the modification of the hog lera virus. It has been found that ort residence (1 to 2 hours) of the cholera serum in the circulation he horse does not change the infec- us nature of the material. Indeed, periments tend to show that a resi- ce of one or two hours in the blood tem of the horse sometimes raises virulence of the hog cholera virus. ndant experiments also show that ing a residence of from four to nty-four hours in the circulatory tem of the horse there is a gradual enuation of the hog cholera virus, degree of attenuation depending on the number of hours allowed for s purpose. Theoretically, there- e, there is some period of time, at me point between four and twenty- r hours after the horse has received intravenous injection of hog chol- serum, when the virus is sufficient- attenuated to act as a vaccine un- all conditions, yet is devoid of in- tious qualities. Our work has oven that such a hypothesis is ex- imentally true.

Since September, 1908, the Kansas ate Experiment Station has vacci- ted 1,153 hogs with experimental rse serum hog cholera vaccine. ese animals, with the exception of e herd, were situated on various rms in the state. Eight hundred and enty-six unvaccinated hogs were pt in the same enclosures with the ccinated animals.

The first test was made in a herd of 5 hogs belonging to Martin Bauer of oughton, Kan. In this herd 24-hour rse serum vaccine was used. (Horse rum drawn twenty-four hours after e animal had received an injection hog cholera virus in the jugular in.) At the station rigid tests of -hour horse serum vaccine showed at it possessd some immunizing operties, but did not yield constant sults. These observations were con- med by this field test on Mr. Bauer's rd of hogs. In this herd of 485 hogs, 2 received this experimental vaccine, received Bruschettini's vaccine, and 5 were unvaccinated. This herd ntracted hog cholera through natural posure from an adjacent farm three eeks after the vaccination, and the llowing animals died: College vac- nated, 73.4 per cent; Sorby vacci- ted, 90 per cent; unvaccinated ani- als, 89.1 per cent.

After this experiment a stronger ccine was used. This was "6-hour rse serum" vaccine which, after reful tests at the station was used thirty herds of hogs. In eleven of ese herds the experimental vaccine appeared to produce the disease. In most instances the disease appeared in a mild form, but in a few cases acute hog cholera was present. Of the total number of vaccinated hogs, 7.1 per cent gave evidence of contracting the disease from the vaccine.

In all of these herds, almost without exception, the hogs were on heavy feed. In nearly all instances the hogs were fat and were fed heavy rations of corn. Therefore we found that the 6-hour horse serum vaccine could not be used with perfect safety upon fat corn fed hogs. Nearly all these eleven herds were in close proximity to hog cholera at the time of vaccination, therefore, in some cases, the disease may have gained access at the time of vaccination.

In ten of the total thirty herds, hog cholera existed at the time of vaccination. In these ten herds an average of 25.9 per cent of the vaccinated hogs died while the average mortality of the unvaccinated animals reached 54.6 per cent, showing a saving of 28.7 per cent of the animals by the vaccination.

On December 8, 1908, the herd of J. C. Goss, Frankfort, Kan., was vaccinated. Out of the total sixty-one hogs in this herd, twenty-eight were vaccinated, leaving thirty-three controls. This herd was already exposed to hog cholera. Two days after vaccination four of the vaccinated animals died. After that period none of the twenty-four vaccinated hogs showed symptoms of the disease, while 51 per cent of the controls became sick and 20 per cent of them died.

On December 24, 1908, a herd of 328 hogs in Dallas, Tex., showed symptoms of hog cholera. During the morning three of them died and careful post mortem showed typical lesions of the disease. During that day 125 of the hogs were vaccinated with 6-hour horse serum vaccine. By February 27 the disease had run its complete course. One hundred ninety of the unvaccinated hogs and twenty-five of the vaccinated were dead. In other words, among the controls there was a mortality of 90.5 per cent, while only 20 per cent of the vaccinated animals died.

In the case of both of the herds mentioned above the owners were very careful not to overfeed. The Texas herd received no corn, but were being fed hotel refuse.

From an experimental point of view the results of the field work with horse serum vaccine have been highly satisfactory. Considerable experimental work remains to be done both in the laboratory and in the field. We know, however, that, theoretically, the method is successful, that experimentally, it will produce active immunity. The results, therefore, appear to be of sufficient promise to justify aggressive work in an effort to complete the study. Even should the horse serum vaccine never appear to be a thoroughly practical product upon further investigation, results may be obtained which will be of both experimental and practical importance. Indeed, it has already been shown that by injecting hog cholera virus into the blood system of the horse the resulting horse serum when drawn off one or two hours after the injection, is highly virulent. This fact alone could be used to advantage in hyper-immunizing hogs in producing the hyper-immune serum, according to the government method. The infectious horse serum could be prepared much more quickly and cheaply than could hog cholera serum.

The important factor in comparing the two methods (the hyper-immune serum and horse serum vaccine) is the expense involved in the preparation of the two products. The hyper-immune serum should be used in case of infection in a herd. It is then practical because of the principles underlying its immunizing action and because its expense is slight when compared with the value of the animals it will save. As preventives or vaccines, on the other hand, the hyper-immune serum and the simultaneous methods are, at present, too expensive to be practical. If the horse serum vaccine upon further investigation appears to be safe and efficient under all conditions, the expense involved in its preparation can never curtail its extensive use.

Without going into the details of the relative cost of the products used in the two methods (hyper-immune serum and the horse serum vaccine) a simple statement can sufficiently show the relative expense of the two. Take the ratio between the amount of blood serum which can be secured from a hog and that which a horse will yield. Multiply the number representing the amount of horse serum which can be obtained, by four, because the dose of hyper-immune serum used in treating hogs is four or more times that of the horse serum vaccine used in vaccinating. The resulting proportion represents the relative cost of the two products. Furthermore, among other items not considered, may be mentioned the fact that the horse may be used for at least two or three subsequent serum yields while the carcass of the hog is probably destroyed or sold after the first yield. If the hog is not bled to death his serum yield is reduced by at least one-half or one-third.

Should the work of this station succeed in demonstrating the practicability of the horse serum vaccine we would then have a successful means of combating hog cholera. The hyper-immune serum would still hold its important place, that of a passive immunizing and therapeutic agent in the case of outbreaks, while the horse serum vaccine would be used purely as a vaccine or active immunizing agent among healthy herds.

Kansas: "These state fairs must be good things for the farmer or Minnesota wouldn't put $200,000 in one building. I can't get $100,000, even to start my fair."

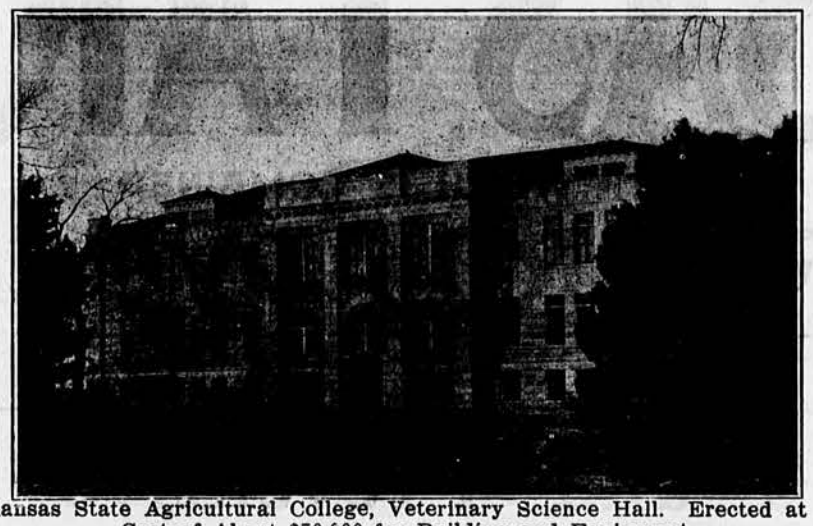
The Kansas State Agricultural Colleg

The forty-sixth annual catalog of the Kansas State Agricultural College, covering the school year of 1908-09, has just been issued from the State Printing office. This is the largest catalog yet issued by that institution and contains 240 pages that are brimming with interest to the friends of agricultural education.

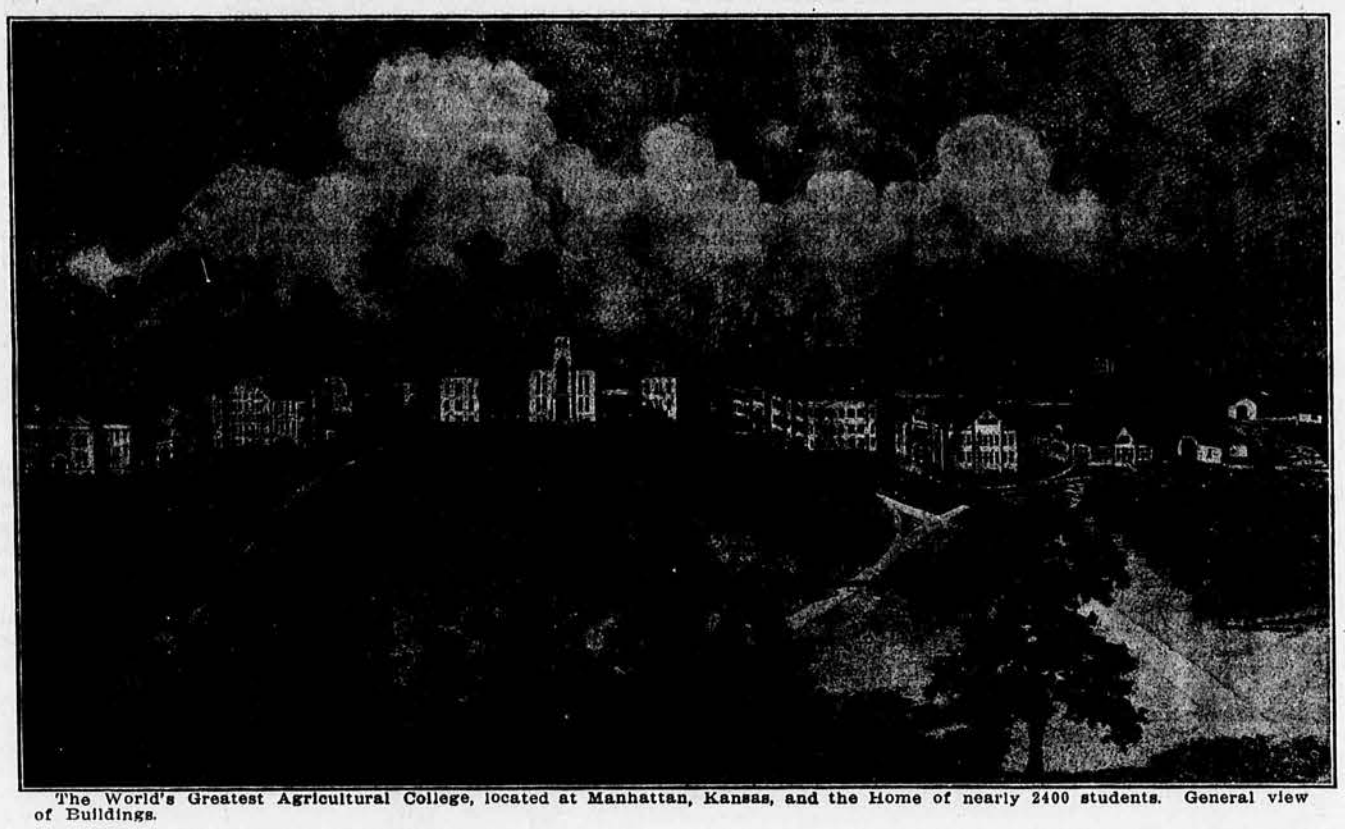
The enrollment for the past year shows that Kansas furnished 2,276 students from 102 counties. There were 25 students from 10 other states and 7 from the Philippine Islands, which makes a total enrollment of 2,308 students. Of these 743 were young women and 1,563 were young men. This total shows 116 more students than for the preceding year. The total number of graduates for this year was 125, which is 9 more than for last year.

The catalog is illustrated with numerous cuts showing the different buildings and a large plan of the grounds and buildings executed by the engineering department. It also gives a complete list of all graduates, with their present occupations and postoffice addresses where known.

The financial report shows that the state has appropriated in these forty-six years the sum of $2,460,230 for all purposes, including the erection of buildings, the creation of a library, the purchase of supplies and the payment of running expenses. Viewed solely from a financial standpoint this might be called a good investment, as the state property at Manhattan is probably worth every dollar that has been spent in the establishment, building up and conducting of this greatest of agricultural schools.



Kansas State Agricultural College, Veterinary Science Hall. Erected at a Cost of About $70,000 for Building and Equipment.



The World's Greatest Agricultural College, located at Manhattan, Kansas, and the Home of nearly 2400 students. General view of Buildings.

When the work that has been done by the College and its Experiment Station for the direct benefit of the farmers in the dissemination of practical information about methods of farming and breeding, the introduction of new and valuable varieties and the breeding up and improvement of those already known is considered, this investment must be reckoned in the thousand per cent column. But when the real purpose of the institution—the education of the farmer boys and girls to become manly men and womenly women, who are filled with the idea that the world has a work for them to do and that they are equipped for doing it; when the powerful influence of this great institution on the citizenship of the state and particularly on the farmers who are its most important class, comes to mind the returns on this pitifully meagre investment made by the state are simply beyond estimate.

Farming, which is the ultimate basis of all other kinds of business, is a very different proposition from what it was a quarter of a century ago. Then the farmer of Kansas planted in the richest of virgin soils and reaped his abundant reward. Now, his soil is depleted, its first strength gone and he faces the added problem of restoring its productive capacity. Then cheap beef and mutton were made on the wide open ranges with but little cost. Now, he must study feeding problems on restricted areas and at the same time meet the demand for a very much higher quality of meat products. Then, it was true that almost anyone could make a living on the farm and many who had little or no previous knowledge or experience to guide them could win a competence. Now, there is keen competition and many shrewd, energetic, hustling men, who have been thoroughly trained in the ways and means of modern farm life are devoting their best energies to this, the greatest of all human occupations.

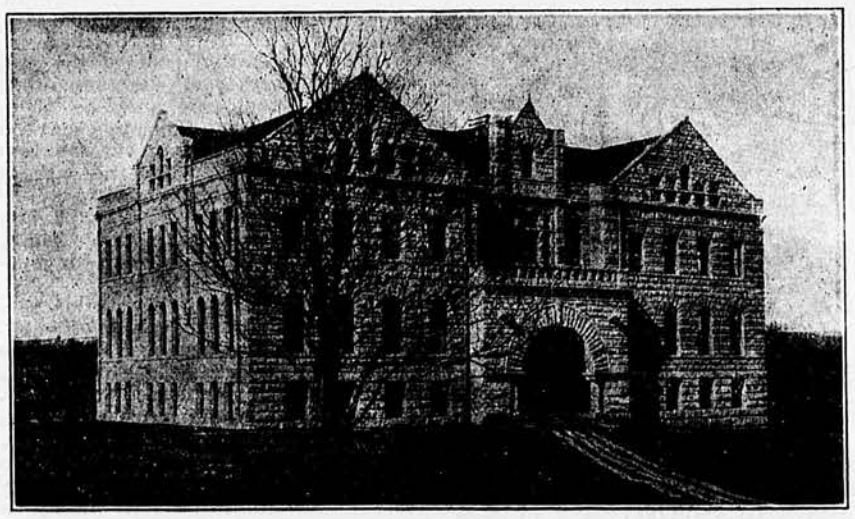
Farming has become a matter of specialization in some considerable gree and yet there are certain k of accurate knowledge which sh be the property of all who are gaged in it. Knowledge of the and the principles of its cultivati the propagation and development crop-producing plants; the probl of animal breeding, judging and n tion; the intimate knowledge of t growth and a thousand other thi must be had by the man who w succeed at farming.

The purpose of the agricultural lege is not to teach the how of fa ing so much as the why. It would but a poor investment if this great stitution taught nothing but what ery farmer learns in his daily w Its object is to teach the science agriculture and not the art with wh every farmer is already more or familiar. The college teachers things which the modern farmer m know, but which he cannot find out his own farm and it does this in broadest possible way.

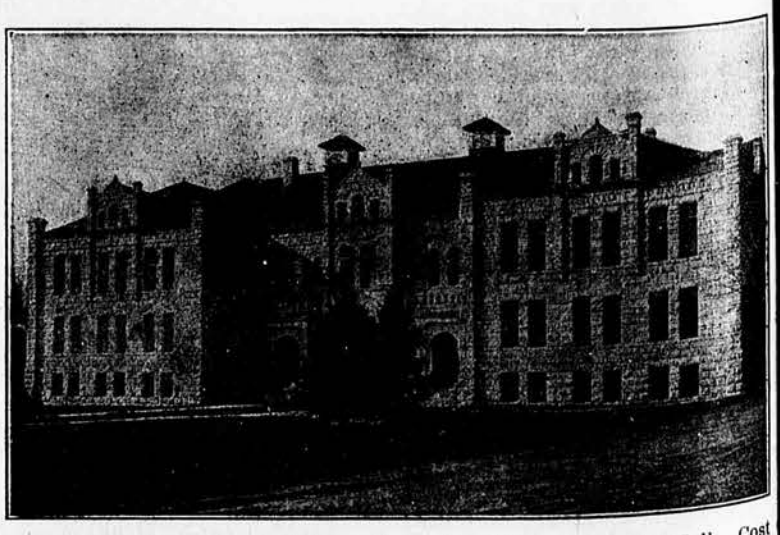
Not only have its 1,454 gradu received this necessary instruct but its thousands of students have attended classes without gr ating have had it in part and, u present plans for farmers instit and college extension, thousands farmers who cannot sit in its c rooms or work in its laboratories its beneficiaries.

The Agricultural College is the educational institution which, m than any other, must keep close to farmer. It must take the young m or the young woman direct from country school, give him the train it has to offer and send him forth do his life's work, capable, self-reli and able.

If you sprinkle a little salt in t water, when boiling common star the clothes will not stick when iron



Kansas State Agricultural College, Horticultural Hall. Cost With Equipment, $90,499.



Kansas State Agricultural College, Domestic Science and Art Hall. Cost Building and Equipment. About $75,000.

Insects Likely to Injure the Wheat in 1910

By PROF. T. J. HEADLEE

The two insects most likely to reduce the yield of the 1910 wheat crop, whose injuries should be forestalled in the next few months, are the Hessian fly and the greater wheat-straw worm. Both did large damage to the 1908 crop, and both are in the present crop. The prevention of the harm they do is almost entirely a matter of better culture, and the very efforts that should be made to prevent their work will, with minor exceptions, make for the largest yield of wheat.

HESSIAN FLY.

Habits and Life History.—Just at this time,, May 22, most of the flies are small white maggots, less than one-fourth of an inch long, to be found lying between the leaf-sheath and main stem, just above a joint either above or below the surface of the ground. Before harvest the effect of this maggot attack will be seen in the fallen straws that mark the infested fields. By harvest time most of the maggots will have become fully grown and have turned into dark-brown "flaxseeds."

What it Will Do this Summer, Fall, and Winter.—With a few exceptions the flies will remain as "flaxseeds" until next September and October, when the long-legged, gnat-like adults will emerge and lay their long-oval reddish eggs lengthwise in the grooves on the upper sides of the leaves of the volunteer or early-sown wheat plants. These eggs, which are just large enough to be seen with the unaided eye, soon give forth tiny reddish larvæ that wriggle down inside the leaf-sheath until they reach the joint. Here they rasp the tissues of the stem, and feed and grow.

It is usually the central stalk that is worst infested, while the tillers, many of which grow up after the flies have deposited their eggs, will be almost or entirely free. The maggots soon lose their reddish color and turn white, the majority reaching maturity and transforming into brown flaxseeds before cold weather. Thus they pass the winter, safely tucked in between leaf-sheath and main stem just above a joint, and usually below the surface of the ground. Not all the living "flaxseeds" infesting the stubble during the summer will give forth adult flies in the fall, but about fourteen per cent will remain throughout the winter and give forth adults the following spring.

Indication of Fall Work.—In the late fall the presence of the fly is indicated by the form of the plant. The stalk infested with maggots has no strong central shoot, but appears leafy and bushy. The first effect of the fly is to make the wheat tiller freely, covering the ground and giving the field a deep green color, thereby deceiving the inexperienced into thinking the prospects for wheat unusually fine. Later, if enough flies be present, the deep green color will be exchanged for sickly yellow appearance, and it is then evident to everyone that something is wrong.

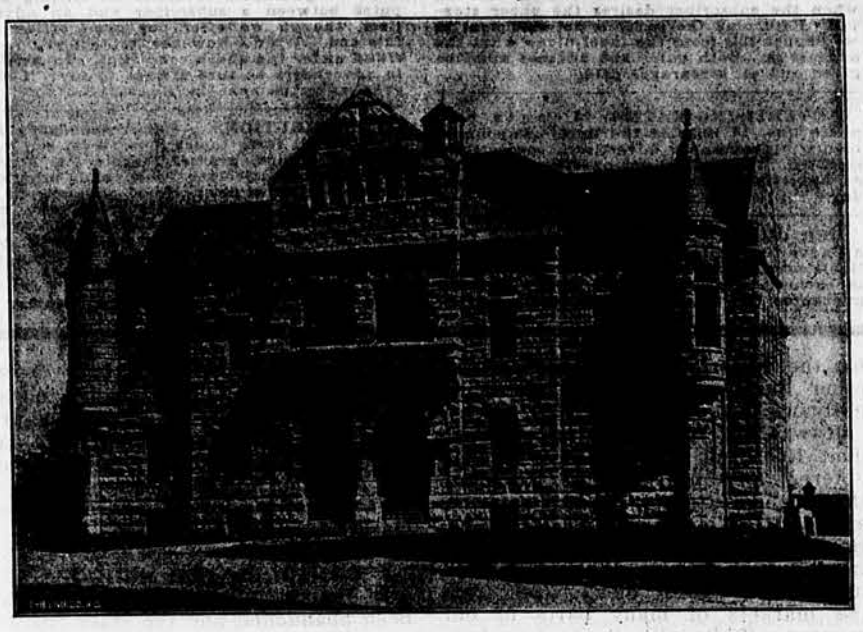
What it Will Do Next Spring and Summer.—With the coming of spring the long-legged, gnat-like flies will crawl out of the flaxseeds and fly about over the wheat, depositing eggs on the blades. From the eggs laid at this time will come the maggots that feed on the wheat, weakening the stems and causing them to break and fall before harvest. Some of these maggots will reach maturing and transform into "flaxseeds," from which will come adult flies in May. These flies will deposit eggs on the blades of the most immature stalks and the larvæ will develop about the heads, so sapping them that they may never emerge from their sheaths. It is probable that the bulk of damage to the wheat crop is effected by the work of the fall and early spring broods, and that those flies emerging in May do little real damage to the crop, because they appear to confine their attacks to young plants that spring up from the base of older stalks. This habit does, however, increase the numbers of the destructive fall brood.

INJURY.

Twice during the year do the maggots of the Hessian fly work injury to the wheat plant. The maggots of the March and April brood of flies cause the infested plants to produce unfilled heads and the stems to break a short distance above the ground and fall over. This is the type of injury usually noticed. The maggots of the September and October brood of flies greatly weaken and frequently destroy the young plants. Many fields of wheat have been completely destroyed in this manner.

NATURAL CHECKS.

Weather Conditions.—Dry weather, coming just after the eggs have been laid on the leaves and continuing for two or more weeks, will prevent many of the eggs from hatching and most of the larvæ that do emerge from getting down into the plants. Such destruction of the fly by dry weather occurred in Ellsworth county during the present spring. Unfavorable weather conditions of this and other sorts may almost eradicate the fly from limited localities.



Kansas State Agricultural College, Agricultural and Animal Husbandry Hall. Cost of Building, $25,000.

Natural Enemies.—Certain tiny wasp-like insects prey on the Hessian fly, and when these are present in large numbers the fly disappears as an injurious insect. Not enough study has been given to these parasites to enable any one to say under just what conditions they thrive and do their work. They are present and working on the fly during this spring and summer.

Unfavorable conditions of weather and natural enemies are not at present sufficiently under the control of man to render it safe for the wheat grower to depend upon them. He must resort to artificial measures.

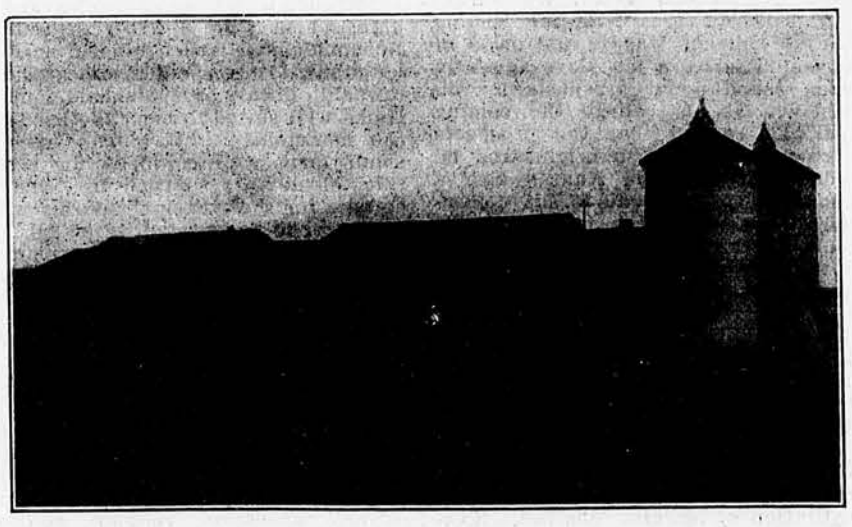
METHODS OF CONTROLLING THE FLY.

No one measure is sufficient to prevent the fly damage, but the following combination will enable even the individual farmer, regardless of the action of his neighbors, to escape a great deal of the harm, and in communities where all practice it intelligently, will enable him to escape practically all fly losses.

Destruction of Infested Stubble.—All infested stubble, unless far removed from any next crop of wheat, must be destroyed, for not only does the fly issue from it in the fall, but emerges in serious numbers from it the following spring. The infested stubble cannot be sufficiently destroyed by fire, for the reason that a large percentage of the "flaxseeds" are below the surface of the ground, where they will not be harmed by burning the stubble. It can be accomplished in another way, which at the same time will tend to preserve the richness of the soil and to promote its good physical condition: (1) The stubble should be disked immediately after harvest to throw out the "flaxseeds" and expose them to their parasitic and predaceous enemies, to start the volunteer wheat, and to conserve the soil moisture, thereby rendering plowing relatively easy; (2) the disked stubble should be so plowed under in a few weeks that it will lie not less than five inches below the surface. The soil should be compacted with a harrow without pulling any of the infested stubble to the surface. When this is properly done, very few flies will be able to penetrate the five inches of closely packed soil that lies above them.

Destruction of Volunteer Wheat.—All volunteer wheat should be destroyed not later than the first of September, lest some of the maggots infesting it reach the flaxseed stage and carry the fly to the main crop.

Late Sowing.—By far the most important measure is to be found in the practise of sowing the wheat only after the bulk of the flies have deposited their eggs. This time, however, varies with the nature of the season from year to year, and can be determined only by experiment. Experimental sowings during the past two years have shown that wheat sown after October 15 in Southern Kansas, that sown after October 7 in Central Kansas and that sown after September 30 in Northern Kansas has been almost entirely free from infestation. It must be remembered that late sowing without the destruction of the stubble will not be sufficient, for a considerable percentage of the fly passes the winter in the old stubble and emerges the following spring.



Kansas State Agricultural College, Dairy Barns and Silos. Cost of Building and Equipment, $4,000.

Grading Wheat, Preparation of the Seed-bed, etc.—When the young wheat plant is attacked by Hessian fly, the single shoot above-ground may be killed, and the growth of new sprouts depends upon the food material in the grain. The large, well-filled grain will, other things being equal, show the greatest ability to recover from fly attack. A well-prepared and rich seed-bed will enable the seed to produce healthy, thrifty plants that will be able to withstand the attack of the fly much better.

GREATER WHEAT-STRAW WORM.

Habits and Life History.—It is now, May 22, to be found in short, stunted, headless wheat stalks as a greenish-yellow, footless grub or a pupa from which, during the month of May, will emerge a shining, black, winged, ant-like creature one-fourth of an inch or less long. If the farmer finds such stunted plants and will split them open he will see the black pupæ, empty skins, or possibly some of the greenish-yellow larvæ. Later he will observe these winged, ant-like creatures crawling up and down the wheat stems, searching for places to deposit their eggs. The female thrusts her ovipositor through the wheat stem just above the uppermost joint that she can reach, and deposits her egg on the inside of the stem. The tiny grub that hatches from this egg will live within the straw, sapping it of its strength and causing the head to fail to fill, and possibly so weakening the stem that it will break a short distance below the head and fall over, but simply bear partly filled heads. By harvest time the grubs are fully grown and remain in the straw throughout the summer, fall and winter. They emerge the following spring as pitch-black, wingless, ant-like creatures, about one-eighth of an inch long, and deposit eggs in the young wheat plants. The hatching grubs so injure the wheat plants that they never grow and the heads fail to emerge.

INJURY.

The grubs injure the wheat plants twice during the year: (1) The larvæ of the March brood stunt the attacked plants and prevent them from heading; (2) the larvæ of the May brood prevent the infested plants from producing fully filled heads and cause many of them to break over before harvest.

METHODS OF CONTROL.

Rotation.—When the grower has to deal with the greater wheat-straw worm alone, and can find it practicable, the planting of the succeeding crop on a part of the farm distant from the infested stubble and straw will enable him to avoid damage from this insect.

Destruction of Stubble and Straw.—This is the surest and in many cases the most convenient way of controlling this straw-worm and also the joint-worm. The stubble may be burned or so deeply and carefully plowed under that none will be left sticking out to form passageways for the adults when they come forth the following spring. The straw may be destroyed by fire or any other convenient method. Inasmuch as the joint-worm is known to inhabit grasses such as frequently grow in the fence-rows about the edges of wheat fields, and as our studies would indicate that some individuals of the greater wheat-straw worm may have a similar habit, it would be well to burn off or otherwise destroy the grasses along the fences before the middle of next February. If the grower has to fight Hessian fly as well as the greater wheat-straw worm, he has simply to add to his measures the destruction of straw and of the grasses along fences.

Steps Against the Greater Wheat-Straw Worm.—1. Rotate. 2. Destroy stubble, straw, and grasses along fences before the middle of the following February.

To remove ink stains from woolen goods place some cotton underneath the spot and rub well with another cotton saturated with alcohol. Repeat the operation until the ink disappears.

KANSAS FARMER EDITORIAL

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CONTRIBUTIONS. — Correspondence invited on all farm topics, live stock, soil cultivation, grains, grasses, vegetables, household matters, recipes, new and practical farm ideas, farm news. Good photographs of farm scenes, buildings, live stock, etc., are especially invited. Always sign your name, not for publication, unless you desire it, but as an evidence of good faith. Addres all communications to

KANSAS FARMER COMPANY,
Topeka, Kansas.

A FAITHFUL PUBLIC SERVANT.

It is the general opinion of those who are acquainted with the work of Gifford Pinchot, chief of the government's Forestry Bureau, that he is a faithful public servant. He is a man of great wealth, which he inherited. He is not in the forestry reserve for the small salary he receives. He does not "need the money" like most of the rest of us. It is apparent that he is engaged in the work he is doing for the love of it, and because he finds an opportunity for serving his country. In his activity he resembles the late strenuous president. He was, in fact, a member of Roosevelt's famous "tennis cabinet."

But in spite of the service which he has rendered the country, no man perhaps is more genuinely hated. Wherever he goes there is a trail of bitter abuse in his wake. Just now there seems to be trouble between him and Secretary of the Interior Ballinger, and it is not unlikely that the opposition of Mr. Ballinger may result in Mr. Pinchot's retirement.

It was Mr. Pinchot who first suggested to ex-President Roosevelt the governors' conference on the conservation of our national resources and he is now at the head of the commission whose appointment resulted from that conference. This appointment did not add to his popularity in some matters.

The farmer is directly interested in the work Mr. Pinchot is trying to do in the face of so much opposition. His chief work has been the conservation of our forests now so nearly gone except on the Pacific coast. Forests are necessary for our very existence as a nation. "Great American Desert" may as well be written all over the map of our country if the forests are all destroyed and without a definite policy of conservation they will be destroyed. It is well known that there is the most determined opposition to any forest policy on the part of many interests and on the part of many members of congress. Very little has been done as compared with what should be done, and the enlargement of the work of Mr. Pinchot's bureau was practically destroyed by action of congress two years ago.

A few of those opposed to Mr. Pinchot are frankly against any forest system whatever. Incredible as this may seem, they say that such matters ought to be left to private enterprise. Sometimes they reply to arguments for the necessity of forest preservation by shutting their eyes and shouting that they are optimists and that this talk of the country going to ruin without forests is merely a calamity howl. This is in spite of the historical fact that nations have been ruined by the destruction of forests and in spite of the almost incalculable injury already done to our own new country. Others will not admit that they are opposed to a policy of forest preservation. They claim to be in favor of it, but it is noted that when any particular forestry measure is proposed they are against it. Some opponents of a forestry policy are professedly in favor of it, but they invariably oppose all measures designed to put this policy in force.

Mr. Pinchot appears to have stirred up a considerable tempest at the recent Irrigation Congress at Spokane. He was speaking in favor of some of his well-known policies, forest preservation, government irrigation work, and the saving to the people of water power, which Mr. Pinchot claims is already falling into the hands of a trust. It would be apparent in advance that such talk as this would arouse bitter opposition, and it did arouse opposition on that occasion. It was particularly disappointing to have the secretary of the interior, from the same platform, say that government irrigation projects should not be extended, and that irrigation farming is not a proposition for the poor man.

The people of this country believe in the work in which Mr. Pinchot is engaged. They hope he will be permitted to continue in it, but the outlook is not altogether reassuring. It sometimes looks as though a forest policy will not be taken up in earnest in this country until we are absolutely forced to it by the most bitter necessity, as Germany was. It is a most cruel misfortune that we cannot profit by the experience of Germany and other European countries, but apparently we cannot.

It was a frequent saying of President Roosevelt that we have already entered a forest famine. To many that sounds extreme, but is it extreme, after all? We are only an infant nation, and yet not only is lumber extremely high in price, but really good lumber has almost disappeared from the markets of many parts of our country. White pine is the best lumber for building purposes. This country had unsurpassed white pine forests. But you and I cannot have white pine now with which to build a house unless we have a big bank account. It is practically gone and the price is prohibitive. Nothing really takes the place of white pine, but we can't have it in this new country. This surely is a calamity. It is almost impossible to get good shingles. Not only so, but two years ago in Kansas, in some of the smaller towns, shingles could not be purchased at all, except with a bill of lumber for an entire building. The local lumber dealer acted under orders from "higher up." This looks pretty nearly like a famine surely. Very little really good lumber comes into Kansas, and this isn't the fault of your local lumber dealer either. He would rather sell lumber of the highest quality. He would also like to see it cheap and abundant, and so would the carpenters and contractors. Kansas, after all, is interested in the forest question, the lumber question.

THE COLLEGES WILL BE FULL.

A professor in one of the leading Kansas colleges was in the office of KANSAS FARMER a few days ago. On being asked about prospects for attendance at his college the coming year, he replied that the prospects were never before so bright, and he added that crops in Kansas always meant plenty of students for his college and others. The majority of the students in the colleges of Kansas are from the farms. This is true not only of the great State Agricultural College and the excellent private and church institutions, but it is true of the State University, also, as stated in the literature issued by the university itself. This is only natural in an agricultural state like Kansas.

Many of the young men and young women in homes where KANSAS FARMER is read will be entering some institution of learning this fall. KANSAS FARMER does not presume to advise just where an intending student should go, but we venture respectfully to suggest that it would be well to look carefully over the school and college announcements which have appeared in KANSAS FARMER this summer. No farm paper we think has carried more advertising of this character and KANSAS FARMER is proud of this fact. This paper does not often call attention to any particular class of advertising in its editorial columns, but we do call attention here to our school and college advertising, and believe that not only is there no impropriety in doing so, but that we are doing our readers a service by directing attention to the announcements of these excellent institutions of various classes.

CONSOLIDATED SCHOOLS.

In Indiana 1,611 small schools have been abandoned and the state has 386 consolidated schools, 122 of which have good four-year high school courses. Many abandoned schools are transported to other districts or to town schools. The number of children transported is 19,109, requiring 1,116 wagons, at a cost of $2.07 per wagon per day. Many pupils are also transported by private conveyance and by interurban cars.

Fassett A. Cotton, former school superintendent of that state, told about this at the Macomb meeting of the County Teachers' Association of Illinois, and from actual contrast described the plans of the new centralized school in part as follows:

The school must be the center of township life. The teachers should be well prepared men and women, thoroughly in touch with the problems and interests of the township, and permanent residents of the community. Do you believe that? Many do not. They should understand the relation of education and agriculture and should be able to create in the boys and girls a love for the land.

The central school should have a kindergarten, the eight grades and a high school with a four-year course. It should have well equipped, modern buildings. Here should be located the township library, which should contain books well suited to meet the needs of the community. It should have a small farm well equipped for scientific elementary agriculture, and a cottage for the principal and his wife, the latter to be assistant principal. He should have charge of the manual training, including work in wood and iron and agriculture; the assistant, cooking and sewing. On Saturdays and during summer vacations the boys and girls could study scientific farming, cooking and sewing on this school farm and in this farm home.

Such a school will become the center of the social life of the community. The citizens will have a meeting place to discuss every phase of life—agriculture, education, religion, politics. There provision may be made for good lectures, the best music, etc. The teachers will use their knowledge of rural life in the school work. The boy will find himself and his farm experience in every lesson assigned.

In arithmetic the problems will be concrete and tangible appeals to common sense and will clinch every principle with their homely, practical application. In language the children will talk and write about things which they know, things which they have done and in which they are interested, and every lesson will be alive. The teachers will know the nature of the soil and can show the practical value to the farmer of a knowledge of chemistry.

Out of school—and this is a particularly interesting feature of it—there will be opportunity for work in the community. Corn clubs for the boys, cooking and sewing clubs for the girls, agricultural societies for the parents. These will give the teachers a chance to get into the lives of the people.

Parents will endorse and enlarge such a work, regardless of cost, when they see that the teacher is better preparing their boys for farm life. The children when once shown that it takes brains to farm, and that the returns are substantial and the work dignified, would more and more decide to prepare thoroughly to do the work of the farm. This schooling ought to lighten the burden of toil by making intelligent skill its ally. The essential thing is that the boy be taught to work and that skillful work is ennobling. One result will be to induce the boy to remain on the farm.

A decade of this work in the schools touching the lives of all the boys and girls would revolutionize agriculture and would be the forerunner of the greatest industrial development this country has ever known, larger self-respect and larger returns in dollars and cents.

BREEDERS' PRICES.

The pendulum of prices for breeding stock seems to swing one way as far as it does the other. Conditions will be right for the breeding and sale of breeding hogs, for example, and everybody wants to get into the business. Certain breeders will then take advantage of the situation and announce, with blare of trumpets, that the particular family of hogs that they are breeding is the big money maker. The conditions have perhaps made hog prices high, but these men make them abnormally high for their particular strain. Men are induced to buy of these "hot blood" families and then, when the pendulum swings back, as it is sure to do, they find themselves heavy owners of a class of stock for which there is no sale. This fact should not, however, tend in any way to discourage legitimate breeding nor should it mitigate against legitimate prices for breeding stock. When a man pays a little more money for his breeding stock, takes a little better care of them and develops their progeny into breeders of quality, he is entitled to pay for his labor, the interest on his investment and the amount of brains he puts into his business. The breeder of good breeding hogs is right when he asks more money for his pigs than the breeder of market hogs can get, and he will receive it. He is not justified, however, in either booming his prices beyond all reason or in selling at near market prices. When he does either of these things he hurts himself badly, but he hurts all other breeders worse.

Perhaps the recent experience with the "hot bloods" will have a salutary effect but there remains the other fellow—the man who sells too cheap. Every breeder should unite to get rid of his class by educating him to better things. It may be claimed, with justice, that a man has the right to sell his own property at his own price, but there is a moral aspect to this question when applied to swine breeders that does not seem to apply in every other case.

When a man owns pedigreed animals they should be good ones or he should get rid of them. If he owns good animals and offers them for sale at near pork prices he cuts his own throat by failing to get what his hogs are worth, by fixing a low price for his hogs in the future and by lowering the prices of every other breeder of the same breed. He simply makes his business unprofitable.

THE BEST CONSERVATION.

Since the famous conservation convention called by President Roosevelt ended its sessions a great deal of interest has been manifested, and more generally, we believe, in the objects for which the commission was called together. It is now announced

that there will be held in the near future the First National Conservation Congress and delegates for the same have been appointed. Many important and even vital subjects will be presented at this meeting for discussion, but none that is of more direct and personal importance to the individual farmer everywhere than the conservation of his soil fertility. Every farm can be managed so that it will produce profitable crops without soil exhaustion. Every pound of plant food that is given to the soil over and above that which is used up by the crops serves to increase the value of the farm.

Weather conditions and careless methods will, of course, affect the crop production but if the farm is so managed that the same or a greater amount of plant food is returned each year than that which has been used by the growing crops the farm will retain its fertility and hence its value.

Most farmers believe in manuring their land. But too many do so only once a year after the manure has been allowed to stand in all kinds of weather and leach away a large percentage of its valuable ingredients. A study of the problems of green manuring and of the seeding and cultivation of the leguminous crops, which gather nitrogen from the air and also of the planting of crops which will serve as a cover for the soil at certain seasons when they might suffer by heavy rains or the melting of heavy snows, is most profitable.

If the soil is regarded as a storehouse of wealth, its true relation to the farmer will be more highly appreciated. Farmers have toiled, handling but little ready money, looking forward to some period in the future when they might be in more prosperous financial condition, and have finally realized that they have amassed considerable wealth in the increased fertility of their soils, and that their farms are far more valuable than they had ever believed would be the case. The farmer who uses fertilizers will never go backward.

ATTEND YOUR STATE FAIR.

It seems to be one of the requirements of human nature to take an occasional rest. It also seems to be a requirement of civilized humanity that this rest shall not consist in sitting down and doing nothing, but shall be a change in activity. We feel that every farmer is entitled to such a change as much as any other business man, and suggest that there are two places which he can visit with keen enjoyment and great profit to himself while he is taking his vacation. These two places are the State Fair and the State Agricultural College and Experiment Station. While Kansas has no State Fair in the sense of having one that is supported financially by the state, she has two very excellent fairs, either of which will pay for a visit by the farmer and his whole family. These fairs come at a time when farm work is not so pressing that the farmer cannot leave for a few days and we feel that he owes it to himself and his family to visit them. And we also feel that he can make it more interesting by showing some of the products of his own labors on the farm. Perhaps the best time to visit the Agricultural College is during the State Farmers' Institute, which is held during the Christmas holidays, though any time is good. If you cannot afford the time to go to the state fairs be sure to attend your county fair, see what your neighbors are doing and next year make your arrangements differently.

The scientists, as well as practical feeders, tell us that the most rapid as well as the most profitable growth is made by the young pig. The same is true of other animals. The colt grows into money faster during the first year of its life than at any later period. If an animal is stunted in its colthood no amount of good care is likely to bring it up to what it should have been. This especially is true of draft horses. Experienced breeders of draft horses are careful of the colt and keep him growing at his best gait. It is only by this means that the size and form demanded by the modern buyer can be attained. It is a wise practise to take good care of young animals of all breeds, but especially is true true of the draft breeds of horses.

Destruction of Quack Grass.

In a letter to the Breeders' Gazette, E. M. Barton contributes the following:

"Shade during the dry weather of the late summer and early fall will take the life out of the roots and leave them to decay and to fertilize the soil. Hoeing, if it could be followed up frequently and thoroughly enough to keep the leaves of grass from appearing at all, would in time do the work, but I see numerous gardens where hoeing is followed from season to season, and where the quack grass persists more reliably than the desirable produots of the garden. But how to obtain dense shade of several weeks' duration in the quack grass is the problem. It is not easy, but it can be done, and that without much expense. There are other valuable crops that will do it, but corn is the one which, on the whole, does the best work. I think about $5 per acre extra labor on the corn field will destroy all except a few small tufts of the quack grass in one season. Then to make sure, follow with corn the next year under somewhat less rigorous, but still careful cultivation and the eradication will be complete.

"The roots of the quack grass run close to the surface of the ground. The roots of the corn plant go down into the ground. In order to give the corn a start we manure the field heavily before plowing in the fall; then in the spring drill the corn thickly for silage. We plant the varieties of corn for silage that we would plant if we wanted the grain to mature, but plant it thicker. Before the corn shows we harrow the field and as soon as the rows show cultivate with a one-horse cultivator, then harrow once more across the rows and finally cultivate with one or two or three-horse cultivator, according to the necessities of the case. After the corn harvest in the fall we plow the field for corn the following season, and work it as early and as often as possible in the spring for the second corn crop. The old and dry roots have more vitality than those that are young and more sappy. Hence the advantage in keeping the grass stirred up so as to have more of the tender shoots instead of the older ones to deal with. Conditions which will make a crop of about twelve tons of silage per acre on the quack grass will give shade enough to take the life out of the roots of the grass. With only six tons or less per acre the quack grass will gain on the field. A dry hot season and a season generally favorable to corn is a help, and two corn crops in succession under the treatment described will surely clear the field. Both these crops with the heavy manuring for the first one may be good heavy and profitable crops. The result of this practise is that we have effectively cleared several of our worst fields, and this while raising a profitable crop, and each year we gain one or two new fields that are clear of this grass. In this way the greatest of weed pests has lost its terrors."

Walnut Grove Herd Big Poland-China Hogs

35 big, growthy early spring boars and 40 gilts. Carefully selected and all sired by our big boar, Looks Grand, by Grand Look. They are out of big, mature sows, daughters of King Do Do, Big Hadley, Johnson's Chief, etc. We guarantee satisfaction. They will be priced to sell.

H. S. CHAPMAN & SONS, Dubois, Nebraska.

WHY BUY A CORN-BINDER

When You Can Purchase a SLED-CUTTER for One-Tenth the Price.

Runs easy, and cuts and gathers corn, cane, Kafir-corn, or anything which is planted in rows

Ask your Implement Dealer for it or send

$10.00.

—TO—

Green Corn Cutter Co.,

TOPEKA, KAN.

Fully Protected by Patents.

Save 20% when you Build

It's time now to think about building

Of course you will build with cement

If you thoroughly investigate, you will use the best of cements—**Ash Grove Superfine.**

No matter what you intend building—be it fence posts, hog troughs or a splendid barn—you can't fail if you use the best cement properly.

Ash Grove Superfine is the best cement made and if you follow the complete instructions we give in our free book, "PRACTICAL CEMENT FACTS," the results will be excellent.

You can save 20% on the amount of cement used, if you buy

Ash Grove Superfine

PORTLAND ASH GROVE CEMENT

It's ground 10% finer than the "Standard Ground" cements—that's the reason. Consequently it is 20% stronger—will hold sand and gravel together 20% better.

You can save 4 barrels on every 20 you use. What will 4 barrels cost you? Isn't it a saving worth while? Ask your dealer for **Ash Grove Superfine. Insist upon it.**

But get all the facts. **Write for our free book,** "PRACTICAL CEMENT FACTS." It shows how to distinguish between poor and good cement, and how to use the best cement—**Ash Grove Superfine.**

ASH GROVE LIME & PORTLAND CEMENT CO.
Dept. C
Kansas City, Mo.

This Book is FREE

A County Engineer For Good Road Work.

Shawnee county, through its board of County Commissioners, is setting a splendid example for the rest of the state to follow. With a considerable fund at their disposal for use in the improvement of the public highways the board of County Commissioners appointed Geo. J. Graves, formerly of the Santa Fe railway, as county highway engineer with a compensation of $1,200 a year. He will begin his official work on September 1. Mr. Graves received his professional training in the engineering department of the State University and has been employed by the Santa Fe railway for the past eight year. His appointment is made under the recent ast of the legislature which provides that in counties of more than 50,000 population the engineer shall be employed at a fixed salary. He will have direct charge of all permanent road improvements in the county and supervision of plans for macadam or other road new road propositions. One of the first duties Mr. Graves will be charged with is that of experimenting with oil for the preservation of road surfaces by the prevention of dust.

Singer Figures That Speak.

Four times as many Singer sewing machines are sold annually as all other makes combined. The Singer travels all over the world, and outsells every make and variety of machine each in its own native district. This can mean but one thing, and that is the Singer is the best sewing machine manufactured and has a wide enough margin of superiority over every other machine to enable it successfully to fight against local prejudice, long distance freight rates and import duties, and become the sewing machine, the recognized best, in every country under the sun. That is just what it is. Ask any housewife, and she will tell you that there are but two kinds of machines, the "cheap, inferior" one, and the Singer. She may have been led into buying one of the former, but if she has, she has regretted it, and sooner or later turned to the Singer. The Singer is the only machine in the world that has the elastic stitch which will stretch just as much as the material it holds together, and no more. It is the only machine that is so perfect mechanically that it will do the heaviest sewing with little power, and the only machine that will perform the most difficult feats of sewing without injuring the most delicate materials. These, with its long life, are the factors that render the Singer without a peer among its competitors. The Singer Sewing Machine Company has the most colossal manufacturing and distributing system in the world. It has over six thousand stores, offices and factories scattered over both hemispheres. Back of the Singer is over fifty years of manufacturing experience, in which time factories that for the manufacture of sewing machines have no equal in the world have been created, with specialized machinery and specially trained workmen for each process. Every Singer sold is backed by the guarantee of this tremendous system, with its record of two generations of square dealing and business honesty. The Singer Company is so confident of the merits of its machine and its ability to talk for itself, that it is willing to let all responsible persons give one a thorough trial in their own homes absolutely without charge, and without any obligation to buy. Write the Singer Sewing Machine Company, Room No. 1174, Singer Building, New York, for the booklet, "A Wireless Message from the Singer Tower," giving full particulars of this remarkable offer.

Readers Market Place

CLASSIFIED ADVERTISING
3 CENTS A WORD

The rate for advertising in this department is low, only three cents per word each insertion. There is no more popular advertising than classified advertising. Every one reads classified ads, and just because they are classified. You can reach 50,000 farmers in Kansas and adjoining States, the best farmers on earth, through this page. All ads set in uniform style, no display. Initials and address count as words. Terms, invariably cash in advance.

HELP WANTED.

WANTED—MEN TO SELL RIDING ATtachment for plows, listers, harrows. Weight 110 lbs. Clamps on beam, makes complete riding implement. Address, Plow Co., Coffeyville, Kan.

WANTED—A SOLICITOR WITH HORSE and buggy to drive through the country and solicit subscriptions. Address Circulation Manager, Kansas Farmer, Topeka, Kan.

WANTED—LOCAL MEN TO TAKE ORders for high grade western grown nursery stock. Experience unnecessary. Outfit free. Cash weekly. National Nurseries, Lawrence, Kan.

WANTED—LADY OR GENTLEMAN AS local representative in every Kansas county. Splendid chance to make good wages without great effort and no expense. Write for particulars. Address Circulation Department, Kansas Farmer, Topeka, Kan.

SWINE.

FOR SALE — REGISTERED POLAND China sows bred for fall litters. Spring pigs, either sex. Meddler blood. O. Warrensburg, Seneca, Kan.

POLAND CHINAS, SHORTHORNS AND B. P. Rocks—Yearling boars, sows and gilts open or bred, also fall pigs. B. P. Rock eggs $3 per 100. A. M. Jordan, Alma, Kan.

FOR SALE—DUROC BOAR, AMBITION'S Best 51073, by Ambition, winner of first at Illinois state fair last year; 3 years old and sure breeder; dam Oom Paul breeding; low price. S. S. Smith, Clay Center, Kan.

CATTLE.

POLLED JERSEYS — FOR BREEDERS' names write Charles S. Hatfield, Box 8, R. 4, Springfield, Ohio.

FOR SALE—A LIMITED NUMBER OF high grade Polled Durham cows and heifers. C. M. Albright, R. 2, Overbrook, Kan.

FOR SALE—FRESH, YOUNG, REGISTered, Holstein cow. Big, rich, milker. G. G. Burton, Topeka, Kan. Ind Phone 2300—Ring R.

FOR SALE—CAR LOAD OF REGISTered Shorthorn cows and heifers, fine ones, Scotch breeding. J. J. Thorne, Kinsley, Kan.

FOR SALE—REGISTERED JERSEY bull, nearly mature, fine individual, gentle, quick and sure, and bred fashionably along butter and milk lines. His sire and dam's sire bred as well as the best in any eastern herd. T. H. Scantlin, Route 6, Chanute, Kan.

BEAUTIFUL ALYSDALE — HOME OF the red and roan Shorthorns, Prince Consort 187008, red; Master of Alysdale 241519, roan for sale. Car load of their sons, car load of their daughters, at prices less than they are worth; will sell singly; let me show them to you. C. W. Merriam, Columbian Building, Topeka, Kan.

SHEEP.

FOR SALE—SHROPSHIRE RAMS; REgistered and ready for service. Ernest Gifford, Beloit, Kan.

DOGS.

FOR SALE—COLLIES OF ALL AGES. Natural born cattle drivers. Pedigreed stock. Write for circular. Harry Wells, Belleville, Kan.

SCOTCH COLLIES—PUPS AND YOUNG dogs from the best blood in Scotland and America now for sale. All of my brood bitches and stud dogs are registered, well trained and natural workers. Emporia Kennels, Emporia, Kan. W. H. Richard.

COLLIES OF ALL AGES FOR SALE—They are stock drivers, pets and heme protectors, 260 head sold last year. Write for illustrated circular and prices. Would like to buy a few ferrets. Address Harvey's Dog Farm, Clay Center, Neb.

SEEDS AND PLANTS.

FOR SALE—ALFALFA, TIMOTHY, BLUE grass and other grass seeds, seed buckwheat, turnip seed and other seeds for fall planting. Send for prices. The Barteldes Seed Co., Lawrence, Kan.

FOR SALE—KHARKOF SEED WHEAT, recleaned and sacked F. O. B. cars here at $1.50 per bushel. This wheat made an average of over 30 bushels this year. A. F. Huse, Manhattan, Kan.

WANTED—NEW CROP MEADOW FESCue or English blue grass, clover, timothy and other grass seeds. Please write us when you have any to offer. The Barteldes Seed Co., Lawrence, Kan.

POULTRY.

BUFF COCHIN EGGS—HOUSEL, JEWel, Kan.

BARRED ROCKS—EXTRA FINE SPRING cockerels and breeding pens at half price now. Circulars. A. H. Duff, Larned, Kan.

MISCELLANEOUS.

DUO HOLDS THE COW'S TAIL WHILE you milk. 25 cents coin. J. P. Overlander, Highland, Kan.

PATENTS PROCURED AND SOLD; BIG money in patents; book free. H. Sanders, 115 Dearborn St., Chicago, Ill.

GENUINE BARGAINS IN HIGH-GRADE Upright pianos. Slightly used instruments; 12 Steinways from $350 up; 6 Webers from $250 up; 9 Krakauers from $250 up; 7 Knabes from $250 up; 3 Chickerings from $250 up; also ordinary second-hand Uprights $75 up; also 10 very fine Parlor Grand pianos at about half. Write for full particulars. Cash or easy monthly payments. Lyon & Healy, 62 Adams St., Chicago. We ship everywhere on approval.

LAWYERS.

A. A. GRAHAM, ATTORNEY AT LAW, Topeka, Kan.

REAL ESTATE.

320 ACRE GOVERNMENT HOMESTEADS. Write U. S. Commissioner, Des Moines, New Mexico.

WE CAN SELL YOUR PROPERTY, send description. Northwestern Business Agency, Minneapolis, Minn.

CATHOLICS LIVE AMONG YOUR OWN people. Farms for sale near church. Circulars free. Box 601, St. Paul, Kan.

AGENTS WANTED—TO SELL LANDS in the richest valley in Mexico. J. Wiswell & Co., General Agents, Columbus, Kan.

FOR EXCHANGE—A CHICAGO SUBURban lot for a draft stallion or a jack. W. J. Yohe, 316 S. Seneca St., Wichita, Kan.

320 ACRES WELL IMPROVED, 11 MILES north Burdett, Kansas, price $25 per acre. Terms, address, Owner, C. S. Eno, Larned, Kan.

FOR SALE—THREE GOOD FARMS—300 acres, 120 acres, 16 acre truck. For full information and description address 1001, Minneola, Tex.

FIFTY IMPROVED FARMS FORTY miles south of Kansas City, $30 to $75 per acre. Send for lists. J. B. Wilson, Drexel, Mo.

FARM LOANS MADE IN ANY AMOUNT from $500 up at lowest rates and on most favorable terms. Betzer Realty & Loan Co., Columbian Bldg., Topeka, Kan.

FOR SALE—ONE THOUSAND ACRES irrigated land in the fruit belt of western Colorado. For information address E. R. Hartman, Maher P. O., Montrose Co., Colo.

786-ACRE HIGHLY IMPROVED LYON County Ranch for $34.00 per acre. Write for full description and list of small farms. Hurley & Jennings, Emporia, Kan.

FOR SALE—LIVERY BUSINESS LOCATed in thriving town in east central Kansas, fine location, no opposition, no automobiles, everything first class. For particulars address W. A. Devine, Manchester, Kan.

FOR QUICK SALE—200 ACRES, FINE dairy and stock farm, $3,500 worth of improvements, close to good town. Price $5,800. Farms and ranches, all sizes. Write for lists. Garrison & Studebaker, McPherson, Kan.

BARGAINS—160 ACRES, 100 CULTIvated, 14 alfalfa, 8-room house, good barn, other outbuildings, homey place, orchard, price $5,200. All kinds and sizes. Write for lists. Garrison & Studebaker, Salina, Kan.

FARMS IN THE CORN, WHEAT AND alfalfa belt of Lyon, Greenwood and Chase counties. Best combined farming section in the West. Owners' prices. Write for lists, stating what you want, to J. M. McCown, Emporia, Kan.

A REAL FARM BARGAIN—182 ACRES well improved, 12 roomed house, 2 large barns, fenced and cross fenced, orchard, good water. Price $6,000.00. Three miles west and ½ mile south of Baxter Springs, Cherokee county, Kansas. A. L. Jones, Baxter Springs, Kan.

GREAT BARGAIN, 275 ACRE FARM IN oil and gas belt of Kansas. Best of black land, well watered, two sets of improvements. Well divided into 2 or 3 farms. For full particulars write owner, C. W. Griffin, Humboldt, Kan.

FREE HOMES FOR EVERYBODY UNder the homestead and desert acts. Sulphur Springs Valley, Arizona, is fast settling. Water obtained at a depth as shallow as 4½ feet. As fine alfalfa land as there is in the world. For further information address the McCall Realty Company, Cochise, Ariz.

FARMERS OF SMALL MEANS—OKLAhoma sells two million acres school land soon, on 40 years' time, which gives you chance to own home. Big opening of 4,000,000 acres Indian land, 4 years' time. One crop pays for land. Send 25c for descriptive booklet telling all about it. M. N. Due, publisher, Dept. 28, Tecumseh, Oklahoma.

I WANT TO BUY ABOUT 160 ACRES less than 100 miles of Kansas City, within 2 miles of town of 2,500 or larger. Good soil, suitable for alfalfa, corn, some pasture, no overflow, good improvements. Only bargains examined. Detailed description with plats invited. Name bottom cash price. Box 107, Fairmont, Neb.

U. S. GOVERNMENT LAND OPENING under Carey Act—Conrad-Valier project, Montana. 70,000 acres of fine grassy prairie under irrigation. Drawing October 7, 1909. Must register for drawing before October 7. Can register by mail. For information and blanks write W. M. Wayman, Valier, Mont., or 454 Security Bank Bldg., Minneapolis, Minn.

CENTRAL KANSAS FARM LANDS—WE have large lists of choice farming lands in the Great Arkansas River Valley of Kansas, ranging from $15 to $100 per acre, according to location and improvements. Best wheat, corn and alfalfa raising soil in the world. Every acre pays big interest on investment. Write us today for full particulars. Cooks & Grant, 16 N. Main St., Hutchinson, Kan.

MANURE SPREADER.

MANURE SPREADDER..6..6 T.. D ....

FOR SALE—A NEW MANURE SPREADer, never used, none better made. It is for sale for a special reason at considerably less han the list price. If you have been thinking of buying a manure spreader, and every progressive farmer is thinking about buying one, here is your opportunity to get an absolutely new one at a special price. Write quick. Address A. Turner, care Kansas Farmer, Topeka, Kan.

GRAIN GRADING RULES.

Under provisions of Chapter No. 222, Laws of 1907, the grain grading commission appointed under said act, met pursuant to published call at the governor's office in Topeka, Kan., on the 27th day of July, 1909, and established the following grades of grain, to be known as Kansas grades, to be in effect on and after the 1st day of August, 1909.

G. W. Glick,
J. G. Maxwell,
Thomas Page,
Grain Grading Commission.

RULE 1.

Wheat which has been subjected to "scouring," or to some process equivalent thereto, or containing an objectionable amount of rye, shall not be graded higher than No. 3.

Kansas Hard Winter Wheat.

No. 1 Hard.—Shall be hard winter wheat, sound, dry, plump, and well cleaned, and shall weigh not less than sixty-one pounds to the bushel.

No. 2 Hard—Shall be sound, dry and reasonably clean, hard winter wheat, and shal weigh not less than fifty-nine pounds to the bushel.

No. 3 Hard.—Shall be hard winter wheat sound, dry and may be some bleached, bu not clean or plump enough for No. 2, and shall weigh not less than fifty-six pounds to the bushel.

No. 4 Hard.—Shall be hard winter wheat, tough, or from any cause so badly damaged as to render it unfit for No. 3 hard.

Rejected Hard.—All very damp, very musty or very smutty, trasny, stack-burned or dirty hard winter wheat.

Kansas Turkey Hard Wheat.

Hard winter wheat of the long berry, dark, amber colored type of the Turkey varieties shall be classed as No. 1 Kansas Turkey hard wheat, No. 2 Kansas Turkey hard wheat, No. 3 Kansas Turkey hard wheat, and No. 4 Kansas Turkey hard wheat, and inspection certificates issued accordingly, and the other specifications for each of these grades shall be the same as for Kansas hard winter wheat of the same grade.

Red Winter Wheat.

No. 1 Red.—To be bright, sound, plump, dry and well-cleaned red winter wheat, weighing not less than sixty pounds to the measured bushel.

No. 2 Red.—Shall be sound, dry and reasonably clean red winter wheat, and shall weigh not less than fifty-nine pounds to the bushel.

No. 3 Red.—Shall be red winter wheat, sound, dry, and may be some bleached, but not clean or plump enough for No. 2, and shall weigh not less than fifty-six pounds to the bushel.

No. 4 Red.—To be thin, bleached or tough red winter wheat, reasonably sound, but unfit to grade No. 3 red.

Rejected Red.—All very damp, very tough, very smutty, very musty, trashy, dirty, damaged, stack-burned or thin wheat, falling below No. 4 red.

White Winter Wheat.

No. 1 White.—To be bright, sound, dry, plump and well-cleaned pure white winter wheat.

No. 2 White.—To be sound, dry, well-cleaned, pure white winter wheat.

No. 3 White.—To be sound, dry, white winter wheat, reasonably clean.

California, Colorado, Washington, Idaho and Utah Wheat.

No. 2.—To be sound, dry, well-cleaned, pure white wheat, free rrom smut, grown in Colorado, Utah, California, Washington or Idaho.

No. 3.—To be sound, dry, reasonably clean white wheat, grown in Colorado, Utah, California, Washington or Idaho.

Wheat of above description of lower grades to be classed on its merits as regular No. 4 or rejected.

Spring Wheat.

No. 1.—To be bright, sound and well cleaned spring wheat.

No. 2.—To be bright, sound spring wheat, reasonably clean, and weigh not less than fifty-seven pounds to the bushel.

No. 3.—To be dry and reasonably sound spring wheat, not equal to No. 2, and weigh not less than fifty-five pounds to the bushel.

No. 4.—To be thin, bleached or tough spring wheat, reasonably sound, but unfit to grade No. 3 spring.

White Spring Wheat.

No. 1 White.—To be bright, sound and well-cleaned white spring wheat.

No. 2 White.—To be bright and sound white spring wheat, reasonably clean, and weigh not less than fifty-seven pounds to the bushel.

No. 3 White.—To be dry and reasonably sound white spring wheat, not equal to No. 2, and weigh not less than fifty-five pounds to the bushel.

No. 4 White.—To be thin, bleached or tough white spring wheat, reasonably sound, but unfit to grade No. 3.

Rejected Spring Wheat.—All very damp, very tough, very musty, very smutty, trashy, dirty, damaged, stack-burned or thin wheat, falling below No. 4.

Mixed Wheat.

All mixtures of spring, soft and hard winter wheat shall be classed as mixed wheat, and graded as follows:

No. 2 Mixed Wheat.—To be sound, dry and reasonably clean, and weigh not less than fifty-nine pounds to the bushel.

No. 3 Mixed Wheat.—Shall be sound, dry, reasonably clean, and may be some bleached, but not clean or plump enough for No. 2 and shall weigh not less than fifty-six pounds to the bushel.

No. 4 Mixed Wheat.—Shall include mixed wheat that from any cause so badly damaged as to render it unfit for No. 3 mixed.

Rejected Mixed Wheat.—All very damp, very tough, very musty, very smutty, badly stack-burned, damaged or thin spring and winter wheat, falling below No. 4 mixed wheat, shall be graded as rejected mixed wheat.

Macaroni Wheat.

No. 1 Macaroni Wheat.—Shall be bright, sound, well cleaned and be composed of what is known as rice or goose wheat, and weigh not less than sixty pounds to the bushel.

No. 2 Macaroni Wheat.—Shall be sound, dry and reasonably clean rice or goose wheat, and weigh not less than fifty-eight pounds to the bushel.

No. 3 Macaroni Wheat—Shall be inferior to No. 2, but sound, and be composed of what is known as rice or goose wheat, and may include wheat that is bleached and shrunken, and weigh not less than fifty-five pounds to the bushel.

No. 4 Macaroni Wheat.—Shall include all wheat badly bleached or smutty, or for any other cause unfit for No. 3.

Rejected Macaroni Wheat.—Rejected macaroni wheat shall include all wheat that is very smutty, badly bleached and badly sprouted, or for any cause unfit for No. 4.

RULE 2.—CORN.

No. white, yellow or mixed corn should not contain more than 15½ per cent of moisture.

No. 1 Yellow.—Shall be pure yellow corn, sound, dry and well cleaned.

No. 2 Yellow.—Shall be seven-eighths yellow, sound, dry and reasonably clean.

No. 3 Yellow.—Shall be seven-eighths yellow, reasonably dry and reasonably clean, but not sound enough for No. 2.

No. 4 Yellow—Shall be seven-eighths yellow, and unfit to grade No. 3 yellow.

Rejected Yellow.—Shall be very badly damaged.

No. 1 White.—Shall be pure white corn, sound, dry and well cleaned.

No. 2 White.—Shall be fifteen-sixteenths white, sound dry and reasonably clean.

No. 3 White.—Shall be fifteen-sixteenths white, reasonably dry and reasonably clean, but not sound enough for No. 2 white.

No. 4 White.—Shall be fifteen-sixteenths white, but unfit to grade No. 3 white.

Rejected White Corn.—Shall be very badly damaged.

No. 1 Corn.—Shall be mixed corn, of choice quality, sound, dry and well cleaned.

No. 2 Corn—Shall be mixed corn, sound, dry and reasonably clean.

No. 3 Corn.—Shall be mixed corn, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 4 Corn.—Shall include mixed corn that is unfit to grade No. 3.

Rejected Mixed Corn.—Shall be very badly damaged.

Kafir-Corn.

No. 1 White.—Shall be pure white Kafir-corn, of choice quality, sound, dry and well cleaned.

No. 2 White.—Shall be seven-eighths white Kafir-corn, sound dry and reasonably clean.

No. 3 White.—Shall be seven-eighths white Kafir-corn, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 4 White.—Shall include white Kafir-corn that is unfit to grade No. 3.

No. 1 Red.—Shall be pure red Kafir-corn, of choice quality, sound, dry and well cleaned.

No. 2 Red.—Shall be seven-eighths red Kafir-corn, sound, dry and reasonably clean.

No. 3 Red.—Shall be seven-eighths red Kafir-corn, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 4 Red.—Shall include red Kafir-corn that is unfit to grade No. 3.

No. 1 Kafir-corn.—Shall be mixed Kafir-corn, of choice quality, sound, dry and well cleaned.

No. 2 Kafir-corn.—Shall be mixed Kafir-corn, sound, dry and reasonably clean.

No. 3 Kafir-corn.—Shall be mixed Kafir-corn, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 4 Kafir-corn.—Shall include all mixed Kafir-corn, not wet or in a heating condition, that is unfit to grade No. 3.

RULE 3.—OATS.

No. 1 Oats.—Shall be mixed oats, sound, dry, clean and free from other gain.

No. 2 Oats.—Shall be mixed oats, sweet, dry, reasonably clean and reasonably free from other grain.

No. 3 Oats.—Shall be mixed oats that are slightly damp, unsound, slightly musty, dirty or from any other cause unfit to grade No. 2.

No. 4 Oats.—Shall be mixed oats that are from any other cause unfit to grade No. 3.

No. 1 White Oats.—Shall be pure white, sound, dry, clean and free from other grain.

No. 2 White Oats.—Shall be seven-eighths white, sound, dry, reasonably clean and reasonably free from other grain.

Standard Oats.—Shall be seven-eighths white, but not sufficiently sound and clean for No. 2 white, and shall be reasonably free from other grain and weighing not less than twenty-eight pounds to the measured bushel.

No. 3 White Oats.—Shall be seven-eighths white, but not sufficienty sound and clean for No. 2.

No. 4 White Oats.—Shall be seven-eighths white, badly stained, or for any other cause unfit to grade No. 3 white.

No. 1 Red Oats.—Shall be pure red, sound, dry clean, and free from any other grain.

No. 2 Red Oats.—Shall be seven-eighths red, sound, dry, reasonably clean and reasonably free from other grain.

No. 3 Red Oats.—Shall be seven-eighths red, but not sufficiently sound and clean for No. 2.

No. 4 Red Oats.—Shall be seven-eighths red, badly stained, or from any other cause unfit to grade No. 3 red.

No. 2 Color Oats.—Shall be seven-eighths color and in condition the same as No. 2 White.

No. 3 Color Oats.—Shall be seven-eighths color, and in condition the same as No. 3 white.

No. 4 Color Oats.—Shall be seven-eighths color, that from any other cause is unfit to grade No. 3.

RULE 4—RYE.

No. 1.—To be plump, sound, bright and well cleaned.

No. 2.—To be plump, sound and reasonably clean.

No. 3.—To be reasonably sound and reasonably clean, unfit for No. 2.

No. 4.—To include all damp, musty, dirty rye, unfit for No. 3.

RULE 5.—BARLEY.

No. 1.—To be plump, bright, sound and free from other grain.

No. 2.—To be sound and reasonably clean.

No. 3.—To be reasonably clean and merchantable.

No. 4.—To include all unsound and damaged barley.

Rejected.—Shall include all very badly damaged barley falling below No. 4.

RULE 6.—SPELTS.

No. 1.—To be plump, bright, sound and free from other grain.

No. 2.—To be sound and reasonably clean.

No. 3.—To be reasonably clean and merchantable.

Rejected.—To include all unsound and damaged spelts.

RULE 7.—NO-GRADE GRAIN.

All grain that is not wet or hot, or in heating condition, shall be classed as no-grade.

RULE 8.—REASONS FOR.

All inspectors shall make their reasons for grading below No. 2 fully known by notation on their books. The weight alone shall not determine the grade.

RULE 9.—TEST WEIGHT.

Inspectors shall ascertain the fair average test weight of each lot of wheat inspected by him, and note same on his record. Such average test shall be used, as far as applicable, in determining the grade of each lot of wheat inspected.

RULE 10.—THE WORD "NEW."

The word "new" shall be inserted in each certificate of inspection of newly harvested wheat until September 1 each year.

RULE 11.—CLAIMS.

All claims for damages against the inspectors or weighmaster should be filed in this office before the grain has left the jurisdiction of this department.

RULE 12.—LIVE WEEVIL.

Wheat containing live weevil shall not be graded, but the inspector shall give the variety of wheat and test weight, and note "live weevil."

RULE 13.

Inspectors shall in no case make the grade of grain above that of the poorest quality found in any lot of grain inspected, where it has evidently been "plugged" or otherwise improperly loaded for the purpose of deception.

Bargains in Farms, Ranches & City Property

ECIAL BARGAINS—80 acres 3 miles Clyde, second bottom, $50 acre. 150 near Green in Clay Co., 99 under plow, improved, $50 per acre. 160 acres near town, $3,500. Write for fine large WALTER NELSON, Clyde, Kan.

ACRES CHOICE ROOKS COUNTY LAND, $6,800.
early all tillable. Some in cultivation, iles from station.
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AND AT $20 TO $50 per a. in corn, lfa and stock country; 160 miles west Kansas City; improved ranch, 560 a. per a. You will be shown, will you ? Ask for list.
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Wilsey, Kansas.

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O BIG BARGAINS IN KANSAS LAND. 0 acres smooth prairie land, 5 miles n Dodge City; price $18 per acre. 160 s near Perry, Jefferson County, Kansas, ly improved, price only $40 per acre. information write
HALE & ENGLISH,
Dodge City, Kansas.

0 ACRE farm bargain, 7 miles north of Ness City. Small frame house, 2 ms, frame barn for 4 horses, hen house, ll granary, good well and windmill, 75 s in cultivation, 35 acres in wheat, onerth with place, 12 acres alfalfa. Land be plowed, nearly level, 1 mile school. e $2,500. $2,000 must be cash.
C. LOHNES & SON, Ness City, Kan.

ARKANSAS LAND
advancing in Grand Prairie. 160 a. plandon $75 per acre; 720 a., 2 plantations, 200 a rice now, without crop, $65 per acre; a., 2 story house, big barn and store on ce, 180 a. rice land, 100 a. timber, 80 a. 160 a. now at $30; 320 a. rice land, ced, $40; stock farms, $25 to $40, any tract. F. W. HOUSTON, Stuttgart, Ark.

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you would like to live in the most beaucity in the West, with unsurpassed cation, business and religious advanes, in a city clean, progressive where estate values are low, but steadily adding, where living expenses are reason a city with natural gas at lowest s, address the Secretary of the Comcial Club, Topeka, Kan.

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e have farms for sale in Ottawa and joining counties, good upland improved, from $25 to $60 per acre. Bottom land proved at from $60 to $125 per acre. You e not seen the best till you see the Solon Valley.
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RE YOU LOOKING FOR A HOME?
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SPECIAL BARGAIN

55 acres, 200 acres lays gently rolling, ance quite rolling, 120 acres in corn, 50 res timothy and clover meadow, balance e-grass pasture with some timber, farm nced and cross fenced, hog and sheep ht, all woven wire and barb wire on top, cept about a mile of nice hedge. Loated 3½ miles from town of 1,200 population. Improvements consist of a large rn 52x60, two cattle sheds, one 30x60 and e other 14x90, scales, another small barn, l the sheds and barns are newly repaired d in good condition, newly painted. House new, just being completed, 7-room 16 feet uare, with bathroom, hallway, 2 clothes osets, large porch in front and a porch the rear, solid concrete block foundation nder the house, house cost $3,500, wash ouse over cellar, concrete walks, poultry ouse, 16 foot square, smoke house and ice ouse. Improvements on this property worth 7,500. There is an air pressure water sysm with large stone and concrete reservoir welve feet above ground, 1,500 feet of unerground piping conveying water to five oints on the farm, catching all barn lots nd pastures, also water piped to the house, vatory in kitchen and lavatory, toilet and ath in the bathroom, ample sewer sysem. This farm is offered for quick sale at 76 per acre. Possession given March 1, 910. Liberal terms if desired. Picture and list sent on application. I have other arms larger and smaller. Write.
BAZEL J. MEEK,
Chillicothe, Missouri.

WHY NOT BUY LAND of the owner and save from $5 to $10 on the acre? Land of all descriptions from $3.50 per acre up. Send for circular or come and see us. G. N. DAVIS & CO., Cimarron, Gray Co., Kan.

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and upland, 75 acres in cultivation, balance meadow, no other improvements, 3 miles from town. Price, $3,800. A snap as 40 acres of it is in fine alfalfa ground.
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80 acres 3½ miles Salina all in cultivation, $4,500.
240 acres Saline county, 80 in cultivation, all fenced, fair improvements, ½ mile school and church. $25 per acre.
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J. W. BRADSHAW,
The Land Man, of Herington, Kansas, is offering a section of land with two sets of improvements, 6 miles from Herington, for $45 per acre. 200 acres under cultivation. A snap well worth $50 per acre.

MARSHALL COUNTY BARGAINS.
Large list of improved farms for sale at $40 to $100 per acre. 200 trading propositions. Can match you on anything. Write for complete list.
TROSPER & BLACKNEY,
Frankfort, Kansas.

IRRIGATED FARMS FOR SALE.
In the famous Arkansas Valley of Colorado and the Pecos Valley of Texas, reasonable prices; good terms. If you want a money making investment or an ideal home write for further information.
J. F. CURRY, Lamar, Colo.

A NESS COUNTY BARGAIN—400 acres 11 miles from Ness City, 100 in cultivation, well fenced, good house, barn, well and windmill, 18 feet to water, all smooth, half mile to school. Price $5,000. Reasonable terms. This is only one. Come and see. LOHNES & CASON, Ness City, Kan.

WASHINGTON COUNTY LAND FOR SALE.
160 acres 4 miles from county seat, one mile to school all fenced, one set improvements orchard, well, 120 acres cultivated, 40 pasture, $50 per acre; terms on half. W. J. GORDON, Washington, Kan.

FARMS FOR SALE in South Missouri. I have several good farms for sale on easy payments from $5 to $10 an acre. Please write me for full particulars.
WILLIAM BOWEN,
Houston, Missouri.

TEXAS ORANGE GROVES easily obtained. Co-operative plan. Company does work, gives share crops, enormous profits, permanent income, life insurance. May we send details at once? STIRLING IMPROVEMENT CO., INC., Duluth, Minn.

GOOD HOME CHEAP—160 acres, 130 in cultivation, all fenced, 3 room house, barn, cow shed, poultry house, well and windmill, only 4 miles to R. R. where an elevator will be built this summer. Will take a small cash payment and give 5 years on balance. Price $2,500. KILBERG & MILLER, Ness City, Ness Co., Kan.

SCHUTTE & SHINEY, the Rush county Kan, real estate hustlers; 30 years in the same old place. Good farmers raised from 26 to 47½ bushels of wheat per acre here last season. We can sell this land at from $20 to $35 per acre. Good improved ranch land, ½ good farm land, at $15 per acre. Good bottom land not over 5 miles from market at $25 to $35 per acre. Well improved and running water, plenty of timber. See us, or write us at La Crosse, Kan.

Buy Western Kansas Land.

Should you want to buy any Western Kansas land for speculation or for a home, don't fail to write me. I am selling land throughout all counties in western Kansas. I am myself farming extensively on the kind of land I offer for sale. I can sell you land that will make you money. Write me at once for prices. Address
EUGENE WILLIAMS,
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KANSAS CORN, WHEAT AND ALFALFA LAND.
Beautiful Smith Co., improved farms and 20,000 acres unimproved land in Comanche Co. new being surveyed and ready for settlement in a short time. Buy now at reasonable prices and terms. Double your money before long. Can use some good paper on approved securities as cash. Write me and do it now, for list, descriptions and prices.
CARL G. ANDERSON,
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A REAL BARGAIN.
320 acre stock farm, 120 acres under cultivation, balance in pasture, that cannot be beat in southeastern Kansas, being well watered by a creek that is supplied by springs. Good 6 room house, well at house, good barn for 16 head horses and shed for car cattle. Loft for 20 tons of loose hay, granary for 2,000 bu. grain, cribs for 3,000 bu. ear corn; lots all hog tight, also 100 a. with woven wire hog tight fence. Good steel wind mill in pasture at springs that never fail, furnishes water to large cistern at the barn. Good orchard and plenty of shade. This ideal stock farm is located 2½ miles from a thriving town of 500 people and 100 miles from Kansas City on the main line of the M., K. & T. Ry. This farm will be sold soon, for it is a bargain at $35.00 per acre. For further information call or write. J. J. WILSON, Moran, Kan.

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In the Lower Pecos River Valley we control selected irrigated lands, with perpetual water rights, which will, when properly farmed, realize the owner a net income of 100 per cent each year, equal to the total cost of the land the perpetual water right.
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farms for sale. Write for list. We have a few bargains that will not be on the market long. Property for sale and trade.
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160 acres 5 miles from Wakefield, Kan., (Clay Co.), 135 acres broke, 25 acres pasture, small house, barn, etc., good water. Price $6,500.
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160 acres, all good smooth land, 40 acres in cultivation, balance hay and pasture; one mile to good town; 6-room house, barn for 6 horses, other buildings; good water, good orchard, all fenced. Goes now for $5,500, $1,500 cash will handle. Get busy.
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120 acres, 60 acres in cultivation, balance fine timber. Good 3 room house, 3 fine springs, fine apple orchard, large thrifty trees, other fruits. 1 mile from town. Good reason for selling. Price $1,000. Write me for full particulars.
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240 acres, house 8 rooms, barn, sheds, etc., 90 acres in cultivation, 90 acres pasture, 60 acres grass, good orchard, fine water, fine improvements, 4 miles from good town, all tillable, 1 mile to school. Price $55 per acre.
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640 acres of good alfalfa land, well watered and corners with townsite of Russell Springs, Logan Co., Kan. Some alfalfa seeded this spring. A snap at $10 per acre, easy terms. For full particulars write
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Look at this—157 acres of fine land, all bottom, improved; price $90 per acre. 93 acres, all bottom, fair improvements; price $90 per acre. 60 acres bottom, improved; price $5,500. 175 acres, 100 bottom, improved; a fine home; price $14,000. Bargains in city property.

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Choice corn and alfalfa farms for sale in Barber county, Kansas. Crop failures unknown. Write for particulars and list. Address
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WELL IMPROVED 334 acre farm, Jefferson Co., Kan., 2 miles station, 4 miles town of 1500 population, 50 miles Kansas City, 50 miles St. Joseph, Mo., 24 miles Topeka; 220 acres dry bottom, fine for alfalfa; this is a snap at $60 per acre, time on $8,000, if desired. ADAMS BROS. & HAMM, Atchison, Kan.

WABAUNSEE COUNTY LAND—160 acres 80 cultivated, 4 room house, fair barn, 9 miles town, nice level land, a great bargain at $35 per acre. 80 acres near Eskridge, well improved, $50 per acre. Three quarters of good grass land $23 per acre. F. L. McCOY, Eskridge, Kan.

280 acres, six miles to town, well improved, creek bottom, some timber, 50 acres pasture, rest farm land, near school and German church, $65 per acre. 160 acres adjoins town, good improvements, 15 acres alfalfa, hog tight, 100 under plow, rest pasture, $75 per acre. Write me your wants.
B. F. BEESON,
Linn, Kansas.

SPLENDID SMALL RANCH in Greenwood county, 480 acres 6 miles Toronto, 100 acres good bottom land, 30 acres alfalfa, 25 acres meadow, balance in pastures well fenced and with living springs, 2 alfalfa hog pastures. Good 8 room house, large barn, granaries and sheds, all kinds of fruit, R. F. D. and phone; known as the best improved place in the country. For quick sale, $28, half cash. Try me on exchanges H. B. GILES, Emporia, Kan.

GOOD GRAIN AND DAIRY FARM.
160 acres, 100 acres in cultivation, 40 acres pasture, 20 acres meadow. Improved with good 6 room house, barn 40x40, cow barn 30x40, hog house, smoke house, chicken house, work shop, corn crib 28x40; 2 wells and wind mill, cistern, running water in pasture. Located 9 miles from Wichita and 2 miles from station on the main line of the Santa Fe R. R. on R. F. D. and phone. Price $9,000. The Nelson Real Estate & Img. Co., 137 N. Main St., Wichita, Kan.

PURCHASE A FINE FARM of 640 acres in the Arkansas River valley, 2½ from a good town, and 12 miles from Hutchinson, Kan. This farm has a 6 roomed house, barn, sheds, well and windmill, fenced and cross fenced, 400 acres under cultivation, balance in pasture, 300 acres now in corn, one-third goes to purchaser. A bargain at $24,000. 120 acres in Vernon county, Mo., improved, 80 acres in corn, one-third goes to purchaser. Price $2,700.
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160 acres, 5 miles from R. R. town; four room house, new barn; 120 acres in cultivation, balance in pasture and mow land. Spring water. A bargain at $50 per acre.
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BARGAINS in Kansas Lands. 400 a. Morris county, mile from station, 125 in cultivation, 2 sets of improvements, $55 per acre. Other farms of any number of acres in Dickinson, Marion, Kiowa, Gove, Ford, Rush, Ness and Sherman counties at various prices, according to location. Lands booming, prices advancing.
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W. F. JONES, General Traffic Manager
710 Majestic Bldg., Denver, Colorado

DAIRY

About the Dairy Sire.

E. H. Dollar, who has bred some of the record breaking Holstein cows, says any man with a herd of ten cows can afford to head his herd with a pure bred sire. Many men are satisfied if they can buy a registered calf, and the registration is about all they get. It don't make a sire better because he is registered. The question is, What are the calf's ancestors, and what is their record? The best pure bred sire at the head of the herd means more than one-half the herd. Buy only of a man you have confidence in. There has been a lot of guesswork in selecting a sire. I would, if possible, buy a sire that has been tried and has produced a daughter of high production, even if it was an aged sire. I would buy on the records of the dams back of him. Ordinarily I would buy the sire with the masculine, not the feminine conformation. Buy a sire that two or three generations back is from dams that were great producers. Again, I would want a sire from a dam whose capacity for production has been developed to its utmost, without injuring her. Then take care of the sire, feed him well. Do not turn them out with the herd, but in the yard, where he can get exercise. Keep a record of the time when cows are served. The sire needs some exercise, he will retainh is vigor much longer. You are safe to buy an old sire, but don't get him very fat. The tread power is a good way to exercise, he will retain his vigor much with a strong constitution, you need not fear to cross him back on his daughters, one cross. In answer to questions he said, the bull in the barn should have a box stall, then plan some exercise for him. Be firm with the young bull. Don't be afraid, but don't take any chances. Exercise and handling usually make him safe.

Dairy and Dual-Purpose Breeds of Cattle.

Prof. C. S. Plumb, of the Ohio College of Agriculture answers this question in the Breeders' Gazette:

"What breed is preferable where milk is sold to a condensery? Is there a comparative sheet of the different dairy breeds in printed form, and if so where can it be obtained?"

The more commonly recognized dairy breeds are the Jersey, Guernsey, Holstein-Friesian, Dutch Belted and Ayrshire. Recently the Brown Swiss has been classed in this group by the Brown Swiss Cattle Association in this country. Of so-called dual or general-purpose breeds the Shorthorn of milking form, the Red Polled and Devon are the better known.

Each of the above breeds has recognized standing. The Dutch Belted, Brown Swiss and Devon are not very numerous in America, although the latter is one of the oldest breeds on this continent. There are hundreds of thousands of Jerseys, Holstein-Friesians and Shorthorns over the United States and many thousands of Guernseys and Ayrshires. The more common breeds are abundant on account of their general merit and adaptability.

Many reports of the capacity of individuals of the different breeds have been published, most of these until recently being private tests and more or less subject to criticism from the partisan sources from which they came.

The first great comparative and impartial test of dairy cattle took place at the World's Columbian Exposition in 1893 at Chicago. An attempt was made to compare 25 cows each of Jersey, Guernsey and Shorthorn in milk, butter-fat and butter, cheese and flesh production. There were three tests, one in cheese making covering 15 days, one in butter production and one in general production of milk, butter and live weight, while also a heifer test was attempted. The greatest test of all covered 90 days, including 25 cows of each breed. In the other tests not so many cows were used. This work was under the supervision of a testing committee of experiment station men and representatives of the breeds and their work was regarded as of the highest character.

Briefly summarizing an immense amount of figures in print, the following results were obtained.

The best five cows of any breed competing were Jerseys. The Jerseys as a breed gave the most profitable returns. In the cheese test the following results were secured:

	Amount cheese.	Value cheese.
Jersey	1,451.76 lbs.	$193.98
Guernsey	1,130.62 lbs.	135.22
Shorthorn	1,077.60 lbs.	140.44

In the 90 day test we have the following results:

Breed—	Milk
Jersey	77,488.8
Guernsey	61,781.7
Shorthorn	66,263.2

	Butter.	Value butter.	Cost feed.
lbs.	4,274.010 lbs.	$1,747.215	$587.50
lbs.	3,360.431 lbs.	1,355.261	484.14
lbs.	2,890.869 lbs.	1,171.669	501.79

In this 90 day test to produce a pound of butter it cost with the Jerseys 13.75 cents, Guernseys 14.41 cents and Shorthorns 17.36 cents. In a 30 days' test of 15 head of each breed, it cost per lb. of butter 13.28 cents for the Jerseys, 12.81 cents for Guernseys and 15.77 cents for the Shorthorns.

When the five best cows of each breed were compared there was shown a net profit in the three tests of $159.48 for the Jerseys, $116.03 for the Guernseys and $105.39 for the Shorthorns or the dual-purpose breed. In these tests gains or losses in flesh were recorded and the cows given credit therefor or otherwise.

As a final reference to this test, undoubtedly the Jerseys were selected from a larger field and with more effort than occured with the other two breeds, so that they reaped a distinct advantage therefrom.

In 1901 at the Pan-American Exposition at Buffalo another comparative dairy contest was made. This time five cows each of ten breeds were tried, as follows: Jersey, Guernsey, Ayrshire, Shorthorn, Holstein-Friesian, Polled Jersey, French-Canadian, Brown Swiss, Red Polled and Dutch Belted.

The cattle in this test were selected under various conditions, in some instances not to the satisfaction of breeding associations interested. The comparison extended over six months, under the supervision of impartial and capable experts. In this comparison the following figures will suffice to show the relative position of each breed:

Breed—	Milk
Jersey	26,986.3
Guernsey	27,134.5
Ayrshire	32,998.2
Shorthorn	31,986.2
Holstein	39,059.9
Polled Jersey	20,326.6
French Canadian	24,615.2
Brown Swiss	30,89 3
Red Polled	28,713.0
Dutch Belted	24,893.3

	Butter fat.	Profit in butter.	Profit in solids.
lbs.	1,223.88 lbs.	$225.41	$200.63
lbs.	1,248.09 lbs.	230.11	202.56
lbs.	1,219.44 lbs.	217.91	235.87
lbs.	1,129.77 lbs.	171.82	205.64
lbs.	1,275.85 lbs.	210.62	262.15
lbs.	948.31 lbs.	169.24	145.18
lbs.	984.11 lbs.	176.45	181.83
lbs.	1,123.15 lbs.	182.99	207.51
lbs.	1,141.81 lbs.	198.15	201.15
lbs.	847.50 lbs.	116.79	132.60

It will be seen that in this trial the Guernseys led on butter, with Jerseys second, Ayrshires third and Holsteins fourth. On the profit in total solids the big milkers, the Holsteins, led, with Ayrshires second and Brown Swiss third. Edward Van Alystyne, who superintended this test, thus commented on it in 1902 in the "Jersey Advocate and Dairyman":

"The best cows are not all in any one breed. The Channel Islands cattle are certainly the ones to be selected for butter production. For milk production without regard to fat content the Holsteins are to be selected, especially if the food supply is plentiful and easily obtained. Size alone is no criterion of the value of a dairy cow."

The most recent comparative breed on production took place in 1904 in the cattle test at the Louisiana Purchase Exposition at St. Louis. Four breeds, Holsteins, Jerseys, Brown Swiss and Shorthorns, were compared. The test, as at Buffalo, extended over 120 days. There were 15 Holsteins, 25 Jerseys, five Brown Swiss and 25 Shorthorns in Class B, entered for "demonstrating the economic production of milk for all purposes related to dairying." In this class each cow was credited with the butter-fat produced at 30 cents a pound, and credited with 3 cents a pound for solids not fat. The following figures give the herd averages:

Breed—	Lbs. milk per cow. Total.
Jersey	4,981.0
Holstein	6,411.7
Brown Swiss	5,301.6
Shorthorn	4,152.0

Lbs. fat per cow. Total.	Lbs. solids not fat. per cow.	Value fat per cow.	Av. daily net profit per cow.
41.5	436.09	69.73	45 cents.
53.4	508.73	65.97	39 cents.
44.2	470.34	57.47	32¼ cents.
34.6	357.56	46.02	25 cents.

This test shows the best record from the Jersey, the Holstein second and Brown Swiss third.

In the tests for butter comparison, known as Class A, the Jerseys, Holsteins and Brown Swiss only competed. In this case was a net profit on the Jersey of 33 cents per day per head, of 24⅓ cents on the Holstein-Friesian and of 19¼ cents on the Brown Swiss. The average pounds of fat per cow in this trial was as follows: Jersey 232.43, Holstein-Friesian 219.89 and Brown Swiss 191.56. The best record made in Class B was by a Jersey with a profit of $67.75, the net profit of the best Holstein-Friesian being $66.82.

At this exposition a dual purpose cow trial took place between the Shorthorns, Holstein-Friesians and Brown Swiss, in which gain in live weight was given credit at 4 cents a pound, butter fat 30 cents a pound and solids not fat in the milk 3 cents a pound. The average gain in live weight per cow for 120 days in this case was: Shorthorns 82 pounds, Holstein-Friesians 94.8 pounds and Brown Swiss 40.5 pounds. The average net profit per cow was: Shorthorn $29.22, Brown Swiss $41.93 and Holstein-Friesian $44.81.

Many tests of dairy cattle are being made today in various states, under the supervision of the agricultural experiment station or of the agricultural college of the state in which tests This work is one in which the pub has confidence and information can secured of these tests from many so ces, notably the agricultural press the associations championing the ferent breeds.

The United State Department Agriculture has published more or le regarding the merits of dairy and du purpose breeds. Farmers' Bulletin N 106 or the "Breeds of Dairy Cattl can be obtained on application to department at Washington. The Bure of Animal Industry of the Uni States Department of Agriculture also published a special bulletin g ing a large number of reports on te of dairy cattle. This can be purchas for about 15 cents from the Division Publications and is well worth havi It contains such comparison as yo correspondence wishes.

A number of agricultural experim stations have published bulletins studies of the production of numero herds in the states. Bulletins by t Indiana station at Lafayette, the linois station at Urbana and the W consin station at Madison are of s cial interest and perhaps may be tained on application.

As to what breed is best, that pends on the proposed use and on on own taste. The information in t article and in the publications refer to is impartial and may assist one coming to a decision.

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JOHN D. SNYDER, Auctioneer.

HOME CIRCLE

My Garden.

I have a little garden
All edged with four-oclocks;
And some of it is sunflowers,
And some is hollyhocks.

And all around the border
I've planted little stones—
A lot of round beach pebbles—
To keep out Rover's bones.

And then, as plain as daylight,
A sign, "Keep off the grass,"
Warns hens and everybody
That there they shouldn't pass.

But Rover makes his pantry
Right in the garden patch;
And all the hens and chicken
Think that's the place to scratch—
By Anna B. Bryant, in The Sunflower.

Lay of a Modern Home.

"Let's build us a beautiful home," said she,
"With pillared porches galore;
With great bay windows and white-tiled halls,
And curled birch finish on all the walls,
And with polished oaken floor."

"And how shall the kitchen be?" said he.
"Pray, how shall the kitchen be?"

"We'll plan a dainty boudoir," said she,
"For me, and a den for you;
Of course, an art and a music room,
A handsome greenhouse with plants a-bloom,
A pretty pergola, too."

"But how shall the kitchen be?" said he.
"Oh, how shall the kitchen be?

"We'll have a lofty tower," said she,
"And an observation dome;
A bath with the newest kinks and quirks,
A library with the finest works,
For our lovely modern home."

"But how shall the kitchen be??" said he,
"Say, how shall the kitchen be?"

"You make of my life a care," said she,
"With wall of your woeful fret,
We'd do quite well with a chafing-dish,
But if more bountiful meals you wish,
We'll plan for a kitchenette."

"A plain little kitchenette," said she;
"A cheap little kitchenette."
—May Lippincott's.

Try ironing button strips upon a lick towel, as well as embroidery.

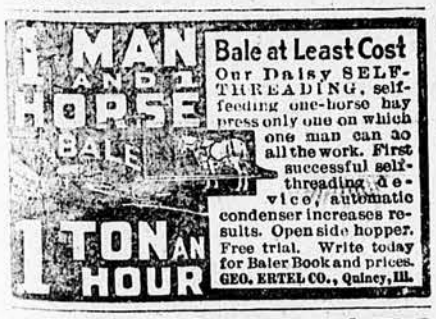
Scorched spots can be removed by wetting the spot and rubbing well with soap, and then placed to bleach in the sun.

When sewing machine oil spots material, rub the stain with lard and let it stand a few hours; then wash with cold water and soap.

A child from two years up can be easily amused with a hammer, a pumpkin and some fencing nails.—Mrs. Ida Brooks, Mayo, Ind.

When ivory handles are discolored, dip half a lemon in salt and rub on the ivory. Wash off in warm water and the handles will look like new.

Lace curtains that have become torn can be mended neatly in the following way: Take a piece of material, preferably the same as the curtain, dip it in cold starch, place over the hole to be mended and press with a hot iron. When the curtain falls into its drapories the mended part can scarcely be detected.



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Nothing is more annoying to the particular housewife than to have her newly oiled dining floor all marred up with chairs. Take a heavy piece of felt and cut out pieces to fit the bottom of each leg, then fasten securely to it with glue. This method is not as expensive as rubber tips and they last much longer.

"Everything is against me!" is a very foolish saying. The Bible tells us that everything works together for good to the true Christian; so to keep asserting the contrary is a sign of both a weak faith and a weak character. The common lot is—the common lot, with its share of difficulty, its proportion of obstacles, its continual gifts of opportunity, and chances of blessing.

No Disturbance Allowed.

A deaf but pious English lady, visiting a small country town in Scotland, went to church armed with an ear trumpet. The elders had never seen one, and viewed it with suspicion and uneasiness. After a short consultation one of them went up to the old lady just before the opening of the services and wagging his finger at her, warningly, whispered: "One toot, and ye're out!"—Woman's Journal.

Little Business Woman.

The daughter of a statesman was sitting on her father's knee one evening when she was a little girl.

She had a new little brother, whom she regarded with wonder.

"Today," said the father, "a man offered to give me a whole roomful of gold for little brother. Shall I sell him?"

The child shook her head.

"But," said her father, "think of how many nice things a roomful of gold would buy. Don't you think that I had better let the man have him?"

"No," answered the girl thoughtfully. "Let's keep him till he's older. He'll be worth more then."

A Post-Card Game.

A successful guessing game for a children's party played out of doors was called a "Seeing-the-Town Trip." A large collection of local post-cards was pinned about the lawn on the tree trunks and other places. The cards were numbered, and of course the names of the views cut off. The children were furnished with pencils and paper and told to "travel around town" and write down what they saw. It was comical to see how some of the most familiar scenes puzzled them. The prizes were a post-card album for the most successful guesser and a collection of cards for the one who recognized the fewest number.—By K. E. M., in Ex.

The Many Things That Women Do.

Did you know that there are 126 women in this country who can do your plumbing? That any one of 786 women in this broad land could fill your teeth and perform other dental operations? That 1,041 women can and do plan houses? That 3,373 make a practise of preaching of a Sunday—from a pulpit, and 1,010 defend prisoners at the bar? That 545 are carpenters and can drive a nail without pounding their thumbs? That there are 167 women masons, 1,365 women who work in mines, and 84 who are engineers? And more remarkable still, that 193 women are blacksmiths by profession, and that you can be buried by any one of the 323 women undertakers?

Sleeping in the Open.

Could everyone realize the real pleasure and great benefits derived from sleeping out of doors we would have very little use for the indoor sleeping room. Sleeping in the open air has been something of a fad for some time; but those in poor health, particularly those afflicted with lung trouble, whose health has been partially or wholly restored, cannot say enough in praise of the idea and will never cease to be grateful to the man or woman who introduced this fad.

Maurice Thompson, that delightful writer of things close to nature's heart, would climb some tall tree with his hammock, fasten it securely to two stout limbs and let the wind rock him to sleep amid the rustling of the leaves and the twitter of the birds, which to him were sweet music. He always went prepared with his rubber blanket, in case of a storm, which he enjoyed greatly, in the upper air and a battle with the elements seemed to bring him even closer to nature and his God.

However, we do not need to sleep in tree tops, a porch or tent will serve our purpose, since it is fresh air, that we are seeking. An upper porch or balcony under a good roof, protected on the open sides by a closed railing, to prevent drafts under the beds or cots, screened in, if you wish, though mosquitoes seldom rise to such a height—with canvas curtains that can be dropped when needed to shut off rain or severe wind—this is an ideal arrangement for the outdoor sleeping room.

One of my neighbors, whose entire family sleeps out of doors, either upon one of the various porches or in the tent, told me that her daughter awakened one morning with wet feet, due to a heavy shower during the night, which did not waken the young woman. The result was a sore throat and a headache upon awaking. But this unpleasantness entirely disappeared within a few hours, which was most unusual, so the mother gave the fresh air entire credit for the renewal of health and strength, which enabled the daughter to throw off a disagreeable cold within a few hours.

The farmer and his family get more fresh air than the average family in the city during the day, but he needs this fresh air throughout the night also. Why not give the plan a trial and watch for results? If you are thus enabled to do a bigger and better day's work, mentally and physically, it will surely have been worth the while.

The number of pounds to the bushel, as provided by law in Kansas, is as follows: Barley, 48; white beans, 60; corn in ear, 70; oats, 32; rye, 56; shelled corn, 56; buckwheat, 50; flax seed, 56; potatoes, 60; wheat, 60.

SUMMER BEVERAGES.

Pineapple Vinegar.

Cover sliced pineapples with pure cider vinegar, let them stand three or four days, then mash and strain through a cloth as long as it runs clear; to every three quarts of juice add five pounds of sugar. Boil all together about ten minutes, skim carefully until nothing rises to the surface, then remove from the fire and bottle it. Blackberries, raspberries, in fact, any kind of highly flavored fruit is fine. A tablespoonful in a glass of cold water makes a fine summer drink.

Buttermilk as a Drink.

Buttermilk, so generally regarded as a waste product, has become a popular drink, much appreciated by townspeople, as well as those living in the country. It is a decided laxative to the bowels and is especially recommended in cases of typhoid fever. It resembles kumiss in its nature and with the exception of that article, is the most grateful, refreshing and digestible of the products of milk.

The Famous Kumiss.

Kumiss is a valuable beverage for use in the sick-room. Heat one quart of milk to seventy-five degrees Fahrenheit, add one and one-half tablespoonfuls of sugar, and one-fourth of a yeast cake dissolved in one tablespoonful of lukewarm water. Fill sterilized bottles to within one and one-half inches of the top. Cork and shake. Place the bottles inverted, where they may remain at a temperature of 70 degrees Fahrenheit for 10 hours; then put in the ice-box or a cold place, and let stand 48 hours, shaking occasionally, to prevent the cream from clogging the mouth of the bottle. It is refreshing and nourishing.—Woman's Home Companion for August.

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Vertical 2, 3 and 25-horse power.

Horizontal (stationary and portable) 4, 6, 8, 10, 12, 15 and 20-horse power.

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Famous air-cooled 1 and 2-horse power.

Famous skidded engines 2, 3, 4, 6 and 8-horse power.

Also a complete line of Famous mounting engines from 4 to 20-horse power, and sawing, spraying and pumping outfits and jacks.

If you will look into the matter rightly, and learn to appreciate how much work an I. H. C. engine will do for you and how economically it will do it, you will inevitably come to the conclusion that you must have one of some kind.

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POULTRY

This hot weather is very conducive to the propagation of chicken lice, and both young and old fowls are generally infested with them. Even the chicks that are raised in brooders are troubled with them, and it behooves the poultryman to see to it that his chickens are dusted with insect powder quite frequently, or their growth will be retarded.

An excellent mixture for fattening broilers is made as follows: One hundred pounds of finely ground barley, 100 pounds of finely ground corn, 100 pounds of finely ground oats, with hulls sifted out, and thirty pounds of beef scraps. Buttermilk or skim-milk is used for mixing. The birds are fed three times a day at intervals of four hours and are kept on this diet for three weeks. Another ration is made of 100 pounds of ground oats, 100 pounds of ground corn, 50 pounds of wheat flour and 4 pounds of talow, to be mixed with milk.

Another instance of the fact that eggs for hatching purposes can be sent a long distance with good results can be seen in the case of Mr. W. B. Borders, of Wichita, Kan. Mr. Borders is a breeder of Buff Orpingtons and sent to England, the original home of the Orpingtons, for thirty eggs. They arrived in good condition and he hatched twenty-six chicks. Two or three of them were killed by accident, but he has now over twenty of those chicks and they are the finest lot of Buff Orpingtons he ever saw. It is not so much the long distances that eggs are shipped that causes poor hatches as it is the rough handling that they frequently get from express agents and others. If handled with proper care eggs can be shipped 10,000 miles away and still hatch a good percentage of the fertile eggs.

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Route 2, Mayetta, Kan.

ANOTHER GREAT LAND BARGAIN.

Right in the timothy and clover belt of Kansas. This is a fine 240 acres of land situated only ½ mile from the new and growing town of Mildred in Allen Co., Kan. This is one of the finest tracts of land that I have ever listed for sale. The lay of this land is perfect and the soil is all a deep black loam that produces big crops of corn and the different small grains. On this farm there is a 1½ story house of 5 rooms, a fair barn, good corn cribs and other farm buildings. It is well watered by good and never failing wells and is well fenced with wire and hedge. Mildred is the location of the million dollar plant of the Great Western Portland Cement Co., which is now completed and is giving employment to more than 200 men. About 180 acres of this farm is in corn and small grain, the balance in grass. It is the property of an estate and is offered for the low price of $13,000. Write J. O. SMITH, Moran, Kan., Agent.

Uncle Sam's Hen Farm.

From time to time officials of the Department of Agriculture have been severely criticized for not paying more attention to the poultry industry, the contention being made that this phase of farming has been practically neglected. These criticisms, for the most part, have come from poultry journals or publications devoted to farming in general. In point of fact, there is substantial basis for such criticisms, inasmuch as little has been done for this industry in comparison with the efforts bestowed upon other products of the farm.

But officials of the department are not particularly to blame. They have not had funds available for extensive work in poultry investigation and experimentation. And, so far as known, critics of the department in this connection have not shown any disposition to assist in obtaining adequate appropriations from Congress for this work. Greater demands have been made for work on other lines and the money naturally has gone into those channels. Therefore, it is not strange that some officials of the department are somewhat resentful at the continued criticisms from persons or concerns interested in poultry raising, some of which have come to light quite recently.

Meanwhile, without having made any particular stir about it, the Bureau of Animal Industry, through the office of animal husbandry, is conducting important experiments at a small but thoroughly equipped poultry plant near the national capital. The work is in charge of a thoroughly competent young man, who is deeply interested in his experiments and who is making a success of the poultry plant. He could do more extensive work if a larger amount of money were available for the experiments. But he has planned and is carrying out systematically a line of work that promises important results for the country generally.

No effort is being made to develop fancy stock. On the contrary, the product of this plant is regularly marketed to employes of the department and the Bureau of Animal Industry in particular. The eggs are always absolutely fresh and guaranteed. Furthermore, they are carefully labeled with the date on which labeled and packed. Commercial cardboard boxes of oblong shape, each holding one dozen eggs, are used for packing. The boxes are so constructed that a given number, fit perfectly into a crate for distance shipment. These "home laid eggs" are so popular in the department that the supply does not begin to equal the demand. Consequently, John Dow gets a supply one week and Bill Smith the next, all hands taking turns. The eggs are paid for at the market price or slightly above, the government hens not laying for charitable purposes.

The poultry plant is located at Bethesda, Md., a few miles from Washington. It has been in operation for some time, but none of the results have yet been made public, for the reason that those in charge believe that it will be far better to wait a while and make a complete report than to publish fragmentary reports as the work progresses.

"I believe that the results that will follow these experiments will be of great value to the farmers and poultry raisers generally," said George H. Rommel, the husbandman of the Bureau of Animal Industry, who has general charge of the work. "Already the results are promising. The young man in immediate charge is deeply interested and is exerting every energy to get results. The probabilities are that we will not be ready to publish the results of this work for a year or more. When the report comes, however, we are confident that it will contain information of great value."

The present work in poultry is strictly commercial, dealing largely with essentials. When appropriations for the work are larger the scope will expand.

ADDITIONAL REAL ESTATE

FOR SALE OR TRADE—North Missouri farms; 240, 250, and 400 acre farms for cheaper Kansas improved or unimproved lands. Write at once what you have. G. T. Kinsey, Chillicothe, Missouri.

THIRTY MILES FROM KANSAS CITY.

Fine 80 acre improved farm in Johnson Co., Kan., one mile to town, ¼ mile to school, $1,000 cash, 8 years' time on bal. at 5½ per cent. Price $80 per acre. U. S. Realty Co., Spring Hill, Kan.

DICKINSON COUNTY FARMS.

A postal will bring a complete list. Mention this paper.
FORD & SMELTZ, Enterprise, Kan.

SOUTH TEXAS LANDS

For sale by the party that owns them, at prices ranging from $10 to $40. Any sized tracts, improved and unimproved.
J. R. WESTMORELAND, Eagle Lake, Tex.

SUMNER COUNTY FARMS.

We have some very choice farms on the market at right prices, and will show the best crops in the State. Write us for particulars.
PFEIFER & ALDERSON,
Wellington, Kansas.

SPECIAL BARGAIN FOR 30 DAYS.

640 acre improved farm, 4 miles from Ness City, 275 acres in cultivation, 4 a. alfalfa. 6 room house, stable, granary, 3 wells, all smooth land but about 60 acres. All under fence, 160 a. fine alfalfa land. Price $10,000, terms on part. J. G. COLLINS, Ness City, Kan.

ELLIS COUNTY, KANSAS

The great wheat, corn and alfalfa county. 240 acres improved, one mile from station, all bottom land. $50.00 per acre. 310 acres, 2½ miles from county seat, close to State Normal School. Improved. $45.00 per acre. Write for my list.
H. W. OSHANT,
Hays City, Kansas.

GOOD BARGAINS.

80 acre farm, 1½ miles of Fall River, good 3 room house, good well, stable and orchard, all good land, close to school, on phone line and rural route. Price $3,200. 160 acres, 2 miles from Fall River, good 5 room house, barn, corn crib and hen house, 75 acres in cultivation, 20 acres mow land, balance pasture and timber. Price $3,500.
WILLIAM FORBES, Fall River, Kan.

FORD COUNTY BARGAINS.

640 acres perfectly level wheat land, in well settled Lutheran settlement, one mile from church and school, 320 acres in cultivation, 160 acres fenced. Price $15 per acre for the next 20 days. 160 acres 3 miles south of Dodge City, 100 acres in cultivation; price $4,000.
G. L. PAINTER & CO., Dodge City, Kan.

A Cheap Home.

A nice smooth, second creek bottom farm, 80 acres, house, stable, well, chicken house, 25 acres in cult., balance in good grass, all can be farmed, and all alfalfa land. 8 miles of town, for the low price of $1,200. $650 cash and $550 in 3 years at 6 per cent if desired. Send for big list. Address,
STINSON & WEYAND,
Spearville, Kansas.

AN IDEAL FARM FOR SALE.

Kansas farm of 300 acres, adjoining a flourishing railroad town, forty miles west of St. Joseph, Mo. The soil, naturally rich, has been made more fertile by twenty years of judicious crop rotation, and by the liberal application of manure; well watered, fine walnut timber, finest blue grass pastures, alfalfa, timothy and clover meadows; finest corn and wheat land; well fenced; hay, cattle and horse barns for a large amount of live stock; large silo, water tanks, granary, fine mill, etc. A model stock or grain farm, ready for use. An excellent opportunity. For complete information address K 225, care Kansas Farmer, Topeka, Kan.

HERE'S A MONEY MAKER.

480 acres, a splendid stock and grain farm; 135 acres creek bottom land in cultivation that does not overflow. 40 acres in alfalfa; 10 acres timothy and clover; 280 acres in pasture, which is a No. 1. A good 7 room stone house, small barn and stock shed; splendid feed lots. Farm is well watered and nicely located. Price $14,000.00. Address
C. R. CANTRALL, Fredonia, Kan.

TAKE YOUR CHOICE

80 acres	$3,000
80 acres	$3,600
80 acres	$4,500
120 acres	$7,500
235 acres	$65.00 per acre
160 acres	$9,200

These are all improved. I have others Write me your wants.
B. F. BEESON,
Linn, Washington County, Kansas.

85 ACRES NEAR HIGH SCHOOL.

Just listed, an 85 acre nice smooth tract, on which is elegant 7 room residence, natural gas for fuel and lights, nice shade, 200 fruit trees, at edge of town, two blocks of county high school, part of place is rented for town pasture, and corn on the place promises 40 or 50 bu. to the acre; no waste; unimproved land no better sold for $60. This house is worth $1,800 and $65 an acre takes it.
DONAHUE & WALLINGFORD,
Mound Valley, Kansas.

HARPER COUNTY LANDS.

640 acres, seven miles from Anthony, county seat; big barn and basement, seven room house, groves, orchards, running water, 400 acres cultivation, 50 acres alfalfa, balance grass; rented last year for $2,100 cash. Close to school, two miles railroad station. Good land for corn, wheat and alfalfa and stock. Price $50.00 per acre. For terms and particulars call or write.
F. L. COLLINS, ANTHONY, KAN.
(Real Estate Barber).

FARM BARGAINS NEAR TOPEKA.

320 acres, 8 miles Topeka, 2 sets improvements, $50 per acre; 320 acres, all smooth, imp., 10 mi. Topeka, $65 per acre; 160 acres, 10 mi. Topeka, all smooth, imp., $60 per acre; 160 acres, 8 mi. Topeka, smooth, imp., $58 per acre; 160 acres, 12 mi. Topeka, well imp., $55 per acre; 80 acres 7 mi. Topeka, fair imp., $50 per acre; 80 acres 9 mi. Topeka, part bottom, $52 per acre. The above are all well located, productive farms and are all offered at a bargain. GILLETT & GILLETT, 104 West Fifth Street, Topeka, Kan.

When writing advertisers please mention Kansas Farmer.

A FINE SUBURBAN HOME FOR SALE.

This fine little home is situated adjoining the corporate limits of Moran, Kan. Only 6 blocks from the business center of the town and only 4 blocks from the splendid new public school building. This is a 5 acre tract situated at the junction of two very public roads and one of the most pleasant locations in the country. There is a good, well built and finished cottage house of 6 good rooms with a double closet, a large pantry and three porches. There is a good barn, with room for two horses and buggy, with good room in mow for hay a good smoke house a chicken house and other outbuildings. The buildings were all built during the summer of 1908, are new and well painted. All of the 5 acres is in grass—blue grass, timothy and clover—except ¾ of an acre, which is fenced chicken tight and is used for garden and truck patch. There is a good well. The house and barnyard is a fine blue grass lawn and is well shaded by large cedar, pine, maple and bodark trees. Moran is a fine little city of 900 people, has two main line railroads and the junction of a branch line. There are 12 passenger trains every 24 hours, with that number of mails. It has 5 good church buildings, a good public hall, one of the best schools in the state, a fine park and here is held one of the best fairs in Eastern Kansas. For additional information write J. O. SMITH, Moran, Kan.

When writing advertisers please mention Kansas Farmer.

BREEDING STOCK FOR SALE

In order to make room for growing stock I will sell a few dozen W. P. Rock hens at $10 per dozen or less quantities at $1 each. Such breeders would be worth from $2 to $5 each at breeding season. Some late chicks might yet be gotten out of them.
THOMAS OWEN, Station B, Topeka, Kansas.

LIGHT BRAHMAS.

LIGHT BRAHMA EGGS.

from birds scoring 93 to 94 by Judge Rhodes, $1.50 per 15, large flock $1 per $15, $4 per 100. Baby chicks each month $2 per dozen. MRS. A. P. WOOLVERTON, R. 8, Topeka, Kan.

PURE BRED POULTRY.

SUNNY CREST.

Stock, fruit and poultry farm. Eggs to sell from M. B. turkeys, R. I. Reds and Leghorns. Registered Jersey calves and Poland China hogs for sale. Write me. MRS. WM. BRITE, Pierce City, Mo.

BUFF ORPINGTONS.

BUFF ORPINGTONS, extra fine cock and two fine hens, $10; also 12 utility hens, $1 each. HARRY CURE, Atchison, Kan.

BUFF ORPINGTONS—Ckls., pens, baby chicks, eggs. More first prizes State Fairs and State Shows than all other breeders. My POULTRY BOOK, containing information worth hundreds of dollars to farmers sent for 10 cents. W. H. MAXWELL, R. 95, Topeka, Kan.

When writing advertisers please mention Kansas Farmer.

RHODE ISLAND REDS.

ROSE AND SINGLE COMB RHODE ISLAND REDS.

Eggs from any mating half price remainder of season. Mixed eggs Rose or Single Comb from several matings $1 per setting. Red pullets hatched in midsummer will make winter layers. Write for descriptive mating list. It is free.
H. A. SIBLEY,
Lawrence, Kansas.

BUFF ORPINGTONS.

BEST BUFF COCHINS IN KANSAS.

This variety exclusively. Can furnish eggs from prize winning stock at $1.50 and $2 per setting. J. C. BAUGHMAN, Topeka, Kan.

FOR SALE.

S. C. Buff Orpington hens, pullets and cockerels.
S. C. White Orpington hens, cockerels and pullets.
S. C. Black Orpington pullets and cockerels.
White Plymouth Rock pullets.
Rose Comb R. I. Red cockerels and pullets and a few
Diamond Jubilee Orpington hens and pullets. $1.00 to $2.50 each.
MRS. LIZZIE B. GRIFFITH,
Route 3, Emporia, Kan.

ELD NOTES

FIELD MEN.

Devine.....Topeka, Kan.
R. Johnson.....Clay Center, Kan.
Johnson.....Beloit, Kan.

PURE BREED STOCK SALES.

Percherons.

—J. C. Robison, Towanda, Kan.
1—Percheron Breeders' Sale at Man-an, Kan. Will H. Rhodes, Manager.

Draft Horses.

26, 27, 28—Percherons, Belgians, ch Draft, Shires, Clydes, Trotters, at mington, Ill. C. W. Hurt, manager, wsmith, Ill.
1, 2, 3, 4—Percherons, Belgians, ch Draft, Shires, Clydes, Trotters, at mington, Ill. C. W. Hurt, manager, wsmith, Ill.

Jersey Cattle.

30—Mrs. Wm. Brite, Pierce City, Mo.
—Geo. W. Null, Odessa, Mo.
12—Kinloch Stock Farm, Kirksville,

Herefords.

27—Miss Lou Goodwin's dispersion at Rapids. Chas. R. Thomas, manager, amson Bldg., Kansas City, Mo.
—Sam'l Drybread, Elk City, Kan.
12—Breeders' Sale Company, sale at mington, Ill. C. W. Hurt, manager, wsmith, Ill.
16—Shawnee Breeders' Association, L. rooman, manager, Topeka, Kan.

Shorthorns.

3—Harriman Bros., Bunceton, Mo.
9—Breeders' Sale Company, sale at mington, Ill. C. W. Hurt, manager, wsmith, Ill.
17—Shawnee Breeders' Association, L. rooman, manager, Topeka, Kan.

Polled Durhams.

10—Breeders' Sale Company, sale at mington, Ill. C. W. Hurt, manager, wsmith, Ill.

Aberdeen-Angus.

27—Sutton Farms, Chas. E. Sutton, ner, Lawrence, Kan.
11—Breeders' Sale Company sale at mington, Ill. C. W. Hurt, manager, wsmith, Ill.

Poland Chinas.

26—W. R. Coleman, Kingman, Kan.
26—W. R. Coleman, Kingman, Kan., A. W. Shriver, Cleveland, Kan.
26—A. W. Shriver, Cleveland, Kan.
2—F. G. Nies & Son, Goddard, Kan.
23—J. R. Sparks, Hunter, Okla.
—Geo. W. Null, Odessa, Mo.
5—J. D. Spangler, Sharon, Kan.
13—H. W. Griffiths, Clay Center, Kan.
16—Geo. W. Falk, Richmond, Mo.
26—C. S. Nevius, Chiles, Kan.
30—Roy Johnston, South Mound, Kan.
1—Herman Gronninger & Sons, Ben-a, Kan.
17—Geo. W. Smith, Pawnee City, Neb.
17—G. M. Hill, Garnett, Kan.
19—J. H. Harter, Westmoreland, Kan.
2-3—Breeders' Sale Company, sale at mington, Ill. C. W. Hurt, manager, wsmith, Ill.
1—J. W. Pelphrey & Sons, Humboldt, n.
3—H. S Chapman & Sons, Pawnee y, Neb.
3—J. W. Owens, Mill Grove, Mo.
4—E. E. Axline, Oak Grove, Mo.
10—H. B. Walter, Effingham, Kan.
19—H. O. Sheldon, Wichita, Kan.
2—F. G. Nies & Son, Goddard, Kan.
13—D. A. Wolfersperger, Lindsey, Kan.
15—C. H. Pilcher, Glasco, Kan., at ncordia, Kan.
16—J. H. Harter, Westmoreland, Kan.
25—Chas. O. Parsons, Clearwater, Kan.
25—Gress & Barnard, Nelson, Neb.

Duroes.

3—H. J. Coppins, Potwin, Kan.
25 and Nov. 20—S. W. Alfred & Son, aron, Kan.
27—Pearl H. Pagett, Beloit, Kan.
2-3—Breeders' Sale Company, sale at loomington, Ill. C. W. Hurt, manager, rrowsmith, Ill.
5—Miner & Cross, Guide Rock, Neb.
8—C. L. Carter, Cabool, Mo.
9—A. L. Aitkin and W. W. Weast, arsons, Kan.
10—Sam'l Drybread, Elk City, Kan.
12—S. W. Alfred & Son, Sharon, Kan.
31—J. E. Joines, Clyde, Kan.
1—Pearl H. Pagett, Beloit, Kan., and G. Sollenbarger, Woodston, Kan. Com-nation sale at Concordia, Kan.
2—E. M. Myers, Burr Oak, Kan.
3—Rinehart & Slagle, Smith Center, an.
4—W. C. Whitney, Agra, Kan.
7—Frank Elder, Green, Kan. Sale at ay Center, Kan.
8—Samuelson Bros., Manhattan, Kan.
9—Samuelson Bros., Cleburne, Kan.
9—Miner & Cross, Guide Rock, Neb., Superior, Neb.
9—Miner & Cross, Guide Rock, Neb.
16—Samuelson Bros., Blain, Kan.
17—Thompson Bros., Garrison, Kan.
18—T. E. Goethe, Leonardville, Kan.
21—W. T. Fitch, Minneapolis, Kan.
22—Pearl H. Pagett, Beloit, Kan.
23—F. G. McDowell, Corning, Kan.
23—R. G. Sollenbarger, Woodston, Kan.

Berkshires.

g. 31—Sutton Farms, Chas. E. Sutton, wner, Lawrence, Kan.
t. 12—Kinloch Farm, Kirksville, Mo.
v. 2-3—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
v. 16—F. T. Hadachek, Wayne, Kan.
b. 15—F. T. Hadachek, Wayne, Kan.

Hampshire Swine.

v. 2-3—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.

Chester Whites.

v. 2-3—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.

Combination Sales.

pt. 28 to Oct. 1—Woodson County Breed-rs' Association will sell: Aberdeen-Angus cattle, Sept. 29; Shorthorn cattle, Sept. 30; Durocs, Berkshires and Poland Chinas, Oct. 1. Write G. A. Laude, Secretary, at Rose, Kan.
ec. 11-18—Enid Fine Stock Show and Sale, F. S. Kirk, Manager, Enid, Okla.
b. 16, 17, 18—Mitchell County Breeders' Association, Beloit, Kan.

A movement is on foot to organize an improved stock breeders' association in Jackson county, with Holton as headquarters. This is a move in the right direction and should meet with immediate success. The Woodson County Breeders' Association with headquarters at Yates Center, a description of which was given in a recent number of Kansas Farmer, is an excellent example of what may be done along this line. There are many other associations of this kind in Kansas and all of them are successful.

Mr. H. T. Groom who has been known in Kansas for years as a breeder of Shorthorn cattle in the panhandle of Texas has been experimenting with speltz or emmer and, while he has not tested it very long he feels that it will be one of the best small grain crops for the semi-arid region. He states that in Europe this grain is much used for human food like wheat or rye, and, so far as his experience has gone it promises well for the southwest. He believes that Dwarf, Maize, Kafir corn, Sorghum and Speltz will make a combination that will bring money to the pockets of the farmers of the southwest. Speltz is an excellent feed for hogs and equally good for horses and mules, though the latter must be fed with care on account of its richness.

Geo. Smith's Big Hadley Pigs.

If interested in big type Poland Chinas and you are in the market for a first class spring pig of either sex, correspond with Geo. W. Smith, of Pawnee City, Neb. Mr. Smith has them sired by Mammoth Hadley the greatest son of the $500 Big Hadley. Their dams are representative of the very best big strains, such as Prince Youtell, Over Chief, Highland Chief, etc. When writing please mention Kansas Farmer.

Colonel Albright.

The successful business man in any line must have plenty of what is known as stick-tititiveness. He must not be a man easily discouraged. There is perhaps no business that requires courage and ability to hang on more than the business of the auctioneer. Col. A. L. Albright of Waterville is one of the boys that keeps eternally at it. Always talking and working for better and more good stock for Kansas farmers. Remember him when you hold your next sale.

Another Guide Rock Herd.

A herd of Poland Chinas that most Kansas breeders have heard about is the J. H. Hamilton & Son herd at Guide Rock, Neb. Guide Rock is just over the line from Jewell county, Kansas. The writer visited this herd recently and found a spring crop of pigs numbering 125 that is indeed the best we have seen this season and we think possibly we ever saw. As breeders of big smooth Polands the Hamiltons have always stood in the front ranks and today their herd is second to none in the West, or East either, for that matter. The Hamilton ty, of a Poland China is neither the big type nor the little type. It is a type that is gaining favor all over the country and those who are interested in the best in big, smooth Polands should be sure to see their show herd at both Lincoln, Neb., and Topeka, Kan., at the state fairs this fall. They are fitting a herd that will meet with favor everywhere. They will price very choice young boars now at very reasonable prices. Write them, mentioning Kansas Farmer.

Rinehart & Slagle's Durocs.

Rinehart & Slagle, Smith Center, Kan., are breeders of Duroc Jerseys, who have a fine crop of spring pigs to price at once. They have 150 pigs from 24 sows and they are as nice a lot as you will find anywhere and the breeding is good as well. They positively will not hold their young boars later than October 20 and prefer to not hold them that long. Mr. Rinehart takes the stand that it is decidedly to the advantage of the purchaser to get his young boar early, before he is probably ruined by his associations with a pen full of other young boars. This firm is offering choice young boars selected from their herd at very low figures if taken at once. They want to move them early and will sell cheaper if they can do so. Their herd boar, Golden Ruler, sired by Pearl's Golden Rule, has proved his worth by siring a major number of this crop of pigs. Always mention Kansas Farmer when writing this firm, Rinehart & Slagle, Smith Center, Kan.

H. A. J. Coppins' Duroc Sale.

On September 3, at Potwin, Kan., H. A. J. Coppins will sell a bunch of his fancy Durocs. The offering will consist of 22 head of tried sows and gilts and 7 spring boars ready for service and one herd boar. The blood lines represented in this offering are King Ingomar, he by King I Am by big I Am, he by Buddy K 4th, dam Miss Ingomar. Four spring pigs by Chief Justice out of Ohio Chief sows, three spring boars by Royal Improver, the sire of Perfect Improver, now at the head of J. A. Howe's herd at Wichita and one of the best Duroc boars in Kansas today. These three young boars will make herd headers and should not be overlooked. The sows are granddaughters of Ohio Chief, Henley, Parker M. C., Tip Top Notcher and Chief Justice. Most of these sows will be bred to Kansas King, he by Kant Be Beat, his dam was Cedar Bell 3d by Top Notcher. Remember the date of this sale is Friday, September 3, and Potwin, Kan., is the place. Kindly mention Kansas Farmer when writing.

ATLAS PORTLAND CEMENT

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The cement bought by the U.S. Government for the Panama Canal

SEND FOR OUR FREE BOOK "Concrete Construction about the Home and on the Farm." Contains over 100 drawings and illustrations.

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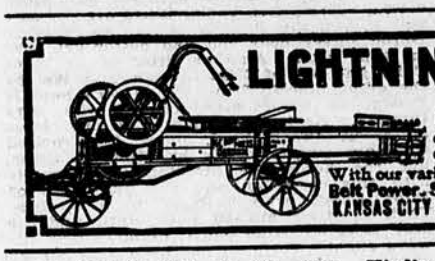
ALFALFA SEED

Kentucky and English Blue Grass

High Grade Seeds Which Will Produce Satisfactory Crops. WRITE FOR SAMPLES and Prices.

ROSS BROTHERS SEED HOUSE 211 East Douglas

Clover and Timothy Seed • WICHITA, KANS.



LIGHTNING HAY PRESSES

For 25 years the Reliable Balers.

Simple, Free from Breakage, Greatest Capacity and Best Work—Strong and Durable.

Consider these Facts for a Profitable Investment.

With our various styles can meet your requirements, Horse & Belt Power, Self Feed Attachments. Write for our Catalog.

KANSAS CITY HAY PRESS CO., 129 Mill St., Kansas City, Mo.

A Great Voter Yearling.

In this issue of Kansas Farmer will be found the advertisement of A. & P. Schmitz, of Alma, Kan. In this advertisement the Schmitz Bros. offer to sell a very choice yearling boar sired by the great prize winning boar, Voter. This pig is a dandy in every respect, a regular show pig, with lots of size. His dam was the fine sow, Promise, one of the best sows ever sired by Perfection E. L. The pig is certainly well enough bred to suit any one and he is just as good individually. The Schmitz Bros. also have the best lot of spring pigs they have ever raised. Most of them are by Voter and out of sows by Perfection E. L., Keep On Perfection, Meddler 3d, Chief Sunshine, Perfect Perfection, the sire of old Keep On, etc. There are about 70 of the spring pigs, and reasonable prices will be made on both boars and gilts. A Voter pig will help the reputation of any herd in the land. Write for full information and mention Kansas Farmer.

Sale of High Class Brood Sows.

In this issue of Kansas Farmer will contain the sale ad of A. W. Shriver, of Cleveland, Kan., and W. R. Coleman, of Kingman, Kan. Announcement of this sale was made last week. We can say without fear of contradiction that some of the best individual sows and some of the richest pedigreed sows will be sold in this sale that ever passed under the auction hammer. The good that the dispersion of such a great herd of brood sows may de by being scattered in other good nerds can not at this time be foreseen. The herd bears that a part of the sows are bred to I's Roll in Line by Next in Line, his dam was the great show sow Carnation, by High Roller. Another great breeding boar is Gem's Spell by Spell Binder and out of Inside Pocket. August 26 will be bargain day for the breeder who wants to buy good brood sows with breeding and quality combined. We urge all lovers of Poland Chinas to attend this sale. Bids sent to auctioneers or field men will be honestly handled. Send for catalog and be on hand sale date. O. W. Devine will represent Kansas Farmer.

Chapman & Sons' Big Polands.

The advertisement of Messrs. J. H. Chapman & Sons, which appears in the Kansas Farmer this week should interest every farmer and breeder who believes in big, smooth Poland Chinas. The Chapman herd is the oldest in Southeastern Nebraska and its owners have a reputation for fair and square dealing that is unequaled. Many noted sires have come from this herd and the length of time that it has been in existence, together with the ability and care with which the business has been conducted is a guarantee of the excellence of the stock offered. In the advertisement which appears elsewhere mention is made of the boars and gilts that are offered for sale. Thirty-five boars and 40 gilts. They are of very early farrow and extra big and growthy. All of them were sired by the outstanding boar, Looks Grand, by the prize winner, Grand Chief. His dam was by Growthy Perfection. The dams of the pigs offered are very large and all matured by such sires as old King Do Do by Expansion Big Hadley, Johnson's Chief and other noted big boars. Write Chapman & Sons about these great pigs and mention Kansas Farmer.

Many times Kansas Farmer has announced that it will pay no attention to anonymous letters. We cannot afford to do so. Many times such letters come to us containing matters that may be important but as we do not know from whom they come we have no means of determining their value. Just now we have a letter from some one who asks an important dairy question but fails to give his post office address or his signature. The letter evidently comes from Reno county but of course cannot be answered under the circumstances.

Farmers in Kansas are becoming more fixed in their belief that grass is a good farm crop. In fact there are many who are engaged in the live stock business who put practically all of their farms into grass for pasture or hay. Of course alfalfa or clover is included into this statement, when hay is refered to. In this connection it is questionable whether a more valuable implement can be secured for farm use than a manure spreader. This puts the manure where it will do the most good and when it will do the most good and at the same time removes the unsightly, illsmelling and insect breeding manure heap. Buy a manure spreader, use it frequently on grass and get bigger crops of grass and richer returns from other crops when the grass is plowed under.

Alfalfa Seed for Sale.

With this issue of Kansas Farmer the Archia's Seed Store of Sedalia, Mo., are advertising alfalfa seed for sale. The class of seed they handle is a choice lot and is offered at $10.50 per bushel. If you wish to sow alfalfa this fall it might pay you to write the Archias's Seed Store at Sedalia, Mo.

SCOTCH COLLIES.

Pure golden sable, with white markings, from trained families of best breeding. Prices reasonable; satisfaction guaranteed.

CHAS. O. PARSONS,
Clearwater, Kansas.

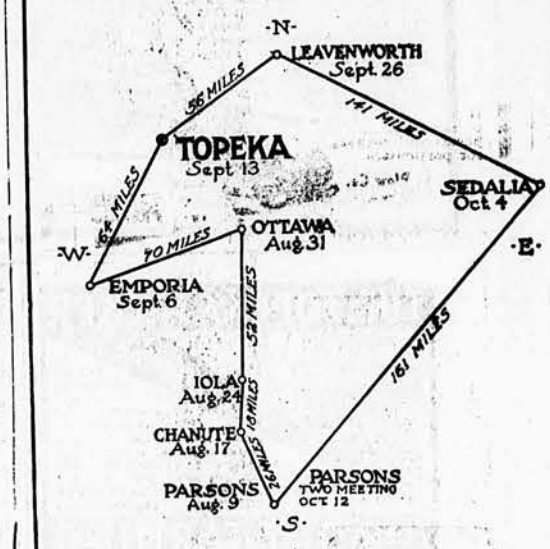
THE STRAY LIST

AUGUST 21, 1909.
Florence Erwin, County Clerk.

Taken up June 15, 1909, by William S. N. Mead, near Fellsburg, Kinsley County, one mare, 14 hands high, sorrel, blaze face, saddle marks. Valued $30.00.

AUGUST 21, 1909.
C. F. Younkin, County Clerk.

Taken up April 24, 1909, by H. M. Keltner, 3½ miles northeast Hoisington, Homestead twp., Barton Co., Kansas, 1 cow, 1,150 lbs., red and white, split under left ear; 1 steer, year old, red, split under each ear; 1 steer, year old red, split under left ear.



The Big State Fair and Live Stock Exposition.

Topeka, September 13-18, 1909.

New Buildings, New Sewer System, New Equipment. Reduced stall rents and increased premiums. Free space for Implements and Machinery. $20,000 in premiums and the glad hand to you.

Member of the Kansas Grand Circuit. Also member of the Big State Fair Circuit with short shipments for each fair. Everybody accomodated and everybody welcome. Exhibits in every department, but especially strong in live stock, implements, machinery, agriculture, horticulture, dairy, poultry, apiary and house hold. Special money for the Boy's Corn Contest and for pure bred live stock. The best track in the State and a large race entry.

For entry blanks and premium list address

R. T. KREIPE, Secretary, -:- Topeka, Kansas

WOODWORTH TREADS

Save Automobile Tires

They are tire protectors, made of chrome leather studded with steel studs held on the tires by spring wires on each side. Anyone can easily fit them to any make of tires.

They cost only about one-half as much as tires.

Puncture Proof **Non-Skidding**

Will save double their cost even on good roads. On rough, rutty or rocky roads they will save over half the tire expense, besides doing away with punctures and skidding.

The only protectors that never heat or chafe the tire.

Guaranteed to give good service and to save the tire.

Over 40,000 sold in last three years. Send for free catalog and our special offer.

LEATHER TIRE GOODS CO.

2402 Whirlpool Ave., Niagara Falls, N. Y.

$50 TO $300 SAVED

We are manufacturers, not merchants. Save dealers, jobbers and catalog house profit. I'll save you from $50 to $300 on my High Grade Standard Gasoline Engines from 2 to 22-H.-P.—Price direct to you lower than dealers or jobbers have to pay for similar engines in carload lots for spot cash.

GALLOWAY

Price and quality speak for themselves and you are to be the sole judge. Sell your poorest horse and buy a 5-H.-P. only $119.50

You Can Make From $5 to $10 a Day

Direct From My Factory on 30 Days' Free Trial. Satisfaction or money back. Write for special proposition. All you pay me is for raw material, labor and one small profit. Send for my big BOOK FREE.

Wm. Galloway, Pres.
Wm. Galloway Co.,
385 Galloway Station
Waterloo, Iowa

ALFALFA
SAVE THE SEED

Do not thresh your Alfalfa with a common grain separator. Use a special machine—the "Birdsell" Alfalfa Huller. Write us for booklet.

Birdsell Manufacturing Co.
South Bend, Indiana

Guaranteed Ensilage Cutter BLIZZARD

Sold on merit backed by 38 years' success. Proved strongest, most durable, smoothest running. Cuts green or dry feed and elevates any height. Knives adjustable at any time. Perfected construction throughout. Mounted or unmounted. Ask for free book, "Why Silage Pays."

Write for New Catalogue Free

Jos. Dick Mfg. Co.
1418 W. Tuscarawas St.
Canton, Ohio

Don't Have a Blind One

Wonderful Discovery

VISIO

MOON BLINDNESS and all Diseases of the Eye successfully treated with this NEW REMEDY.

Money Back if it fails to cure. $2.00 per bottle postpaid on receipt of price.

Visio Remedy Ass'n, Dept. 9, 1933 Wabash Av., Chicago, Ill.

GET BUSY

Sawing your summer's wood with the DIAMOND SAW FRAME AND SAW. The very best made. FULLY GUARANTEED. All styles of frames. All sizes of Saw Blades. Ask your nearest dealer, or write direct to the factory. Printed matter free.

NEW WINONA MFG. CO.
304½ W. Fifth Street, WINONA, MINNESOTA

ALFALFA FINEST NON-IRRIGATED SEED. FRESH AND PURE.

Also CLOVER, TIMOTHY, BLUE GRASS, WHEAT, RYE, BARLEY TURNIP and OTHER SEASONABLE SEED. Best and Cheapest. Catalogue Free.

ARCHIAS' SEED STORE.
Box 17. Sedalia, Missouri.

A. T. Cross, Guide Rock, Neb., has 75 Duroc Jersey spring pigs that are ready to select from. He is offering the best of the young males at prices that will be found reasonable. They are by the great herd boar Pilot Chief, which is owned jointly by Mr. Cross and his neighbor breeder, H. B. Miner. The get of Pilot Chief this season is simply great. Both Mr. Cross and Mr. Miner have some litters sired by him and out of their best sows that it will be hard to beat this fall in the show ring. While his get is outstanding the get of Col. C. by G. C.'s Col. is also attractive and the value of this great young boar has been considerably enhanced since this season's crop of pigs have begun to show up. Mr. Cross and Mr. Miner have separate herds but own Pilot Chief and a line of high priced sows jointly. They are now advertising as Miner & Cross and when you write to them address them in that manner and you have the best in two herds to select from. They have claimed February 9 as the date of their bred sow sale and they will sell at Superior, Neb. Their offering on that date will be sterling in every particular.

Miner's Duroc Herd at Guide Rock.

H. B. Miner, Guide Rock, Neb., has 50 early spring pigs sired by Pilot Chief that are as good as the best. He has five February boars sired by Pilot Chief and out of a sow sired by a great son of Crimson Wonder that must be seen to be appreciated. These five young boars are for sale and if you are looking for an extra early Duroc Jersey boar you had better get busy on this litter. Another litter is by Pilot Chief and out of Miss Lincoln Top, she by the great Lincoln Top. Mr. Miner's herd is strong in good breeding all the way through. As has been stated in our notice of A. T. Cross' herd, many high priced sows are owned jointly by Miner & Cross, but the herds are maintained separately with this exception and the ownership of Pilot Chief, who belongs to the firm. Their sales are always held jointly and the best selected from each herd, which always enables them to put up a very strong offering. On February 9 they will sell at Superior, Neb., an offering of bred sows selected from both herds that will be hard to outclass. They are young men, who stand well at home and both own good farms and are young farmers and breeders who do things. They have been good buyers in many of the best sales in Nebraska and Kansas. They are holding their sale in February at Superior to enable their Kansas friends to attend conveniently. They expect to attend a number of sales in Kansas this season.

Lobaugh's Poland Chinas.

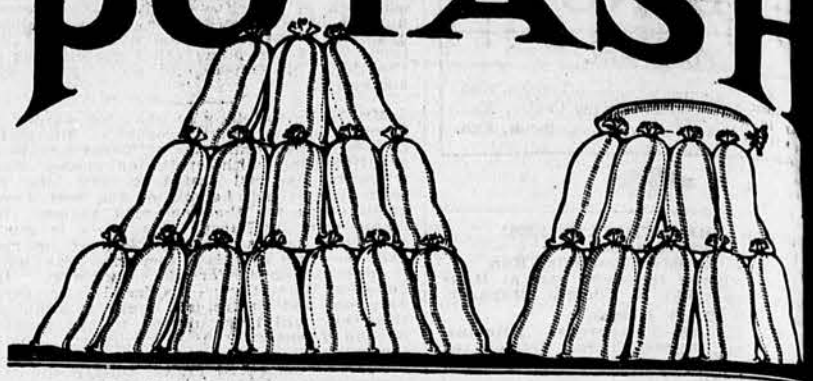
Farmers and breeders that like plenty of size in Poland Chinas should be interested in the advertisement of A. C. Lobaugh, of Washington, Kan. Mr. Lobaugh is offering for quick sale a half dozen very choice yearling gilts sired by a thousand pound boar bred by Peter Mouw and out of large Tecumseh bred sows. These gilts will be sold for $25 each and kept until safe in pig to the excellent boar, Kansas Ex by Expansive, the best thousand pound son of old Expansion. These gilts are good ones and are certainly very cheap at the price. In fact, they are worth the money open, to say nothing of the service of the great young boar which we have mentioned. But Mr. Lobaugh has a big lot of hogs and will spare these at the price if they are sold soon. This fine herd was established about five years ago with stock from breeders that adhered to the big type. He was very careful in making selections and always bought good individuals. Most of the sows are of Tecumseh breeding and the herd boars which we have mentioned are as good a pair of boars as can be found in any one herd in Kansas. The old boar, Chief, is of the Mouw breeding and was sired by Chief Price 2d and his dam was Chief Lady, the biggest of the big. Kansas Ex is a grandson of Expansion He is very large and has extra good finish and is very mellow. Mr. Lobaugh is also offering about 25 very large growthy early spring boars and a like number of gilts. His farm is about a half mile from town. Visit him if possible.

Harriman Bros.' Dispersion Sale of Shorthorns.

In this issue of Kansas Farmer will be found the advertisement of the dispersion of one of the great herds of Shorthorns. This herd consists of sons and daughters of five champions and one of the greatest milking herds of Shorthorns known anywhere. A herd of 60 cattle (which means, say, 20 females of breeding age) that produces two or three $1,000 bulls every year. A herd made up of the get of only the greatest bulls, including five champions. A herd in which every member is Scotch, and Scotch of high degree. A herd in which more close culling has been practised than we have known of anywhere else in the state. It is perhaps not so important as some other things to know what Harriman Bros. paid for their foundation stock, but the prices were generally among the high ones for the season as their buying for the most part had to be in competition with those who want the best and pay the most. Notable instances of this occurred in the dispersion of some of America's greatest herds, including the Tebo Lawn and the Bothwell dispersions. Impending change of business on the part of Bert Harriman called for some sort of division of the herd, and, as is usually the case, a dispersion sale was determined on—and on such short notice that there is small possibility of a full realization of values. The auction, banking and other interests of the senior partner, Col. R. L. Harriman, make handling the herd without his nephew's help and interest out of the question. In considering this sale Shorthorn breeders should not consider whether they really need such animals as make up the offering. There is no doubt of the need. They should consider rather the opportunity that is offered of securing outstanding producers, cattle of recognized merit of breeding, and that have proved their value as breeding cattle and heavy milkers. Features of the catalog of this sale are found in the liberality and accuracy of the illustrations, nearly a score of the cattle being shown in photographs and sketches. Other features worthy of attention of prospective purchasers are the individual foot notes given for each animal. The catalogs are ready for distribution and may be secured upon application to Harriman Bros., Pilot Grove, Mo. Look up ad on another page and mention Kansas Farmer when you write.

Thomas Hubbard, Kimball, Kan., received a letter asking him to ship a bushel of his Roseland white corn seed to the Transvaal department of agriculture in South Africa. Mr. Hubbard makes a specialty of raising this variety of seed corn and exhibits of it at the Paris Exposition were awarded first premiums.

POTASH



10 More Bushels of Wheat for 87 Cents

The result of a test. Two Fertilizers used, in which the quantities of Nitrogen and Phosphate were the same. **No Potash** yielded 21 bushels per acre. **With Potash** the yield was 31 bushels. The extra cost for Potash was 87 cents.

Potash makes deep roots, gives strength to the stalk, vitalizes the plant, fills out head and grain and increases the weight.

This Fall add 15 pounds of Muriate of Potash per 100 of bone or plain phosphates, or—to 2 add 10 pounds per 100. All elements are required, but be sure to add **Potash.** It pays.

Arrange *now* with your dealer to get **Potash** *when* you need it.

GERMAN KALI WORKS, 560-63 Monadnock Building, Chicago
New York—93 Nassau Street Atlanta, Ga.—1224 Candler Build

We will give $100.00 for the 5 best ears of seed corn sent us before Nov. 1st, 1909 by users of

THE APPLETON MANURE SPREADER

bought in 1909. Write today for full particulars, and ask for our FREE SPREADER BOOK, which proves that the Appleton Manure Spreader is as strong as steel and oak can make it; so simple that any boy who can drive a team can run it as well as any man: and so effective in operation that it never bunches the manure, but pulverizes thoroughly and distributes evenly from the beginning to the end of the load.

APPLETON MF'G. CO.
19 Fargo St. Batavia, Ill., U. S. A.

More Grain Profits

Pay me on time, or cash, my factory price, but be sure to try a Chatham, anyhow. Clean your grain—before you sell it—or before you sow it. $1,000,000 lost by Farmers in every state each season by selling dirty grain is a low estimate. You are "docked" on the price because of dirt in every bushel. Cleans wheat for market. Takes oats, cockle, garlic, mustard and chess out of wheat. Cleans red clover—takes out buckhorn plantain. Cleans alsike clover and alfalfa. Cleans beans, oats, barley. Grades corn. Cleans timothy seed.

TAKE 30 DAYS' FREE TRIAL ON A

CHATHAM Fanning Mill, Seed Grader and Cleaner

FREIGHT PAID TO YOU

250,000 sold already in U. S. and Canada. Experiment Stations indorse them, and Agricultural Papers recommend them to subscribers. Write for full particulars—Prices and New Catalog Free—Address me at nearest city to you—MANSON CAMPBELL, President

THE MANSON CAMPBELL COMPANY, Detroit, Mich.
Kansas City, Mo. St. Paul, Minn. Portland, Ore.
24 Branch Warehouses for prompt shipments.

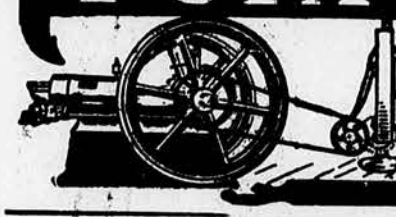
BOO

Tells 100 ways Chatham Pays F

FRE

Sent Freight Prepaid to Farm On 30 Days' Free T

PUMP WATER



PUMP 1000 GALLONS OF WATER FOR ONE CENT

Every farm should have one of our pumping plants. Unlike a windmill it always works, wind or no wind, and costs less for repairs. Plenty of water in a minutes time.

WITTE GAS AND GASOLINE ENGINES

Suitable for wells, any depth, and for irrigation. Guaranteed 5 years. Write stating size wanted.

WITTE IRON WORKS CO.
527 W. Fifth Street KANSAS CITY, MO.

GET THIS HARROWING ATTACHMENT FREE

We are going to give one of these Harrowing Attachments absolutely free to one farmer in each neighborhood. Write us AT ONCE for the particulars. This is a straight business proposition. We sell all our implements direct to the farmers. We depend on them making more sales on their merits. Just now we are making a specialty of these Harrowing Attachments, and we want to sell thousands of them this fall. One in use will sell many others; so we want one in each neighborhood to show farmers what it will do.

Do you want one now without a cent of cost to you? If so, write us to-day. Just a postal card request for particulars.

Madison, Wis.

FREIGHT PREPAID

THE LARGEST AND BEST LINE OF

WELL DRILLING MACHINERY in America. We have been making it for over 20 years. Do not buy until you see our new illustrated Catalog No. 4 Send for it now. It is FREE.

Austin Manufacturing Co., Chicago

$10.00 Sweep Feed Grinder. | $14.00 Galvanized Steel Wind Mill.

We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.

CURRIE WIND MILL CO.,
Seventh St., Topeka, Kansas

THE TOPEKA PACKER

ENDORSED BY SECY. COBURN

It will enable you to get the full yield of your soil, and the difference in one season's crop will more than pay for the machine. A card today, asking for TOPEKA PACKER BOOKLET No. 15, will bring prices and full description. THE TOPEKA FOUNDRY & MACHINE CO., Topeka, Kansas

FOR DRY FARMING

PATENTS TRADE-MARKS and COPYRIGHTS

Notice in "Inventive Age." Book "How to Obtain Patents" FREE

E. G. SIGGERS, Box 7, N. U. Bldg., Washington, D. C.

L. M. PENWELL,

Funeral Director and Licensed Embalmer.

511 Quincy St. Topeka, Kansas

PUBLISHERS' NEWS

ne man with one horse can bale one ton hay in one hour. This is what can be e with a Daisy self-threading, self-feed- one-horse hay press, made by the Geo. l Company, Quincy, Ill. See illustrated on page 9. Write for free baler book prices.

ightning Hay Presses have been made Kansas City for 25 years. They are ng, reliable, do good work and lots of Made for both horse and belt power. te for catalog to Kansas City Hay s Company, 129 Mill street, Kansas y, Mo.

. B. Rankin, of Lyons, Kan., has just ded his store property to G. N. Watkins, Clinton, Mo., for his 280 acre farm in ry county. Mr. Watkins would rather a store in Kansas than a big farm in ouri, though he will probably own both Kansas after a while.

his issue of Kansas Farmer contains the ertisement of J. B. Westmoreland, of le Lake, Tex. Mr. Westmoreland is ad- tising his own lands located in South as. Prices range from $10 to $40 for sized tracts, improved or otherwise. en writing him please mention Kansas rmer.

he Anthony Business College, Anthony, n., of which Prof. John M. Smith is man- r, starts an ad in this week's issue on back page. Please read it carefully. college offers young men and young men an exceptionally thorough course. ite for full information, mentioning Kan- Farmer.

Ash Grove Superfine" is the name of Kansas cement made by the Ash Grove e & Cement Company. It is a splendid ent, none better. Read the interesting on page 5, and write for the free book, ractical Cement Facts." Address Ash ve Lime & Cement Company, Dept. C, nsas City, Mo.

. M. Wayman, with addresses at Vallier, nt., or 824 Security Bldg., Minneapolis, n., announces on page 6, in the "Read- Market Place," a United States govern- nt land opening under the Carey acts. is land embraces the Conrad-Vallier proj- , comprising 70,000 acres. The registra- n date will be October 1-7. Registra- n can be made through power of attor- . If you are interested address as ve, mentioning this paper.

he constantly increasing price on shin- s, together with their poorer quality, is ating increased interest in prepared roof- . For this reason Kansas Farmer is glad carry in its columns the advertisements such firms as the Barrett Manufactur- Company, of New York, with branches other cities, makers of Amatite Roofing. the illustrated ad on page 5. Please that you can get a free sample. Ad- s nearest office of Barrett Manufactur- Company, and say you say the ofter Kansas Farmer.

t only takes a few minutes to run the w around the stack yard and turn a few rows as a protection against possible and as a drainage for surface water. same practise should apply to the hay d alfalfa stacks. Feed stuffs are getting her each year and one cannot afford to danger his harvest of crops by a little k of care in looking after their proper eservation. If the hay is stacked in pasture a litle more time spent in set- g a few posts and running a few strands barb wire around the stack yard will . This saves not so much what the ck might eat as what they would waste d it is well worth saving.

Now is a good time of the year to begin make money by saving. It is an all to mmon practise among the farmers of west- n states to allow expensive machinery to nd out in the weather and take care of lf. It is a common sight in the wheat ld to se whole threshing outfits standing the open with absolutely no protection ainst the weather. If a man spends two three thousand dollars in machinery hich he uses but a few weeks of each ar and then leaves out in the weather the balance of the time he is cutting wn his profit at a rapid rate. Sun, wind d rain will do more to the average piece farm machinery than will all the use to which it is during its active use on the farm.

The writer has always been an admirer of trees but he has his choice at the kind. Perhaps there is no form of tree life more useful for making live fences than Osage orange, but this has its disadvantages. Its root system is very vigorous and reaches out broadly after its share of the moisture to be found in the adjacent soil. This operates as a detriment to nearby crops in certain seasons. If allowed to grow tall the Osage orange is likely to have more enimies than friends especially among the traveling public who suffer from its overhanging branches, its power to shut off the breeze in the hot summer days and its shading of the roadway and preventing the evaporation from muddy spots. The Osage orange is all right but it needs to be looked after and kept properly trimmed.

An Eighty Acre Farm.

With this issue The U. S. Realty Company at Spring Hill, Kan., 30 miles from Kansas City, are advertising a valuable 80 acre farm. This farm is a bargain at the price asked for it. Write at once if you wish to buy. Kindly mention Kansas Farmer.

Harper County, Kansas, Farm.

An exceptionally good 640 acres of farm land is offered by F. L. Collins, the real estate barber, at Anthony, Kan., at a rate and on terms that should interest any reader of this paper that might be looking for a good investment. See full description of farm on page 7 of this issue.

Sharon Valley Alfalfa Farms.

Barber county, Kansas, in the heart of the Sharon valley, is recognized everywhere as among the very best location for alfalfa and corn land. A crop failure has never been known. William Palmer, of Medicine Lodge, the county seat, has a choice list of lands that he will be pleased to forward to any one interested. Mr. Palmer is reliable and will guarantee you satisfaction.

Large Attendance Promised for Kansas Agricultural College.

Judging from the number of inquiries received at the secretary's office the attendance at Kansas State Agricultural College the coming year will far exceed all previous enrollments. A comparison of the number of prospective students of this and last year indicates that the enrollment this fall will be greater by 20 per cent than that of last year. The attendance of 1908-09 was 2,306, the largest in the history of the college or of any institution of learning in the state.

More Grain Profits Book.

The Manson-Campbell Company of Detroit, Mich., with branches in Kansas City and other cities, probably makes more fanning mills than any other company. A quarter of a million have already been sold in the United States and Canada. This is the time when Kansas Farmer readers want fanning mills. Send for the free book which tells about the Chatham Mill. See ad on page 12. Address office nearest you. This mill is sold on 30 days' free trial.

Ranch Doubles in Value Since 1903.

It seems that the investor could not go wrong by buying liberally of Kansas real estate. In this column have appeared numerous reports of sales at several times the cost of a few years ago. A ranch of 2,950 acres sold in Ellsworth county the past week for $75,000 was sold six years for $33,000. William Hafenstein, of Alma, Kan., the purchaser, declares he has a great bargain. There was a time not many years ago when the land was worth not more than $3 an acre, and, in fact, was held at that price for some time before sold.

Atlas Cement.

We have read carefully the splendid book entitled "Concrete Construction About the Home and on the Farm," issued by the Atlas Portland Cement Company. The Atlas company has just put out a new edition of this book. It is the finest book on this question we have seen. It is intended chiefly for farmers. Every farmer ought to have a copy of it. It is splendidly illustrated. It gives just the information we all want to get about concrete. It tells what cement is, how to handle it, etc. We would earnestly advise every reader of this paper to send for a free copy of this beautiful book. See offer on page 11. Address the Atlas Portland Cement Company, 1107, 30 Broad street, New York.

Kansas Commissioners for the National Corn Exposition.

Gov. W. R. Stubbs has just announced the names of the Kansas commissioners who will have charge of the collection and exhibit of Kansas corn at the National Corn Exposition, which will be held at Omaha, Neb., on Dec. 6-18, 1909. Several of these commissioners are reappointed from the board of 1908. The list is as follows: A. M. Ten Eyck, Manhattan; J. H. Miller, Manhattan; Edwin Taylor, Edwardsville; I. D. Graham, Topeka; T. D. Hubbard, Erie; C. B. Kirtland, Salina; W. E. Blackburn, Anthony; J. M. Gilman, Leavenworth; M. M. Sherman, Geneseo; Alex Phillips, Hays; J. T. Tredway, La Harpe; Arthur Capper, Topeka; H. F. Harbaugh, South Haven.

Kansas Land Preferred to Illinois Real Estate.

W. H. Guthrie, a Finney county land baron, was in Topeka recently on a real estate deal by which he hopes to dispose of his Illinois land and add to his holdings of Kansas land. Speaking of Western Kansas, and especially Finney county, he said: "There has not been a season in years when the western part of the state was as prosperous as it is at the present time. The season did not open well and a considerable portion of the wheat was blown out or dried from the lack of moisture. "In May the rains began to fall in that section of the state and have kept it up every few days since that time and the country never looked better than at the present time. Thousands of bushels of corn will be raised in the western part of the state this season, though in the past this section has not been looked upon with favor by corn raisers. Alfalfa and sugar beets will make a record crop this year and the yield of the latter will be larger than ever before. Forage of all kinds is in fine shape and the stockmen expect feed to be plentiful and cheap this winter."

When writing advertisers please mention Kansas Farmer.

SHROPSHIRE RAMS

Big registered fellows. English sire and am. Price reasonable. Descriptive folder ith photos, also booklets on mutton pro- uction. Close connection to Kansas City. hariton, CHANDLER BROS. Iowa.

GALLOWAY CATTLE

SMOKY HILL RANCH

Galloway Herd, headed by Pat Ryan of Red Cloud 26038, Starlight 2d of Tarbreoch 24473 and Valarius 29088. Bulls and heifers for sale from my herd of 180 registered Gallo- ways.

E. J. GUILBERT,
Gill, Kansas.

RED POLLED CATTLE

COBURN HERD OF RED POLLS.

Choice young stock of both sexes for sale: also a few cows.

GEO. GROENMILLER & SON,
Pomona, Kansas.

FOSTER'S RED POLLS.

15 choice young bulls, a few good females and our 2,400 pound herd bull, Dandy S 3174, for sale at bottom prices. CHAS. FOSTER & SON, Eldorado, Kan.

SUTTON'S

BERKSHIRE SALE

50 head of our fanciest sows and gilts including 10 tops from Mr. N. H. Gentry's herd, bred to our show boars,

Berryton Duke Jr., Beau Brummel and Lord Baron 2d.

Also a few choice boars and show gilts, will make up the offering.

On Tuesday, August 31st.

If you need show or breeding Berkshires of best "quality" this is your opportunity.

SUTTON FARM

LAWRENCE, - - KANSAS

Harriman Bros.' Dispersion Sale

60 - All Scotch Shorthorns - 60

PILOT GROVE, MO., Friday, September 3, 1909

40 HERD COWS, ALL HEAVY MILKERS;
10 YEARLING HEIFERS; 10 YEARLING BULLS;
1 GREAT HERD BULL—(NEW GOODS) BY CHOICE GOODS.

This is an absolute closing-out sale of all the Shorthorns owned by us, consisting of 60 head of All-Scotch cattle, 40 splendid breeding cows and heifers, 10 bulls and 10 calves. It is probably the most attractive, the most valuable herd of All-Scotch cattle now owned in the great corn belt section. It has produced more prize-winners the last five years than any other herd of like number, and has probably sent out more high class, high priced Scotch herd bulls than any other herd.

The ten young Scotch bulls in this sale comprise an offering entirely out of the ordinary. Each one is sired by a grandly bred bull, and all are out of heavy-milking Scotch dams that are bred in the royal purple.

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