

KANSAS FARMER

For the improvement



of the Farm and Home

Volume 54, Number 2.

TOPEKA, KANSAS, JANUARY 8, 1916.

Established 1863. \$1 a Year

Better Care of the Babies is All-Important-
Rural School Standards Community Welfare-
Water and Lighting Systems for the House-
Conveniences Mean Contented Family-
Lessons In Tractor and Engine Operation-
Heart-to-Heart Talks to Boys and Girls-
Better Corn; Better Kafir; Better Pigs-
Road Building, Drainage and Irrigation-
Farm Management in Relation to Profits-
Importance of More Live Stock and Dairy Farming-
These and Many Other Phases of Farm Life Thought-
fully Considered During Farm and Home Week at Manhattan

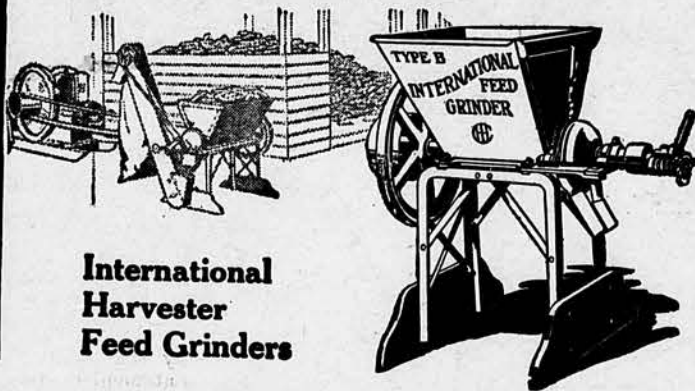


There Was Something on the Program at Manhattan for Every Member of the Family

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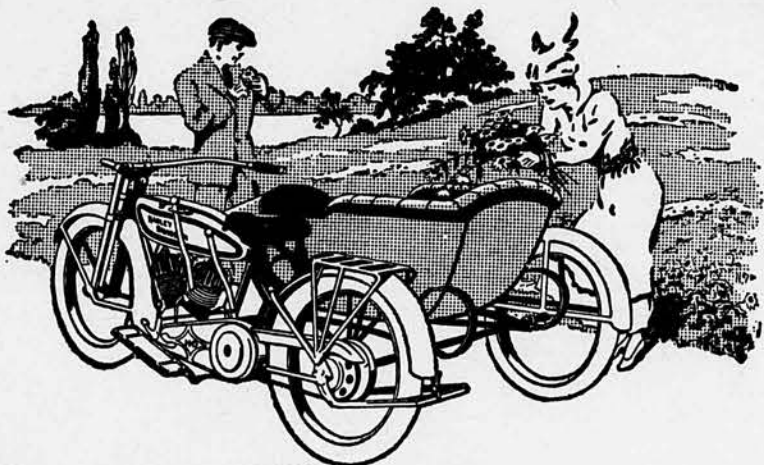
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ADVERTISING PAGE FOR READY BARGAINS

BRAKE AND CLUTCH

Items of Every Day Interest About
The Automobile and for the Motorist

AUTOMOBILE springs frequently get dry and rusty between the leaves and an annoying squeak is the result. This can very easily be remedied. Jack the car up until the load is off the springs, then force something between the leaves to open them. A mixture of graphite and oil can then be worked in with a putty knife or a common case knife. This will stop the squeak and frequently quite a difference can be noted in the riding of the car.

Drain Sediment Bulb of Gas Tank.

A most perplexing winter automobile trouble is the freezing of the water that collects in the sediment bulb on the bottom of the gasoline tank. Water always tends to work to the bottom and unless the tank is drained at least once a month, the water which collects will freeze and prevent gasoline from getting to the carburetor.

It does not freeze solid, as a rule, but allows just enough gasoline to seep through to keep the motor running without developing much power. Sometimes it will stop entirely. The driver then, of course, will get out, look things over, and finally crank the engine again. Meanwhile, enough gasoline has seeped through so that the engine starts off in good shape, but after running a very short distance the same thing occurs again. This difficulty is a most perplexing one. Men who have driven cars for years have been known to spend hours over this sort of motor trouble without finding the cause.

The remedy is to take an old rag or a piece of waste, hold it under the drain cock of the radiator until saturated with hot water, then immediately wrap it around the sediment bulb. By repeating this several times with the drain cock of the bulb open, the water and gasoline will start. It should be let run long enough to be sure that the bulb is emptied of all water and other foreign substances. This same trouble occasionally occurs at the inlet needle to the carburetor float.

Selection of Tractor.

We have been asked if it is practicable and economical to use the small tractor as a substitute for horses.

The horseless farm may be a dream of the future, but at the present time even where tractors are used to good advantage, horses must also be kept. The tractor is being depended upon mainly to do the heavy work such as requires a considerable amount of power. On very few farms is this kind of work continuous. The very large plowing outfits that were first put out are not now much in demand, the tendency being to reduce the size of the tractors so as to make them applicable to farms of moderate size. We believe that as a general rule farmers needing tractors should have one large enough to pull four plows when doing deep plowing. However, it is largely a matter of individual needs. On some farms tractors of smaller size may be used to advantage. The main point is to consider the matter carefully before buying and then be sure that the tractor purchased has an abundance of power to do the work required. It is far better to have a little reserve than to be constantly overloading the engine. A tractor should give service over a period of ten or twelve years, at least, but one too small for the work, that is compelled to carry an overload most of the time, will be quickly worn out.

In selecting a tractor outfit it is always advisable to choose one that is manufactured along standard principles that have proved satisfactory. The machine should be strong and rugged. If any new mechanism is found on a tractor it is well to consider carefully whether or not this device has been tried out under similar circumstances on other machines. It is always desirable to have the outfit adapted to as many uses as possible. There are many things to consider in choosing the tractor best adapted to the conditions on any farm, and we would advise that those interested in buying a tractor secure the literature furnished by the different companies and avail themselves of every opportunity possible to see the different kinds of tractors actually at work.

Study Instruction Book.

The veteran automobilist who buys a new machine of a different make and pays no attention to the instruction book, is likely to find trouble ahead. Of course, in so far as driving the new machine is concerned, he may understand

thoroughly all that is required. Likewise, the manipulating of ordinary features for supplying oil, water, or gasoline. There is certain to be some difference in design, however, that he should understand. Some of them may be so important that ignorance of the proper way to deal with them will be extremely costly. While the instruction book is prepared primarily for the beginner, it is important enough to justify careful study by the purchaser who may be an experienced automobile driver of another make.

This will be especially true if a change is being made from a car without starting or lighting devices and with ignition supplied by a magneto, to one equipped with starting-lighting-ignition unit system. It is like starting all over again in so far as these particular features are concerned. An instance comes to mind of an owner who found upon studying his instruction book, that the universal joint of his new car must be oiled separately, the regular oiling system not taking care of this as in cars he had formerly used. If he had not accidentally made this discovery, serious trouble might have resulted from his failure to keep this joint properly oiled.

Instruction books are prepared for use and every purchaser of a new car should go through the book furnished, with care.

The measure recently introduced into congress by Representative W. C. Adamson, of Georgia, will be of interest to those of our readers who have occasion to drive their automobiles in neighboring states. The purpose of this measure is to make it possible for an automobile owner to travel in other states without the necessity of paying an additional license. In other words, the car properly licensed in any state will be permitted to travel freely in other states if the measure is passed. Making the license tag of one state good for travel in another, does not, however, exempt the driver from being subject to any local police regulations concerned with the driving of automobiles.

Battery Trouble in Engines.

Batteries are a very fruitful source of trouble for many engine operators. If the engine will not start or stops soon after starting or will not pick up speed, the cause may be in the spark. A weak spark gives very slow combustion and often fails to ignite the charge. A weak spark may be due to a loose connection, worn-out batteries, "frozen up" batteries, or a short circuit. Loosen the wire from the stationary electrode and scratch the movable electrode with it. If a bright purple spark is not produced, look for the above troubles.

Examine all connections, including those at the switch and at the ignitor. The switch itself should not be loose, but work tight. While the wire may be touching, and thus give a spark, there is a loss if all connections are not tight.

Worn out batteries cause trouble by weakening the spark. Usually it is only one or two cells that are worn out. A worn out cell not only does not help but actually hinders by cutting down the average strength of the series. In order to get full use of each cell an Ammeter—battery tester—should be used. A good one may be purchased for one dollar and it will relieve all doubt as to the strength of cells and save its cost in a year or two. Cells testing less than five amperes are of very little value, though they may be used in case of emergency. Such weak cells often show a tendency to become exhausted in a short time, but recuperate after a rest, thus confusing the operator. The engine starts but will not continue to run. It is not necessary to test for voltage, as this is not perceptibly lowered by use.

Cold retards the action within the cell, so that little or no current is given off. Hence the batteries are said to be "frozen up."

A short circuit may occur at any point where the two wires come in contact with each other or the frame of the engine, provided the insulation is not perfect. In the battery box a short circuit often occurs by the cells rattling around until two zines come into contact. It may also occur through careless connecting of cells. Such a short circuit will not only reduce the strength of the spark but if allowed to continue, will soon wear out the cells affected. Cells should be packed in the box with paper, rags, straw or cotton waste to keep them firmly in place.—E. R. Gross, Fort Collins, Colo.



KANSAS FARMER

The Standard Farm Paper of Kansas

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G. C. WHEELER, Live Stock Editor

Editorial, Advertising and Business Offices—Topeka, Kansas
New York Office, 41 Park Row, Wallace C. Richardson, Inc., Manager
Chicago Office, Advertising Building, Geo. W. Herbert, Inc., Manager

Entered at the Topeka post office as second class matter



DAIRYMEN WARNED COW BUYERS.

Kansas farmers are too eager for cows of dairy breeding, was the charge made by those in attendance at the meeting of the Kansas State Dairy Association held in Manhattan last week. Experienced dairymen who were present, asserted that many who are now buying cows seem to see nothing but the color markings. Anything that is black and white, or of some other characteristic dairy color, is assumed to be valuable for dairy purposes. These buyers, they claim, do not take note of the fact that the cows purchased may have only two or three teats, may be affected with contagious abortion, or perhaps be non-breeders. It seemed to be the opinion of some of the best dairymen of the state, that the dairy industry is in great danger because of this eagerness of our farmers to buy anything in the way of a cow having the markings of a dairy breed. Some of these men who called attention to these conditions, have recently been in Wisconsin and other dairy districts. They reported that in some localities they found dairy breeders and farmers speaking in a sneering manner of this Kansas greed for anything resembling a dairy cow; they spoke of it as a most fortunate thing for them, as it enabled them to get rid of their culls.

If these charges are true, Kansas buyers of dairy cows should be most careful in the selections they make. It takes more than color markings to make a profitable dairy animal. A beginner can easily make the mistake of getting a bunch of cows that some more experienced dairyman has condemned. Such start in dairying will bring nothing but disappointment and loss. Incidents illustrating this point were given by those in attendance at the meeting.

Probably dairy breeders are as honest as any other class of men, but there will be plenty of them who will seize the opportunity to get rid of a lot of their inferior cows at a good price. There is at least one dairy community in Kansas, however, where this policy is not being pursued. A member of the Dickinson County Cow Testing Association stated that it had been recently agreed among the members of that association that culled cows were to be sold either to the butcher or the purchaser would be told exactly what was wrong with them.

A good many Kansas cow buyers are seeking help in selecting the animals they buy. They realize their ignorance of the business and are calling on those who have had experience in buying cows in dairy districts. Professor O. E. Reed has just returned from a two week's trip to Wisconsin, where he assisted in selecting four carloads of dairy cattle for buyers in Bourbon County, Kansas. A number of dairymen in Kansas have visited dairy communities in other states, and know how to go about it to get the kind of stock that will help advance the dairy interest of Kansas.

In view of what was said at the State Dairy Association meeting, we would urge our readers to study the pedigree of the man from whom they buy cows, as carefully as they study the cows themselves.

MANY AUTOMOBILES IN KANSAS.

Every fourth family in Kansas has a motor car, according to the figures in the office of the secretary of state. The license fees collected on these cars has turned into the road fund of the state, \$331,812.72. The total number of autos on January 1, 1916, was 74,163. There are 8,260 motorcycles licensed, also. The investment in all these cars is not far from seventy-five million dollars. No other state in the Union has as many in proportion to its population. More cars are owned in the big wheat-growing counties than in any other section. Sedgwick County leads, Reno second, Shawnee County being third. The farmers of Kansas evidently own the most motor cars. With them it is not entirely a pleasure proposition. The automobile has become most useful on many a farm in saving time on the road. They can not be called luxuries, although a great deal of pleasure is derived from the farm-owned cars. It is no small matter to keep the farm young people satisfied

with country life. When we see a farmer and his family enjoying a car, we always feel like rejoicing with them that they can afford one. Surely no one is better entitled to the luxury and usefulness of the automobile, than are the folks of the farm.

BOYS' AND GIRLS' CLUB WORK.

There can be no question as to the interest of the boys and girls of Kansas in the various farm and household activities worked out in their clubs. We have visited local fairs in various parts of the state and have been greatly impressed with the value of this kind of work. The boys and girls were in attendance at the Farm and Home Week at Manhattan in large numbers. Jewell County alone had 185, and there were groups from many parts of the state. The county and district agricultural agents all brought boys and girls with them.

Two New Year's calls much appreciated by KANSAS FARMER were those of Lee H. Gould, Miss Eulalia Nevins, the county superintendent of Ford County, with the boys and girls from Southwest Kansas; and E. J. Macy with the Montgomery County boys, who were passing through Topeka on their way home.

In view of all the work that is being done by boys and girls over the state, the exhibits at Manhattan seemed small in numbers. We had seen during the fall so many splendid local exhibits, that we felt sure the exhibits at the state meeting would overflow the room provided for them, especially so since the Kansas Bankers' Association had offered such liberal prizes to be competed for in this state-wide contest. The showing of these various lines of work at Manhattan is the culmination of the work of the year, and the boys and girls should not consider their work completed until they have prepared and sent an exhibit of their work to the state meeting. Perhaps many did not send their exhibits because they were so sure beforehand in their own minds, that others would have better ones. The contestants should have more self-confidence—more faith in their efforts. The prize is not won until the last exhibit has been scored by the judges, and even if the first place is not won, those competing will have the satisfaction of feeling they have done their best and perhaps will learn from their defeat how to win next time.

We hope that the boys and girls who start out this year, will make up their minds to carry their work through to its finish. If all do this, the showing made at the next Farm and Home Week will be a record-breaking one. Parents have an important part in this, for the young people will work much more enthusiastically where they are given proper encouragement at home.

We sometimes hear a man deride our agricultural poultry experts and experiment stations. But he is of the ignorant class, or at least not well informed. No intelligent man could belittle the men who have been able to make the domesticated hen lay 303 and 314 eggs a year, as has recently been the case in a couple of experiment stations. Their methods of feeding and care of the fowls are open to all who will avail themselves of the privilege, and many are pursuing them, till the ratio of egg-laying has been constantly increasing from year to year. It has been said that the man who causes two blades of grass to grow where but one grew before, is a benefactor to mankind. How much more so is the man that causes the hen to lay ten eggs to one that she laid before.

FARM PRICE FOR KAFIR.

We have at various times stated that kafir and other grain sorghums were not being given proper recognition on the market. This is especially true as regards the price paid locally. The spread between the price of these grains and corn is too great. The place of kafir and other sorghum grains is becoming fairly well established in the world's markets, but the local price has not kept pace with the price paid by the ultimate consumer. H. E. Horton, agricultural commissioner of the American Steel & Wire Company of Chicago, has done a great deal to secure a place for the grain

sorghums in the markets of the world. However, before the producer can reap the benefits of what has been done, there must be more educational work done locally. There is no justification for the spread between the farm price and the price paid by the consumer. In endeavoring to secure for the producer his just dues, Mr. Horton is seeking for accurate information relative to local prices that are being paid for kafir, milo, and feterita. A card or letter addressed to him at Chicago, telling the exact price being paid on a specific date, will help the cause along. Mr. Horton is preparing each month, sheets giving the Kansas City prices on these sorghum grains, and will furnish them to every farmer reporting. A study of these price sheets would be very valuable to producers of the grain sorghums.

BOARD OF AGRICULTURE PROGRAM

The program for the Kansas State Board of Agriculture meeting, which has been mailed out this week, has upon it an exceptionally strong list of speakers. Among them are a number of practical farmers, and there are those of national reputation who are in close touch with farm life. It will be a real farmers' meeting. The improvement of live stock, increasing crop yields, and the most important subject of distributing and marketing farm products, will be discussed.

The program of the Kansas Improved Stock Breeders' Association meeting has also been completed. This meeting, which immediately precedes that of the Board of Agriculture, has to do especially with the problems of the breeder of pure-bred live stock.

These two meetings are most important ones and farmers should arrange to attend them and take part in the discussions. The larger the attendance, the better will be the meetings. They are open and free to the public and all are cordially invited and urged to be present.

CLOUD COUNTY HIRES AGENT.

The farm bureau of Cloud County has just employed Carl Knaus as its agricultural agent. Mr. Knaus is a Neosho County boy and graduated from the agricultural college in 1912. Since that time he has been working with his father on the home farm. He was recommended to the Cloud County committee by State Leader Edward C. Johnson, who had carefully investigated Mr. Knaus' qualifications for this work.

Cloud County is one of the good farming counties of the state and we feel sure that this move will help to push it to the front. The fact that the farm bureau has the active support of the Farmers' Union, which has a large membership in that county, is most encouraging. It insures the heartiest co-operation of all the forces of the community that have for their purpose the improvement of farm conditions.

TOPEKA FAIR ELECTS OFFICERS.

The Kansas State Fair Association, which held the first big free gate fair in the country at Topeka last fall, is now making plans for the fair for the coming year. The new officers are L. M. Penwell, president; F. A. Antone, vice-president; and Philip Eastman, secretary. This is an excellent set of officers. These men are public-spirited citizens and can be trusted to put forth their best efforts in the interest of any enterprise with which they may be connected.

Kansas has just been celebrating the burning of her last mortgage. The state now owes not a dollar to any one. It is rather unusual for a state to be free from bonded indebtedness. Nearly all big corporations find it to their advantage to use borrowed capital, and a commonwealth such as the State of Kansas is no exception. We have done a great deal of talking about building roads in the state. Perhaps now that we have no bonded debt we can begin to talk about putting some more money into roads, thus making an investment that will not only pay interest on the borrowed capital, but return a good profit in addition. Roads cost money, and we will never have any really good roads until we put some money into them.

RURAL CREDITS.

"For the government to undertake to finance the farmers of the United States, would be entering upon a new chapter in history that would lead nowhere," was the statement made in an address during Farm and Home Week at Manhattan, by Dr. H. B. Hibbard, professor of agricultural economics in the University of Wisconsin. Shall a better credit system for farmers be brought about through state aid or by self help? This seems to be the question at issue. Dr. Hibbard emphatically stated that farmers must have money, but it is a difficult thing for a democratic form of government to lend money to itself and get it back again. He is opposed to the state aid idea. Many of the bills in Congress provide for the issuing of bonds and the loaning of the money thus raised to farmers. This would simply result in subsidizing farmers as a class. It would lower their self respect and in the end would be of little or no benefit.

It would seem from superficial observation that farmers use less of other people's money than is used by grocers, dry goods merchants, or other town business men. Bankers maintain that any man who is worthy of it can get credit at their banks. The man who has established his credit can get money at the same rate at which any other man can get it, whether he is conducting a town business or is a farmer. If there is a lack of credit among farmers it is not because of their occupation; it is because they have not worked out a standardized credit system. Such system, however, would not be the same as would serve the town business man. Dr. Hibbard called attention to the fact that bankers are sometimes slow to loan money to farmers because they can not get it back in a short time. The merchant can turn his stock of goods quickly, but frequently an investment made by a farmer can not be expected to begin to return an income before two years or even longer. The chief need of the farmer in the matter of credit, is to have longer time on his loans. It is impossible to pay them in thirty, sixty, or ninety days, as can often be done by the merchant. The farm loans can not be liquidated as quickly and easily as can the town loans, but on the other hand there is a great demand among investors, for farm mortgages.

The most important reason for a system of farm credits, brought out by Dr. Hibbard, was that conditions are such at the present time that we must have farm credit in order to have farm ownership.

Most businesses, except farming, are organized on a partnership basis. A young man can start in at the bottom on only a small salary, and by careful managing of his affairs, and saving, can acquire a little of the stock at a time and in time can become secretary, treasurer, vice president or even president of the concern. Not so in the farming business. The man starting in farming is required to get possession of a farm and the man with \$500 or \$2,500 does not cut much figure. It is impossible to buy a farm costing perhaps \$20,000 and pay for it in the time our average farm mortgages run.

Dr. Hibbard does not seem to be looking for any great revision or overturning of all of our old systems of credit. He maintains that farmers are in need of two kinds of credit—more current farm mortgages, and some means of getting money from the money centers to the places where it is needed and it should not cost two, three, or four per cent to do this. When farmers get to the point where they are willing to pay the price, they will be able to get together and use some of the money now belonging to them as a group, transferring from those who have it to those who want it.

Most farmers could make good use of additional capital. However, the tendency is to work along and do business according to the amount that may be obtained conveniently. There is an abundance of money in the country, and it certainly is to be hoped that some means may be worked out whereby farmers can secure the needed capital as conveniently as can the town business man.

SELECT BULL FROM RECORDS

Dairy Sires Differ Greatly in Power to Transmit Capacity to Daughters

[Editor's Note.—The history of the development of the Jersey herd at the Missouri Experiment Station furnishes a most valuable lesson in dairy heredity. This story as here given is from an address made by Prof. C. H. Eckles at the 1908 meeting of the Missouri State Dairy Association. Seldom is it possible to so fully trace the history of a dairy herd having such complete production records.]

It has long been an axiom of the breeder that the sire is half the herd, and yet thousands of men make use of a "scrub" or grade sire on account of mistaken economy in cost rather than pay a few dollars more for an animal that is almost certain to transmit desirable qualities. It is not surprising that we have so many worthless cows. They come by their worthlessness in the majority of the cases from sires worse than worthless. Some of these scrub bulls are registered in the herd books.

The most forcible means I have at hand to illustrate the remarkable difference in sires is to show some results from our own herd. In 1884 the Missouri Agricultural College bought four registered Jersey cows, and the entire herd we have on hand today is descended from these cows. Of course, herd bulls have been purchased from outside, but no female has been bought. Since 1892 complete milk and butter fat records have been kept of every cow. Up until 1901 practically every female was retained in the herd regardless of her dairy qualities. These conditions give an opportunity to study the effect of sires which can hardly be duplicated anywhere.

FIRST BULL USED A FAILURE.

The first bull used was Missouri Riotor 19400, a son of Bachelor of St. Lambert. There is no record indicating the dairy quality of his dam. In fact, his sire is the only animal in his pedigree known to be a strong breeder. This bull was a very weak breeder, as is shown in the chart. His daughters averaged 4,336 pounds of milk per year while their dams averaged 5,380 pounds—a decline on the average of 1,044 pounds of milk per year each. The average yearly fat production of the dam was 234 pounds, while the daughters averaged only 216 pounds. A decline of eighteen pounds per cow annually from the dams to the daughters.

The income from ten daughters, counting milk at 6 cents per quart, fell \$313.20 per year behind the dams. Counting fat at 25 cents, the loss was \$45. As long as this bull remained in the herd, it was going backward in production, instead of ahead. Suppose the herd had had thirty daughters of such a bull. Each year we would have been \$135 behind what the dams produced, counting fat at 25 cents. If these cows were milked six years each, the total loss would be \$820. This sum would buy several good bulls.

SECOND BULL SET HERD BACK.

The next bull used in this herd was Hugarotus 34447. This was a cheap bull without many tested animals in his pedigree. His mother, however, is said to have been a good cow. The daughters of this bull were inferior to their dams in milk production, but on account of higher per cent of fat they gained slightly in fat production.

It will be seen in the chart that the ten daughters fell a total 3,770 pounds of milk per year behind their dams, but gained 100 pounds of fat. The general results of using this bull were disastrous. In fact, the poorest animals ever in the herd were his offspring. The averages shown are made as good as they are only by the fact that two full sisters sired by this bull, through some "nick," proved first class animals.

When this herd was culled on milk alone, nine out of the eleven daughters of this bull then in the herd were sold to the butcher. The two remaining were the full sisters mentioned. As long as this bull was in the herd, the general tendency was backward.

SUPERIOR HEIFER Sired BY THIRD BULL.

The next bull at the head of the herd was Lorne of Meridale 34024. This bull had a splendid pedigree from the standpoint of records, and his offspring show the results. His daughters, with one exception, were all superior to the dams.

The chart shows that the average milk production was raised from 4,542 pounds per year to 5,751 pounds; the fat production from 220 to 280 pounds per year. At butter fat prices the ten daughters of Lorne of Meridale returned each year \$150 more than their dams. What a difference from the results from Missouri Riotor.



JOHANA BONHEUR CHAMPION 2D, GRAND CHAMPION HOLSTEIN BULL AT TOPEKA FAIR, 1915.—OWNED BY J. M. CHESTNUT & SONS, JACKSON COUNTY, KAN.—DAM HAS JUNIOR FOUR-YEAR-OLD RECORD OF 22.47 POUNDS OF BUTTER IN SEVEN DAYS

If we had milked thirty daughters of this bull six years each, their product would have exceeded their dams in value \$2,700; while the daughters of Missouri Riotor went \$939 behind, or a difference in thirty cows in six years of \$4,639 in actual income.

What would be the value of Lorne of Meridale in a large herd, we cannot say, but I am convinced that as a business proposition an owner of a large herd could better pay \$1,000 for him than accept Missouri Riotor as a gift. Yet, if he had been offered for sale when mature, the chances are that instead of bringing what he was worth, he would have brought little more than a bull beef price.

MISSOURI RIOTOR 3D REMARKABLE SIRE.

The next herd bull was Missouri Riotor 3d 34587. This bull was the son of Missouri Riotor, and was the only real good thing this latter sire left in the herd. The remarkable qualities of Missouri Riotor 3d may come, in part, from his dam, which was the best cow in the herd up to that time, and, like the sire, the daughter of Bachelor of St. Lambert.

The best cows ever in our herd were sired by Missouri Riotor 3d. From dams with average records of 4,609 pounds of milk he sired daughters whose records average 7,154 pounds. The dams averaged 238 pounds of fat per year, and the daughters raised this to 348 pounds.

Ten daughters of this bull produced \$275 worth of fat per year more than their dams. Counting this on the same basis as before, thirty cows for six years, we have \$4,950 worth of butter fat produced by the daughters in excess of that produced by the dams. What would be the value of this bull, had he been owned by an association of neighboring dairymen where he might have had one hundred daughters or more? This bull was raised on the college farm, and, as is often the case, because he was home product, instead of coming from a distant state, he was not counted of any special value, and was sold from the herd without any record even being made as to his purchaser, and he was never transferred. His remarkable breeding value was recognized when it was too late, and now we would like the chance of giving \$1,000 to have him back.

SELECTING HERD BULL SERIOUS MATTER. These figures show the immense difference in the way dairy qualities are transmitted, even where all are purebred animals. The selection of a herd bull is a very serious matter for the man who is trying to build up his herd, and the higher developed they are in the way of dairy production, the more serious is the problem.

One of the chief difficulties is that practically nothing can be predicted from the looks of the animal, if he has the inherent characteristics of transmitting good dairy qualities or not. Who will undertake to judge by the appearance of a bull, if he is one that will transmit dairy qualities as did Missouri Riotor 3d, or whether he is as worthless as Hugarotus?

In selecting a bull for a mixed herd, or one of low dairy capacity, any well-bred bull of a dairy breed with good producing individuals behind him is certain to benefit the herd. Even for the grade herd, the exceptional bull that will transmit qualities higher than the average of his breed is worth more than two or three inferior ones.

There are two courses open to the man selecting a herd bull: One is to buy a young bull on the strength of the records of his ancestors and trust to luck to a certain extent that he will be one that will transmit the desirable characteristics of his ancestors to a high degree. As a rule such a bull will do fairly well, at least in transmitting these characteristics. For the owner of grade cattle or herds of low dairy capacity,

this method of selection does very well.

STUDY RECORDS CLOSELY.

In selecting a young bull, the pedigree, including the record of ancestors, is of as much or more importance than the individuality of the animal. The things to be looked for in the pedigrees are, first of all, records of production by the dam of the animal, if you are breeding for milk production. If you are breeding for show animals, get a descendant of show animals.

Next in importance to the dam's records comes the records of the sire's daughters. If the bull has sired many high testing daughters, it is a good evidence, but not certain, that his son will also transmit these characters. Third in importance comes the grand dams, and so on through the pedigree. The pedigree of Lorne of Meridale is a good example of a pedigree strong in records, and having every indication a pedigree can show that these characters will be transmitted as proved to be the case. The pedigree of Hugarotus shows only three tested cows, of which only one is as close as the third generation. The judgment that would be passed upon these two bulls from a study of their pedigrees would be the same as were the results in actual trial. It must not be expected, however, that the pedigree will always be as accurate an index of the value of the animal as it is in this case.

CLOSE ANCESTORS ONES THAT COUNT.

It should be kept in mind always that it is much more important to have a good animal for parent than a noted animal back in the third or fourth generation. I frequently hear men speak of having a Golden Lad, a Stoke Pogis, or a De Kol bull, and when you examine the pedigree, the animal mentioned is found in the third or fourth generation, which means they consider the most important fact about the bull to be the six and one-fourth or twelve and one-half per cent of the blood of the noted bull he may carry. The close ancestors are the ones that count.

Care should be taken to discriminate between official records and private records of milk and butter production, especially where the latter are churn tests that test the ability of the buttermaker as much as the butter production of the cow. An official record means what it says, and so do many private records, but there is always an element of uncertainty about the latter that detracts from their value.

YEAR RECORDS MOST VALUABLE.

Much more attention should be given to years' records than to those covering seven days. Of course, there are other things to be taken into account in buying a young bull, but I believe the records of the ancestors are of first consideration. In buying a bull of any age, of course, we require an animal of good conformation, strong vitality and constitution and good breed characteristics. In buying a young bull, I want one from a cow medium to large for the breed. She must have been a regular breeder, and a cow of strong constitution and vitality. She must have a well developed, symmetrical udder and teats, and a large official year's milk and butter test.

WATCH FOR TESTED SIRE.

While most dairymen favor the selection of a young bull as a herd bull, there always is the uncertainty about how he will transmit the dairy characteristics. There is a more certain but more difficult way to get a bull that will transmit the desired characteristics. This is to get an old tested bull, one that has sired daughters of merit, and showed himself to be the exceptional animal wanted by every breeder.

The most skilled breeders are always on the lookout for such an animal, but many are never discovered, and many others only after it is too late. Whenever possible, it is always advisable to retain an old bull until the results of his breeding can be ascertained. Then, if not satisfactory, the sooner he is gone, the better; but there is always a chance of finding a bull like Missouri Riotor 3d, previously mentioned.

The wonderful prepotency of Stoke Pogis 3d was not recognized until he had been sold for beef. Hengerveld De Kol, the great Holstein bull, on the other hand, was retained until it was discovered he was one of the great bulls of the breed, and, as a result, was sold for \$1,500 at nine years of age for breeding purposes.

Records of Four Groups of Cows and Their Daughters

| | DAUGHTERS OF MISSOURI RIOTOR | DAUGHTERS OF HUGAROTUS |
|---|--------------------------------|---------------------------------|
| AVERAGE YEARLY MILK PRODUCTION IN POUNDS..... | Dams—5380 | Dams—4953 |
| AVERAGE YEARLY MILK PRODUCTION IN POUNDS..... | Daughters—4336 | Daughters—4576 |
| AVERAGE PER CENT OF FAT..... | Dams—4.41 | Dams—4.78 |
| AVERAGE PER CENT OF FAT..... | Daughters—4.97 | Daughters—5.49 |
| AVERAGE YEARLY FAT PRODUCTION IN POUNDS..... | Dams—234 | Dams—231 |
| AVERAGE YEARLY FAT PRODUCTION IN POUNDS..... | Daughters—216 | Daughters—241 |
| DECREASE PER YEAR FOR TEN DAUGHTERS BELOW DAMS..... | | |
| | Milk.....10,440 lbs. |3,770 lbs. |
| | Fat.....180 lbs. | [Increase].....100 lbs. |
| | Milk at 6c qt. \$313.20 | |
| | Fat at 25c lb. 45.00 | [Increase].....\$113.12 |
| | |25.00 |
| | DAUGHTERS OF LORNE OF MERIDALE | DAUGHTERS OF MISSOURI RIOTOR 3D |
| AVERAGE YEARLY MILK PRODUCTION IN POUNDS..... | Dams—4542 | Dams—4609 |
| AVERAGE YEARLY MILK PRODUCTION IN POUNDS..... | Daughters—5751 | Daughters—7154 |
| AVERAGE PER CENT OF FAT..... | Dams—4.9 | Dams—5.17 |
| AVERAGE PER CENT OF FAT..... | Daughters—4.82 | Daughters—4.70 |
| AVERAGE YEARLY FAT PRODUCTION IN POUNDS..... | Dams—220 | Dams—238 |
| AVERAGE YEARLY FAT PRODUCTION IN POUNDS..... | Daughters—280 | Daughters—348 |
| INCREASE PER YEAR FOR TEN DAUGHTERS ABOVE DAMS..... | | |
| | Milk.....12,090 lbs. |25,450 lbs. |
| | Fat.....600 lbs. |1,100 lbs. |
| | Income..... | |
| | Milk at 6c qt. \$362.70 |763.50 |
| | Fat at 25c lb. 150.00 |\$763.50 |

EXPERIMENT STATION WORK

By W. M. Jardine, Director Kansas Experiment Station Manhattan

THE experiment station is a part of the Agricultural College of Kansas, and has been in existence for nearly thirty years. In 1887 Congress passed an act providing for the establishment of an experiment station in every state and territory and appropriating \$15,000 a year for its partial support. These stations were to be located at the agricultural colleges of the respective states and territories, except where such stations were already in existence and located elsewhere in the state.

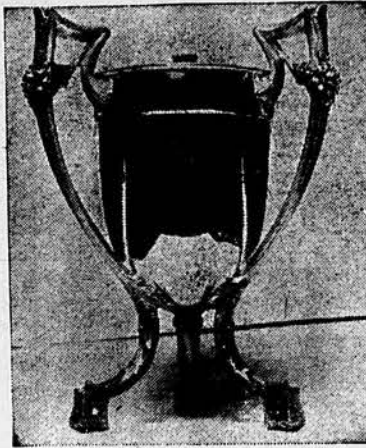
Since the establishment of the Kansas Experiment Station, it has diligently sought to carry out the purposes of the authors of the act creating it. Through researches and experiments conducted with all kinds of plants and animals and with the soil, much valuable information relating to the business of farming has been brought to light. Every crop of any consequence in the state has been improved and its culture extended through the investigations and studies carried on at the station during the past fifteen years.

One of the chief results of the investigations has been the importation and testing of wheats from all countries until it has been definitely determined that hard, red winter wheat, of which the Turkey variety is a type, is the best kind of all to grow in Kansas. The original importations of these wheats have been improved by breeding and selection until it is now generally conceded that Kansas grows the purest wheats of all states or countries.

The sorghums—kafir, milo, feterita, and cane, and others—were developed and their growth extended through the efforts of the workers of the experiment station. When the sorghums were first introduced they were not hardy and were poorly adapted to Western Kansas and especially to the northwestern part. Through selection and breeding, strains adapted to almost every locality of the state have been developed. Two million acres of the sorghums are now grown in Kansas, and they are coming to be the most valuable and dependable crops we have for the western half of the state.

Alfalfa is another crop the growth of which was encouraged and fostered by the station. Various demonstrations and investigations were employed to encourage the establishment of this crop on the farms of the state.

Butter Contest Winners at Manhattan



THE two silver loving cups shown above, given by the KANSAS FARMER Company, were the grand prizes in the butter contest at the annual meeting of the Kansas State Dairy Association held in Manhattan last week. The cup to the left was won by Mrs. Downie, Lyndon, Kan., for the best five pounds of farm butter, which scored 91; Mrs. Antone Kemnitz, Manhattan, won second, score 90; Mrs. S. R. Barry, Manhattan, third, score 88; Mrs. L. R. McClure, Iola, fourth, score 87½; Mrs. J. R. Ladlie, Independence, fifth, score 87.

The cup on the right, offered for the best ten-pound tub of creamery butter, was won by the Topeka Pure Milk Company, Topeka, score 95; Beatrice Creamery Company won second, score 91; Belleville Creamery Company, third, score 89½; Hope Creamery Company, Hope, fourth, with a score of 88.

Premiums aggregating over \$100 in value were offered by manufacturers of dairy equipment and others, for the butter and milk exhibits.

Among other crops that have been improved through station trials, are corn, oats, and barley. New varieties of each are now being grown. Horticultural investigations have done much to improve the fruits of the state, also to determine the best variety of potatoes and other vegetables.

Soil surveys have been made of some of the principal districts of the state and through these surveys we are now in a position to give out more exact information relative to the kinds of crops to grow on the different soils and to advise as to how they should be handled to maintain their permanent fertility.

The station has been instrumental in

the development of better live stock in the state through the introduction of pure-bred animals and through encouraging the keeping of high-class individuals and doing away with the inferior animals.

The widespread use of the silo, the value of which to the state can hardly be estimated, has been greatly furthered by the workers of the experiment station. The feeding value of silage has been demonstrated by feeding trials.

Experiments have also determined the relative feeding value of the principal forage crops and have demonstrated especially the high feeding value of some crops, such as the sorghums. The sta-

tion is teaching the economic and profitable utilization of such by-products as cornstalks, wheat straw and kafir stover.

Dairy investigations in milk, butter and cheese productions have brought to light facts concerning this industry, that have been most helpful in establishing it in the state. The establishment of cow testing associations is being encouraged because of their value in raising the standard of milk production. During the past year milk records of more than 600 cows from forty different herds, have been sent to the dairy department for study and comparison.

Through studies of insect pests we are now in a position to prescribe definite measures for the eradication or control of practically all that prey on the crops of the state. Through these investigations alone, farmers of Kansas have been saved more money than the station has cost for its maintenance in the thirty years of its existence.

Station workers do not confine their attention entirely to investigations on the station farms. They travel over the state, get acquainted with the farmers, keeping in touch with their point of view, and consult with them and aid them whenever possible. They visit and personally inspect farms, write bulletins, answer letters of inquiry, and in numerous ways give first aid to those who are battling with difficult problems of farming.

Practically all of the information available for giving agricultural instruction to the young men attending the college and to the farmers of the state who are reached through our extension workers, is based upon information obtained through the work of this station and through facts gleaned from the farmers of the state and correlated with the results of the station's investigations.

While a great deal has been accomplished and our agriculture has been placed on a substantial basis, the important work of the station is yet to be done. As our lands become more thickly settled, values increase, insects become more numerous, soils less fertile, the problems confronting the farmer will be more numerous and difficult of solution. Station work should proceed without interruption with loyal support, solving these problems as they arise, so that exact information and methods of combating the difficulties of the farmer will always be at hand.

Knowledge of Soil Helps Farmers

THE relationship of soil fertility to successful crop production was one of the most important subjects presented at the meeting of the Kansas Crop Improvement Association, held in Manhattan last week. This meeting, which was held during the Farm and Home week, was addressed by A. R. Whitson, professor of soils at Wisconsin university.

"We have unquestionably reached a point in our social development," said Professor Whitson, "where we must recognize that farmers as well as those following other pursuits, have a distinct responsibility as a whole, and are under obligation to accept assistance which will lead to more efficient service on their part. It will only be through the use of aid offered by the state along these lines that the maintenance of our land in the ownership of a large number of independent farmers will be possible. The higher efficiency which science is already beginning to make possible in agriculture will otherwise lead to the development of large estates under more competent management."

"Among the lines along which aid of this kind can now be offered to the individual farmer, emphasis should be placed on improvements in the management of the soil. While it is unquestionably true that the chemists and physicists are only beginning to understand the numerous complex problems of the fertility of the soil, it is nevertheless true that enough has already been learned to be of incomparable aid to the farmer."

"It would be presumptuous on my part to undertake to point out in detail the application of these principles to the conditions as they exist in Kansas. One fact, however, is so generally recognized that its basis can not be doubted, namely, the importance of mixed farm-

ing, including the raising of some form of live stock as well as some crops to be sold directly from the field.

"There are two great gains in this relation—first it makes comparatively easy the maintenance in the soil of a good supply of readily available plant food as well as offering an opportunity for incorporating in the soil necessary additional supplies of the mineral elements, especially of phosphorus, in a way to render them readily available; and second, it offers profitable employment during the period of the year when the cultivation of the soil itself is not possible.

"The application of this principle will undoubtedly lead to a general modification of the agriculture of essentially all the central and northern part of the United States in such way as to break up the highly specialized agriculture now existing in which the raising of wheat is the chief industry in one section, of corn in another, and of dairying in still others.

"It is, of course, true that one can know more about one particular line of farming than he can about several, and this has led to specialization, but it is possible to combine two or three specialties in such way as to secure still greater results, and just as the manufacturer has found the saving of by-products to ultimately become his chief source of income, so will the farmer undoubtedly find the combination of two or more lines of farming the solution of his problems in regard to the maintenance of fertility and the economic utilization of his labor.

"In the maintenance of a high state of fertility in the soils of Kansas, the problem of the phosphorus supply will undoubtedly prove one of the most important. The large amount of nitrogen ex-

isting in her soils as a result of their prairie origin and their consequent fertility has led to the production and sale of enormous amounts of corn and wheat which have drawn heavily on the original supplies of this element, always existing in very small amounts.

"The use of commercial fertilizers containing this element and the modification of the system of farming so as to reduce the amount of this element being sold are the only methods permanently open to Kansas farmers for meeting this difficulty.

"The marked increases in yield following the use of phosphorus fertilizers on black prairie soils in Illinois, Wisconsin, Minnesota, and the Dakotas, indicate that in time, if not now, similar soils of Kansas will require the same treatment. The farmer must learn to consider this element phosphorus, especially since he will probably be more concerned with it than with any other single element. Nitrogen can be gathered readily from the atmosphere by the growth of legumes; potassium exists in enormous amounts in most soils and will become available when a good supply of active organic matter exists, but phosphorus exists always in small amounts and is always carried in crops which are sold from the farm.

"The farmers of Kansas will do well to heed the warning of the agricultural college especially in regard to the sale of alfalfa, which contains so large an amount of this element, and which is lost to the farm when the alfalfa is sold. It is particularly with reference to this element that a change in the system of farming from grain raising to mixed farming in which a part of the crops are fed and transformed into products containing smaller amounts of the essential elements of plant food and having a

relatively higher value will assist in the maintenance of fertility.

"These and other lines along which improvements in the management of the soil can be made, are being pointed out by your college and experiment station. The soil survey now in progress will furnish a basis for a much more complete and detailed study of your soil problems. It will point out the particular problems requiring solution on each of the different types of soil being mapped. It should be recognized, however, that the mapping of the soil survey in itself is really a preliminary piece of work of value chiefly in the accumulation of information needed in the further studies referred to. It can not in itself answer all the soil problems of the individual farm. That service can only be carried to the farmer through a detailed examination of the individual farm by a soil expert.

"The farmers of Wisconsin were probably the first to require the state to take up this detailed examination of individual farms. This has been done through the law passed by the legislature of 1913 establishing the state soils laboratory and requiring this laboratory to make a careful examination of the individual farm, collect and analyze samples of soil so far as is necessary, and prepare a report to the farmer explaining in full the treatment his soils require to develop and maintain their fertility, and the crops to which they are naturally best adapted. The farmer pays a part of the expense of this laboratory through fees, but a separate fund in addition is provided for its maintenance on the theory that the improvements secured by the individual farmer are passed on to his neighbors and are reflected in the greater prosperity of the state as a whole."

THE SANDUSKY TRACTOR

"THE LITTLE FELLOW WITH THE BIG PULL"

15 Draw Bar H. P.—35 Belt H. P.

A medium size tractor that is really making good on hundreds of farms. Does the heavy work cheaper than horses or steam and can also be used economically on light loads.

You get reliable power at low cost with the correctly designed and constructed Sandusky. Straight gear drive prevents wear and consequent loss of power as also upkeep expense incident to driving through bevel gears.

Sold subject to three day trial, demonstrating on your own work its ability to fulfill

OUR GUARANTEE

We guarantee The Sandusky Tractor to handle four 14-inch mold board plows 8 inches deep where a big team can pull a 12-inch plow 6 inches deep; to run belt machinery up to 32-inch separator; to have one-third reserve over drawbar rating, and for one year against defective workmanship and material.

Equipped with our own four cylinder, four cycle, 5 x 6 1/2 heavy duty, slow speed, vertical motor; 2 1/2 inch crankshaft; 31 inches of motor bearing surface; all four belt bearings; positive self-contained combination force feed and splash oiling system. Motor set crosswise to frame eliminating objectionable bevel gear drive; removable underpan permitting taking up or replacing bearings, connecting rod, rings or entire piston without disturbing any other part of tractor. Three speed selective transmission, 2 to 5 1/2 miles per hour with direct drive on low; three point spring suspension; all steel construction; light weight; small overall dimensions and short turning brakes; easily handled; surplus cooling capacity.

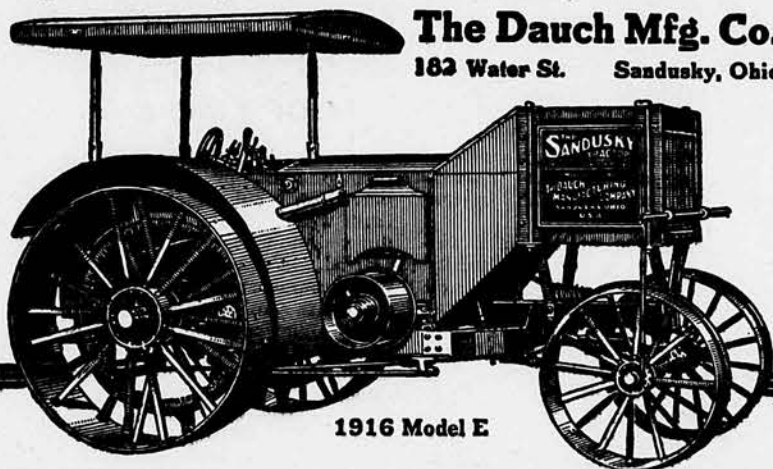
The Sandusky Tractor, its motor, and transmission were each awarded the Gold Medal at the Panama-California Exposition. Also highest award Silver Medal at Society for Improvement of Agriculture Exposition, Lancashire, England.

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The Elephant Head Guarantees 3 Things

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FOR LEAKY CYLINDERS.

Boy and Girl Contest Winners

MANY Kansas boys and girls won prizes at the Farm and Home Week meeting in Manhattan. The awards were as follows:

White Dent Corn—First, George Dowrie, fifteen years old, Miami County; second, Herman Wehrenberg, Chase; third, Carl Hall, Leavenworth; fourth, Chris. Schmitt, Harvey; fifth, Fred Harris, Montgomery.

Yellow Dent Corn—First, John Frank Davis, Lyon County; second, Glen Butz, Nemaha; third, Walter Hays, fifteen years, Miami; fourth, Floyd H. Hern, Dickinson; fifth, Benson Weddle, Dickinson.

Western Kansas, Any Variety—First, Chester Hudson, Trego County; second, Charley Hudson, Trego; third, George W. Burson, Russell.

William Groninger, Doniphan County, won sweepstakes prize on corn.

Kafir—First, Roy G. David, Cowley County; second, Herman Wehrenberg, Chase; third, Nathan Horton, Ford; fourth, Walter Scarborough, Ford.

Feterita—First, Bernard Maloney, Ford County; second, Vern Wilcox, Norton; third, Chris Schmitt, Harvey.

Pigs—First, Victor Hurt, sixteen years, Lyon County; second, Perkins Williams, Lyon; third, Orville Caldwell, Lyon; fourth, Harvey Johnson, Harvey; fifth, Laura Darr, Lyon; sixth, Leslie Price, Lyon; seventh, Robert McGrath, Coffey; eighth, Chris. Schmitt, Harvey.

Poultry—First, Harvey Russell, twelve years, Scott County; second, Helen Spaulding, Scott; third, Jessie Scott, Scott; fourth, Essie Scott, Scott; fifth, Paul C. Jones, Lyon; sixth, Nathaniel Cowan, Russell; seventh, Blanche Field, Coffey; eighth, Clemens Scheve, Rawlins.

Egg Grading—First, Fred Kemmerer, Jewell County; second, Beulah Hall, sixteen years, Leavenworth; third, Theodore Berry, Jewell.

Apples—First, Alice Day, fifteen years, Lyon County; second, Cecil Paine, thirteen, Lyon; third, Henry Peterson, seventeen, Marshall; and Keith Stout, Chase.

Potatoes—First, Paul Williams, thirteen years, Coffey County; second, Henry Peterson, seventeen, Marshall; third, Cecil Paine, thirteen, Lyon.

Biscuits—First, Katherine M. Mottin, fourteen years, Leavenworth County; second, Aldora Smith, seventeen, Stevens; third, Beulah Hall, sixteen, Leavenworth.

Muffins—First, Agnes Gustafson, McPherson County; second, Katie Mellor, sixteen years, Coffey; third, Gladys Stevenson, twelve, Lyon.

Bread—First, Lela Bowersox, sixteen years, Republic County; second, Jessie Ball, fifteen, Republic; third, Marie Moore, fifteen, Wabaunsee.

Cakes—First, Hazel Worster, seventeen years, Allen County; second, Margaret Bond, fourteen, Lyon; third, Mabel Dunlap, seventeen, Allen.

Buttonholes—First, Alice Henning, seventeen years, Ford County; second, Jessie King, sixteen, Douglas; third, Marie Moore, fifteen, Wabaunsee.

One-Piece House Dress—These awards were made in accordance with the following points: Appropriateness of material, 20 per cent; stitching and finishing, 25 per cent; general neatness, 25 per cent; record and drafted pattern, 30 per cent. First prize, Hattie McKinley, seventeen years, Lyon County; second, Wretha Ruth Cory, fifteen, Republic; third, Jessie Ball, fifteen, Republic; fourth, Bessie A. Kuhn, sixteen, Republic; fifth, Mae Hobson, eighteen, Republic.

The two following classes were judged according to these points: Appropriateness of material, 20 per cent; evenness of stitching, 30 per cent; general neatness, 30 per cent; story and record, 20 per cent.

One-Piece Work Apron—Hand made, commercial pattern used: First, Edith Carlson, fourteen years, Wabaunsee County; second, Edith Stout, seventeen, Ford; third, Georgia Knight, fifteen, Wabaunsee; fourth, Mary Wortman, Ford; fifth, Alice Henning, seventeen, Ford.

Sewing Apron—Hand made: First, Cecile B. Paine, thirteen years, Lyon County; second, Agnes O'Brien, thirteen, Labette; third, Helen Bryant, thirteen, Labette; fourth, Alice Clark, twelve, Republic; fifth, Janet Wells, thirteen, Wabaunsee.

With the dawning of each day a new opportunity for "making good" is ours. It is only by studying our operations and analyzing them to the extent of finding out where they can be improved, that we will be enabled to overcome the mistakes of the past.

Are the members of the school board in your district alive to the best things in an educational way, and deeply interested in making the school better serve its patrons? If not, it is your duty to bring these matters to their attention and see to it that they become interested in them.



ABOUT 400 boys and girls were in attendance at the Farm and Home Week meetings at Manhattan last week, and no one who mingled with them there can question the possibility of interesting young people in farming. Their presence at the state meeting was the outcome of interest aroused through the boys' and girls' clubs of the state, and by the agricultural agents throughout the year.

The most important of the recent activities in our state is this agricultural club work. It is a practical demonstration of the possibilities of the farm, and there is no surer way of interesting and holding the attention of those upon whom our future progress depends than by encouraging the club work. Honest competition brings all our energy into action and is sure to result in good.

Many exhibits that should have been entered at Manhattan were left at home, but those shown were indeed creditable, and, judging from remarks heard near the exhibits, had a stimulating effect and will result in attracting much greater competition another year.

The cut shows the practical results of the club work and a fair sample of the products shown at the state meeting. It is a picture of the exhibit of the boys' and girls' club and mother-daughter club of Leavenworth County at the Farm Festival at Leavenworth. County Agent Ross is untiring in his efforts to organize the young people.

Live Stock Investments Can Be Protected

HOW CAN A FARMER FIND OUT ABOUT RESPONSIBLE PROTECTION, ABOUT RELIABLE AND HONEST LIVE STOCK INSURANCE, AMID THE CLAMOR OF CONFLICTING CLAIMS? **INVESTIGATE. DON'T INSURE BLINDLY. HERE IS INFORMATION THAT SHOULD PROVE OF VALUE IN ARRIVING AT A WISE SELECTION.**

THE COMPANY BEHIND THE INSURANCE.

The officers of this company are well known and thorough live stock and insurance men. They have lived in Kansas all their lives. Their reliability and financial standing has never been questioned. They have a record of twenty years clean business methods behind them and are offering to you, Mr. Farmer, live stock insurance in a clean—safe—reliable and well managed company.

THE RECORD OF THE COMPANY.

The record of the Capital Live Stock Insurance Company is a fine example of clean methods, and hundreds of policy holders have written of their satisfaction. Not one complaint among our hundreds of policy holders, is proof of a record that Kansas may well be proud of. The fact that this company has paid all of its losses in full, has made our policy holders our greatest boosters.

The record of our dealings with the other fellow is the best kind of evidence that we are satisfactorily furnishing insurance that will protect your investment in live stock. Not a single adjusted unpaid loss on the books today.

A company with no complaints certainly is deserving of your investigation and attention. We want you satisfied first—your business next. This is the way we do business.

METHOD OF DOING BUSINESS.

Our method is open and above board. We back up and prove every statement we make. We are glad to have our methods investigated. We are saving the live stock owners of Kansas a large sum of money annually. No red tape about

our policies or adjustment of losses. We do business to protect the live stock industry and not to destroy. Our reputation has been made in Kansas, the only state we are doing business in, and it must be maintained in Kansas.

IS COMPANY CONSERVATIVE?

Insurance in the Capital Live Stock Insurance Company is written on a conservative and liberal policy and this company solicits your business on a record of reliability and squareness.

A conservative company is a further guarantee of right protection.

ASK YOUR BANKER.

Your banker keeps posted on reliable and unreliable concerns. Go to him—ask him about the Capital Live Stock Insurance Company of Topeka. Most bankers over Kansas know every officer of our company. If he doesn't know us, ask him to investigate our integrity, financial standing and reliability. We want you to do this. A policy with us means your continued business.

RESPONSIBILITY OF COMPANY.

The Capital Live Stock Insurance Company uses no forced methods and is on a sound business basis. The responsibility of the company gives you a safe investment. When you place insurance in our hands it is backed by efficient service—honesty—and a record of years of successful business experience based on responsibility. There is no theory as to the responsibility of this company—all facts. Protect your live stock investment on that responsibility.

LET US ASSUME THE RISK

We invite the patronage of those who appreciate sound practice in live stock insurance. Every farmer needs live stock protection because live stock is the greatest single investment on the average farm except the farm itself. Your live stock is the most valuable property you own. It is worth more than your house, barns, fences, machinery and other equipment. You have your capital invested in it. You have spent hours and days and weeks and years of time—time that is worth money—taking care of it, feeding, nourishing, watching over it. Your investment must be protected. Reliable live stock insurance is a necessity. For the success of your daily work, live stock insurance in a responsible company is the one way in which a farmer may feel safe about the future. No matter what happens, your investment is protected. No worry about probable losses. All your live stock may die—mortgages may fall due—times may be hard—but the man protected by honest live stock insurance may grow old in peace because his money—his revenue—his success, is assured. No farmer knows the day or hour when his live stock may be swept away, because the life of live stock and contemplative revenue from them is very uncertain. You know without protection you may have terrible losses, so let us assume the risk.

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Cuts the labor and time cost of farming. Gives you the power of eight good horses in the field at one-fourth the cost of horse power, and of a powerful Portable Engine, with power enough to operate your Separator, Thresher, etc.

Plows Eight Acres a Day at a Fuel Cost of 18c Per Acre

Pulls three 14-inch bottom Power-Lift Plows, 8 inches deep, in heavy soil, and with power to spare. It is self-steering when plowing; light weight with wide wheels, turns in 25-foot circle, self-oiling, simple, well built throughout.

Buy your tractor now. You can run the belt power all winter and have the tractor ready to do your spring plowing as soon as the weather and ground are right.

Write for Illustrated Catalogs and full information on the Waterloo Boy Machines. State in which machine you are interested.

Waterloo Gasoline Engine Company
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All Waterloo Boy Machines Strongly Guaranteed by the Biggest Engine Factory in America.

Waterloo Boy Kerosene-Gasoline Engine. The greatest cheap-fuel power machine on the market. Winner of three gold medals at International Expositions. Reliable winter and summer. 11-2 H. P. to 12 H. P.

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This land has proven its ability to make 20 per cent net each year on the value asked. It is offered for sale, as the owner is ready to retire.

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Harper County, Kansas, containing 160 acres; sandy loam with clay mixture; 90 acres in wheat, 20 acres ready for spring crops, 50 acres pasture. All fenced and cross-fenced. Running water, two wells. Four-room house, cave, etc. Stable for eight horses, cattle sheds and other out-buildings. Cash price, \$30 an acre.

FARM NO. 2.

480 Acres, Harper County, Kansas. 160 acres broke, 100 acres in wheat, 60 acres ready for spring crop, all good hard wheat land. \$25 an acre, cash.

FARM NO. 3.

160 Acres, 110 acres broke, 60 acres in wheat, 50 acres ready for spring crop; 50 acres mow land on creek bottom; all fenced, meadow cross-fenced; running water, well, granary and stock sheds; good hard wheat lands. \$25 per acre, cash.

FARM NO. 4.

74 Acres in Sedgewick County, Kansas. All broke, all fine alfalfa land; 6 acres in alfalfa, balance in wheat, was alfalfa; fenced; good house, well, barn for four horses, and usual outbuildings. Near station; 10 miles from Wichita. \$100 an acre. Balance of quarter in alfalfa and can be had for \$116 an acre.

WRITE TO H. N. HOVEY, CARE KANSAS FARMER, TOPEKA, KANSAS.

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THE PROFIT-PRODUCING COMBINATION.

Do you want a nicely improved quarter section, highly productive, two miles from Marysville, the county seat of the banner corn county in Kansas? A bargain for someone at \$16,000, with favorable terms. For particulars address

X. Care, Kansas Farmer

CROP REPORT FOR YEAR

THE Kansas State Board of Agriculture has just completed the work of calculating the yields and values of the farm products for the year 1915. The following facts are taken from this report:

Based on farm values, the agricultural products of Kansas for the year 1915 are worth \$341,561,439. While this is less by about 35 million dollars than that of 1914, in aggregate wealth production this year ranks second. The gross income from the farms is about 100 dollars more than in 1913, and 16 million more than in 1912, which is rated as the state's third best year, agriculturally.

Field crops are valued at \$250,607,544, and animal and other products at nearly \$91,000,000. While this year's wheat crop lacks practically 66 million dollars of equalling the value of the tremendous output of 1914, the difference between the total value of field crops is only a little more than 29 million dollars. This is largely accounted for by the big increases in corn, barley, forage and hay crops over their productions of the year previous. The crops ranking highest in value are wheat, corn, alfalfa, the sorghums, oats and prairie hay, in the order named.

There is a decrease of nearly six million dollars in the value of animal products, mostly accounted for in the one item of animals slaughtered or sold for slaughter, which amounts to \$63,438,405, as against \$69,201,112 last year. The value of poultry and eggs sold is nearly a million dollars greater, and the butter made is worth about a million dollars less.

The yield of all wheat, winter and spring, is placed at 95,768,176 bushels, worth \$85,681,787. Of this output 95,141,207 bushels is winter wheat. The average yield per acre is 12.5 bushels, on the area harvested, and the average value per bushel is 89¢ cents. Although there was a vast quantity of matured wheat lost through continuously wet weather, the year's crop is second in size only to last year's output of 181 million bushels.

Barton County is the leading wheat producer this year, with a yield of 3,086,636 bushels. Reno is second with 2,804,461 bushels; Pratt third, with 2,716,764 bushels, and Mitchell fourth, with 2,708,514 bushels. More than two-thirds of the spring wheat was produced in the two northwestern counties of Sherman and Cheyenne, bordering on Colorado.

The yield of corn from 4,537,238 acres is 142,653,140 bushels, worth \$73,547,443. The acreage is the smallest since 1882, owing to the unusually large area in wheat and unfavorable conditions at planting time. The average yield per acre of 31.4 bushels is the highest since 1889. The acre-yield falls only a little short of doubling that of 1914. The aggregate yield exceeds last year's by 55 million bushels and is worth 14 million dollars more. Smith County leads with 6,423,824 bushels, and following, in order, are Jewell with 5,486,148 bushels, and Marshall, with 5,134,180 bushels. These three counties are in the tier bordering Nebraska. In fact all other counties having so much as three millions bushels or more each, except Dickinson, are in that tier, namely: Brown, Nemaha, Phillips, Republic and Washington. The highest average yield per acre is reported from Lincoln, amounting to 43 bushels; followed by Brown and Geary with 42; Cloud, Dickinson, Doniphan and Saline, with 41; and Chase with 40 bushels. The average yield per acre in Smith County, as in Marshall, was 38 bushels; while Jewell reported 36 bushels.

The yield of oats is 34,304,085 bushels, averaging 24.4 bushels per acre, and it is worth \$13,037,889; as against a crop of 45,349,000 bushels last year, valued at \$17,780,000.

Heretofore the production of non-saccharine sorghums has been given in tons only, which would appear to classify them chiefly as forage. However, as they are grown both for grain and for forage, it is deemed advisable to show the yield and value of grain in bushels and the tonnage and value of the stover, as well as the tonnage and value of sorghums for hay.

A summary reveals that Kansas this year produced 30,236,177 bushels of sorghum grain, worth \$13,896,344, while the stover—the forage after harvesting the grain—amounted to 3,320,004 tons, worth \$6,411,807. This makes an aggregate value of \$20,308,151. Kafir, of course, is the chief of these sorghums. Its yield of grain is 21,633,110 bushels, while that of milo is 4,033,411 bushels, and of feterita 4,596,656 bushels. The returns show also that the tonnage of

kafir stover is not only much the heaviest per acre, but is worth more per ton than that of milo or feterita. The stover yield of kafir was 2,545,134 tons, worth \$5,089,400; of milo 300,077 tons, worth \$439,008; and of feterita 474,793 tons, worth \$883,399. The yield of sorghum hay this year is 575,812 tons, valued at \$1,766,194.

The total value of the state's sorghum crop, including all varieties of the saccharine and non-saccharine sorts, for forage and grain, hay and seed, amounts to \$27,551,275.

In the past no specific statistical information about alfalfa has been available in the board's report except as to acreage. The yield was accounted for under the general head, "Tame Hay," which included the hay of clover, timothy and all other plants belonging in that classification. As Kansas is the premier alfalfa producer, and this legume is constantly increasing in importance in the state's agricultural development and prosperity, it is deemed desirable to treat it as a separate and distinct crop. It is figured strictly on a hay basis, as the best means of approximating its value.

Under this method, correspondents report an average yield per acre this year of 3.4 tons, making the total production 4,647,078 tons, worth \$28,433,930, or a fraction more than \$8 per ton. This low valuation is attributed to a high percentage of damaged hay, the season having been unfavorable, in the main, for proper curing. The state's acreage of alfalfa is 1,359,598 acres, or a gain over the preceding year of 166,000 acres.

The yield of Irish potatoes is 5,138,850 bushels, worth \$3,407,156, as against an output of 3,708,342 bushels last year, valued at \$2,743,293. The crop is the largest since 1909.

The production of barley is the greatest in the history of the state, amounting to 10,405,647 bushels, which is an average of a little less than 32 bushels to the acre, and the crop is worth \$4,399,469. The barley is grown principally in the western part of the state.

With a smaller acreage and a larger yield, the value of the year's millet of \$1,035,740, is less by about \$170,000 than in 1914.

The yield of prairie hay is extra large, with a quality somewhat lower than the average because of the wet summer, according to reports. No definite figures as to tonnage and values are available, owing to the custom of receiving the output figures in the following year, through assessors. It is the intention to hereafter secure these statistics for current years.

LIVE STOCK IN KANSAS.

The State Board of Agriculture has just finished compiling the live stock statistics for the year 1915. The figures show that there have been substantial increases in the numbers of all kinds of stock, except horses, which are less by 8,000 head. Other cattle than milk cows have gained in numbers 490,000, swine 356,000, milk cows 104,000, mules 33,000 and sheep 7,000. The total value of the state's live stock is \$31,655,642, a gain of \$50,000,000. Horses have increased in value \$10 a head, mules \$7, milk cows \$1, other cattle \$1.50, sheep 25 cents, while hogs are lower by at least 50 cents a head.

The numbers and value of stock of the different kinds is as follows:

| | Number. | Value. |
|--------------------|-----------|---------------|
| Horses | 1,063,356 | \$116,969,160 |
| Mules and asses .. | 276,495 | 33,732,390 |
| Milk cows | 276,495 | 59,599,422 |
| Other cattle | 1,919,756 | 81,589,630 |
| Sheep | 138,082 | 690,410 |
| Swine | 1,807,463 | 18,074,630 |

Total value of live stock.. \$310,655,642

ACREAGE OF WHEAT SOWN.

Correspondents of the State Board of Agriculture estimate that the wheat sown in Kansas the past fall is 10.5 per cent less than that of a year ago, approximating in the aggregate 8,454,000 acres, as against 9,448,000 acres in 1914. This fall's sowing is far above the average, however, and is the third most extensive. Its area is exceeded only by that sown in the autumns of 1914 and 1913.

The general average condition of the state's growing wheat is very satisfactory. The general snow that has just fallen, blanketing the wheat, lends encouragement to an already optimistic prospect for this time of year.

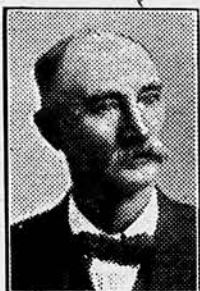
Practically all the counties comprising the eastern two-thirds of the state show decreases in acreages sown amounting to as much as 42 per cent in Wabaunsee, a comparatively unimportant wheat grower, however. On the other hand, larger areas were sown in all the counties of the western third, except a half-dozen in the northern part of that region,

At Last the Farmers of Kansas Can Borrow Money as Cheaply as the Railroads and Big Corporations

The dreams and hopes of many a Kansas farmer are about to be realized. At last farming is to be placed on an equal footing with other business and the farmer is to have the use of capital on equal terms with the railroads, manufacturer and merchant. The interest rate on his farm loan is to be lowered one-third to one-half.

This has been brought about by the Kansas Rural Credit Association, a mutual organization of Kansas farmers for the purpose of securing cheaper money for the members of the Association. This organization is under the direct supervision of the State Bank Commissioner in all of its operations, is capably officered and managed and is already on the high road to success.

Such associations have thrived for a century and a half in Europe and proven of the greatest benefit to agriculture. Several small institutions of this character are now doing a successful business in Wisconsin, in a limited territory. It remained for Kansas, with her usual progressiveness, to charter and organize the first state-wide institution for the benefit of her farmers.



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Salina, Kan.



E. E. Frizell,
Farmer and Ranch-
man, Larned, Kan.



J. G. Johnson,
Landowner,
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W. C. Lansdon,
Editor Salina Union,
Salina, Kan.



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Lyon Co. State Bank,
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The Kansas Rural Credit Association Will Begin Making Loans February 1st

In the comparatively short time in which the books of the association have been open for membership hundreds have joined. Hence the early date at which loans can be made and the value of this association to the Kansas farmer, proven. Mark well this date for it means a new era in Kansas farm loans. On that date the Kansas Rural Credit Association will become an important factor in rural Kansas finances.

Sooner or later, Mr. Farmer, you are going to want the use of some money—naturally you will want the best terms—then join this association. Only members are entitled to its benefits. Join now, as loans will be considered in the order applications are received. Let us send you full and convincing details and particulars about this association and what it means to you. Clip out and mail the coupon below and prepare to share in the prosperity this association will bring you.

JOIN NOW AND BECOME A CHARTER MEMBER

MAIL THE COUPON TODAY

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CREDIT ASSOCIATION**

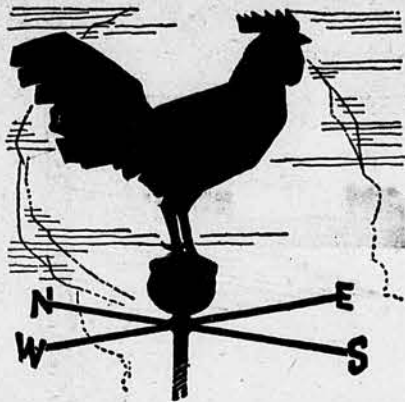
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**The Kansas Rural Credit Association,
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Without obligating me in any way please send me your sixteen-page booklet which explains in detail the plan of The Kansas Rural Credit Association and tells how I can become a member and enjoy the benefits of this co-operative organization of Kansas farmers.

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It will mix 2 1/2 cu. ft. at a batch, has self-tilting dump, runs by hand or 1 h. p. engine. Will keep from 2 to 6 men busy. Does finest work, equal to any \$200 machine—and costs you almost nothing in comparison. Just drop me your name on a post-card today. Full instructions and blue print plans will come at once. FREE.
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Economy of the Dairy Cow

THE dairy cow will more and more replace strictly meat-producing animals where land, labor and feed are high. The cow produces human food with far greater economy than do these meat-producing animals. That this increase in milk cows is actually taking place, is shown by the United States census figures. During the period 1900-1910, milk cows in the United States increased about 20 per cent in number. This is about the same percentage increase as took place in our population during the same period. The total number of all cattle, however, decreased during the ten-year period, showing that dairy cows are taking the place of beef cattle. Professor Frandsen of the Nebraska Agricultural College in an address before the Nebraska Dairyman's Association, brought out this economy of the milk cow in a most striking manner:

"The following data regarding the actual food value of the cow and the steer," said Professor Frandsen, "is a comparison made of the milk produced by one of our cows, La May, in one year and the composition of the carcass of the steer weighing 1,250 pounds.

| | 26,708.3 POUNDS MILK | 1,250 STEER WEIGHT |
|-------------------|----------------------------|--------------------------|
| Proteids. | 841.31 | 172 |
| Fat. | 774.51 | 333 |
| Sugar. | 1,196.53 | ... |
| Ash. | 237.70 | 43 |

Total. 3,050.05 548
The cow produced proteids sufficient for nearly five steers, fat for more than two steers, and mineral matter enough to build the skeletons of nearly six steers, and in addition to this 1,196.53 pounds of milk sugar.

"Comparison of the feed is fully as striking. The steer took two years of liberal feeding to build up its products, while the product of the cow was less than one year. Again, the steer after giving this product is a 'goner,' while the cow is on deck ready to do the same thing next year.

"The cow is the original conservationist. She produces human food cheaper than any other animal on the farm. The principal constituents of butter come from the air, sunshine and water. To put it differently, \$20 worth of wheat takes as much fertility from the soil as \$390 worth of cream. The most practical way to keep up soil fertility is to make it our business to sell those products which remove the least plant food.

"We hear a good deal of talk regarding the crowded professions. The government statistics indicate that Nebraska has less than eight cows per square mile. Some of the eastern states have as much as forty-four cows per square mile. As long as these conditions maintain it is quite evident that there is more and better room for dairy farming. In fact, if we had twice as many live stock farmers, it would mean that in various ways every farmer could materially reduce the expense of producing, handling and marketing his products. This is in striking contrast to the jealous, cut-throat spirit that exists in certain classes in our cities."

More Cows from Wisconsin.

Hardly a week passes that we do not hear of someone going to other states for the purpose of buying dairy cows to ship into Kansas. Only recently we noted that Victor Stuewe, a young Wabunsee County farmer, has been compelled to go to Wisconsin in order to secure the cows to stock the dairy farm he is developing. He was accompanied on this trip by Professor Reed of the agricultural college, who was commissioned to buy a bunch of cows for the various state institutions of Kansas, including a few for the college at Manhattan.

Mr. Stuewe has not heretofore been engaged very extensively in dairying, but after graduating from the agricultural college and returning to actual farm work, he became convinced that dairy farming was the most profitable line he could follow. His farm is located in a good grazing district and he has already built silos, thus providing succulent winter feed that will take the place of summer grass in milk produc-

tion. Mr. Stuewe expects to develop a high class dairy farm, selling the cream and using the skim milk for the feeding of hogs and calves.

This is but one of the many examples to which we might refer, where bright young men have seen the possibilities in using the milk cow in the development of a profitable system of farming. As Mr. Stuewe stated, dairy products are staples and always find a ready sale for cash. The production of these products affords an outlet for a large amount of farm-grown feeds and offers opportunity for the exercise of skill and management.

How to Keep Barnyard Dry.

A dairy farmer in Jackson County writes that his barnyard is so located that it is next to impossible to keep it from becoming flooded and extremely muddy during the winter. A muddy barnyard is a most disagreeable feature on any farm. Milk cows that have to wallow through the mire of a muddy yard to reach the water trough, cannot be expected to do much in milk production.

Our correspondent seems to have inherited an improperly located yard and is thus compelled to make the most of it or tear up the buildings and start anew. It may be possible for him to improve this condition to some extent, but it will require work. With a road scraper or grader he can throw up a dike around all sides of the yard but the lower one. This will keep the water that falls on the upper side from getting on to the yard. The floor of the barn should be at least two feet higher than the surface of the ground a hundred feet away. If this grade does not exist at the present time, an effort should be made to raise the floor. If any sandy dirt is available, enough of it to grade up to the new floor level should be hauled to the barn. The water from the roof should be taken care of in gutters and piped to a ditch entirely outside of the yard. In short, every effort possible should be made to keep all outside water from getting into the yard and removing as quickly as possible that which falls in the yard.

Those locating new barns should consider carefully the location, as the yard surrounding the barn should first of all be well drained.

Next Step in Dairy Cattle Breeding.

The pure-bred dairy cattle business is now progressing very rapidly in Kansas. When pure-bred dairy cattle are scarce, breeders are tempted to save all the males and sell them for breeding purposes. As the numbers of pure-bred cattle increase, disposing of bull calves in this way will become less and less satisfactory. Buyers will get more and more critical and prices will of course go down.

As long as the pure-bred was competing with the "scrub" it was easy sailing for the breeder having pure-bred bulls for sale. The time will soon be at hand, however, when the competition will be between pure-bred animals. When this time arrives breeders of pure-bred dairy cattle cannot expect to make a profitable business of their bull selling unless they produce superior individuals. The "pure-bred scrub" is a well recognized factor in all breeds of live stock and should be disposed of as quickly as possible. As long as he is used for breeding purposes, little progress can be made in improving the common stock. As pure-bred dairy cattle become more numerous it will be found that a registration certificate alone will not sell a bull. He must be possessed of considerable merit and in addition a certain amount of judicious advertising must be used.

One of the great unnecessary losses among dairymen is the sacrifice of the bulls when they are mature and at their best. The average dairyman buys a young bull, uses him two or three years, and offers him for sale without waiting to learn of the quality of his daughters. His neighbor, instead of buying the old bull, buys a young one, and the older one that may be worth a fortune to the community is sold for beef, while the neighbor is experimenting with the young one.

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WORTH TWO \$75. SEPARATORS

Mr. Geo. Ruppel, of Harvard, Mich., wrote me: "I paid \$100 apiece for my first two and \$85 for my last separator. We sold him a new Galloway Sanitary Bath-in-Oil Cream Separator. He says: 'It looks to me like it was built to outwear the other three.' Where other separators are good the New Galloway Sanitary is as good or better. Where others are wrong the Sanitary is right. The best skimming service, the most improved design, the best materials and finish for less money! If the Galloway Sanitary is as good as I say it is, you cannot afford to buy any other kind! If it is not as good as I say, then I could not afford to offer it to you for a ninety-day trial. I couldn't afford to guarantee for ten years against defective workmanship and materials. You save money when you buy it; you make money when you use it. Try it. If you like it, buy it; if you don't, send it back. That's my selling plan in a nutshell." Shipped from Spokane, Omaha, Minneapolis, Chicago, Waterloo and Kansas City.
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Guernsey Cattle Record.

From the American Guernsey Cattle Club we have a compilation and comparison of the highest fifty records made in that breed of cattle for the years of November, 1913, to November, 1914, and November, 1914, to November, 1915, which brings out some interesting facts.

In the 1913-1914 list there appears one cow with a record of over 1,000 pounds of butter fat. This cow was May Rilma, that produced 19,673 pounds of milk and 1,073.41 pounds butter fat. No cows appear in the 900-pound list. Seven appear in the 800-pound list, sixteen in the 700, and twenty-six in the 600 list. The average of the entire fifty records is 715.7 pounds fat.

In the year 1914-1915 there appeared also a cow with over 1,000 pounds of fat, Murne Cowan, having produced 24,008 pounds milk and 1,098.18 pounds fat. Two cows appear in the 900-pound list, seven in the 800, twenty-two in the 700, and only eighteen in the 600. In tabular form this data appears as follows:

| | 1913-1914 | 1914-1915 |
|-------------|--------------|------------|
| CLASS. | No. of Cows. | Avg. Cows. |
| 1,000-pound | 1 | 1,073 |
| 900-pound | 0 | 0 |
| 800-pound | 7 | 849 |
| 700-pound | 16 | 726 |
| 600-pound | 26 | 658 |

Total 50 716 50 742

Five of the cows which appeared last year appear again this year. Their names and records are as follows:

| | 1913-14 | 1914-15 |
|-----------------------------------|---------|---------|
| | FAT | FAT |
| Julie of the Chene | 827.20 | 953.53 |
| Beauty Eagle | 652.85 | 846.86 |
| Imp. Rosie V. of the Bourg de Bas | 635.99 | 755.07 |
| Imp. France XVIII's Daughter | 701.24 | 734.28 |
| Golden Lassie of Paxtang | 675.45 | 715.38 |

Several of the cows in last year's list have daughters that have also entered the list of the fifty highest records.

The average fat production for the entire breed has raised eight pounds during this time and the above figures would indicate that at least a portion of this increase was due to the development of a large number of 700-pound cows and better during the year—the number in this class increasing from sixteen to twenty-two.

Cow Testing Associations.

At the meeting of the Kansas State Dairy Association, held in Manhattan last week, Mr. Engle, one of the members of the Dickinson County Cow Testing Association, stated that the association had enabled him to raise the standard of production in his herd at least fifty pounds of butter fat per cow annually. This is a remarkably good showing as a result of two years of this kind of work. While he could not speak positively for all the members of the association, he said the others had been benefited in a similar manner.

A great deal of interest was taken in the work of this association at the dairy-men's meeting. A cow testing association touches the dairy business of a community from so many different angles that it is hard to understand why more of these organizations are not now working in Kansas. This one in Dickinson County is now in its third year. It does not have quite so many members as it had in the beginning, but what it lacks in membership is made up in enthusiasm. Some of the members dropped out early in the game because the record showed that they were losing money. They were fooling themselves into believing they were dairymen, and not being disposed to do the things necessary to make the business profitable, they dropped out and turned their efforts to other lines of farming.

The whole tendency of this association has been to arouse keener interest in dairying in the community. Every man in it is a better dairyman than he was in the start. One might assume at first thought that the locating of inferior cows would be the most important result of the work of the cow tester. This is one of the important things brought about, but the replies to the questions asked Mr. Engle indicated that he is now feeding his cows better and giving them better care as a result of being a member of the association. The right kind of feed and care will make many a cow profitable that has been kept at a loss. These results came about because of the friendly rivalry that developed and through the opportunity to learn better methods from the monthly visits of the tester. Through him comes fresh dairy knowledge from many sources. He carries from one farm to another the good things he finds in his visits. In the beginning every man used the tester to the limit when he made his

monthly calls. So anxious were these men for all the information they could get, they imposed on the tester. Professor Reed told how the man who was doing the work was kept up night after night until eleven or twelve o'clock as he was making his rounds. Each member was anxious to talk cows and dairy methods, wanted to know all about what the other members were doing, and in his eagerness forgot that while he could stand it to sit up until midnight one night, the tester was being called upon to do this night after night.

Assurance was given at the close of Mr. Engle's remarks, that other associations would soon be started. One is already fairly well under way in the Mulvane district of Sedgwick and Sumner counties. The idea of having local dairy meetings at these centers where testing associations was organized, was suggested at the meeting. A motion was made and passed, authorizing the officers of the State Dairy Association to arrange for two or three such meetings through the year in addition to the annual meeting held at Manhattan. The plan was to hold these meetings in such dairy centers as Abilene, Mulvane, Fort Scott, and Tonganoxie. Every one of these centers should have a live cow testing association. These associations could arrange to have some splendid meetings of the state association in these different localities.

Efficiency of Renters.

The tenant farmer is usually considered to be shiftless in his methods and is often accused of being simply a soil miner, but there is another side to the picture, according to O. R. Johnson of the Missouri College of Agriculture. Whatever shortcomings may generally be correctly charged to the tenant, they are the fault of the system and not of the individual. In some ways the tenant seems to be more efficient than the owner who farms beside him, if we can take a Northwestern Missouri county as a typical example. In the part of that county which was most completely studied by Mr. Johnson, the tenant farms 102.7 acres of land for every workman he employs, including himself, as compared with only about 93.4 acres farmed by the owners and part owners in the same region. The tenant farms twenty-nine acres for every horse that he keeps, while the owner farms only about twenty-five and a half acres per horse. These facts may be interpreted in various ways. The land owner is often an older man, or he is in easier circumstances, financially, and does less work himself, consequently the average number of acres per workman may be expected to be lower. The tenant farms seventy-three acres with \$100 worth of equipment, and the owner farms only about fifty-five acres, showing a greater apparent difference in efficiency here than elsewhere, but there are probably more reasons to doubt whether these figures correctly show the real difference in efficiency. While the tenant farms more than one and a third times as much land with \$100 worth of equipment, it is probable that he does this because he borrows a part of the equipment of a neighboring land-owning farmer. The figures on work obtained from the horses and men employed are not open to this criticism as such help borrowed is usually repaid. Wherever there is an exchange of tools which enables each to use the other's property and avoid buying for himself, co-operation has resulted in more efficient use of the funds of both, but Mr. Johnson feels sure, from his observations during the survey, that the tenant in the region studied was very badly under-equipped and would not have gotten greater results with a lower expenditure for machinery if he had not obtained an advantage by borrowing.

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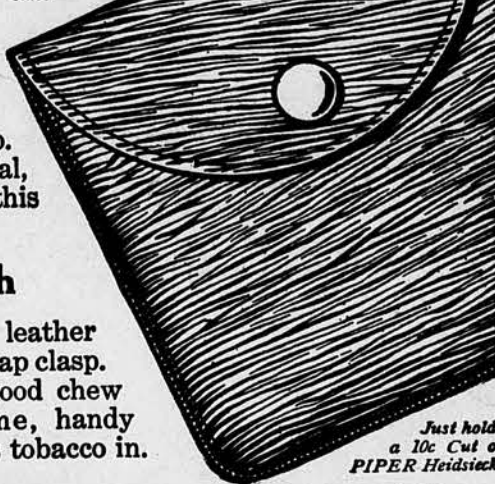
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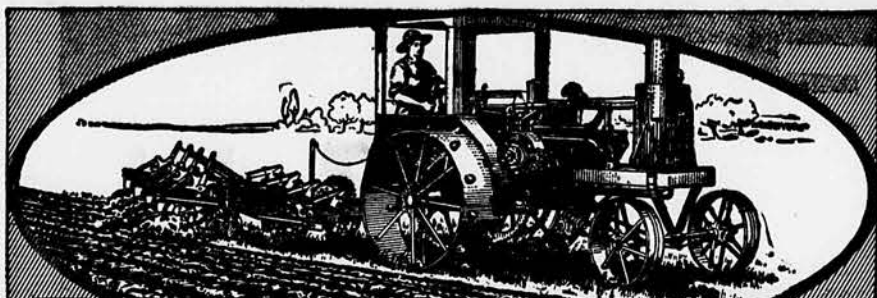
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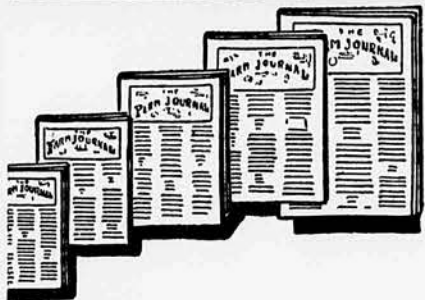
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HORSE BREEDERS OPTOMISTIC

FROM the interest taken in the meetings of the Kansas Horse Breeders' Association at Manhattan, last week, one would infer that the production and use of horses on the farm is not likely to be dropped in the near future. At every session the room where the meetings were held, was filled, many having to stand.

The judging and demonstration work in the college stock judging pavilion was an important feature of the program. Two lectures were given in horse judging—one by Dr. C. W. McCampbell, secretary of the State Live Stock Registry Board, and the other by J. H. Johnstone, of the Chicago Live Stock World.

We heard only a portion of Doctor McCampbell's lecture, but that portion touched on a most important point in the improvement of our horse stock. It was pointed out that many times unsoundness in the feet and legs is overlooked in breeding horses. Stallions with sidebones, bone spavins, and other defects are almost sure to transmit these troubles to their offspring. It is hard to convince people of this because they do not find the sidebone or spavin on the colt or yearling. They fail to appreciate the fact that what was really transmitted is a weakness or defect of a certain part, and when the horse is developed and put to work the sidebone or spavin will appear. It is simply Nature's attempt to strengthen a weak part by depositing some additional bony tissue. There is probably no other more important point in the breeding of horses than to eliminate every stallion showing any evidence of weakness in the feet or legs.

Later in the day Mr. Johnstone was called upon, and the demonstration he gave consisted in placing a group of draft horses strictly from the standpoint of market requirements. The manner in which he placed these horses showed how important is weight, conformation, and soundness of limb in a drafter that is to satisfy market requirements. A horse of splendid draft form in the group was placed at the foot of the class because of the puffiness of his hocks. Mr. Johnstone said such a horse is hard to sell, and will bring \$100 less than one with sound legs. He said he had recently had a letter from a firm back East asking if he could buy a carload of 1,800-pound drafters, all absolutely sound and of good draft conformation. He was compelled to reply that he could not get together such a load, because that kind of horses were nowhere to be found in carload lots. Such horses can be produced, however, and this statement certainly shows the opportunity awaiting those who will set themselves to growing horses of the required type.

We noticed hanging on the wall of the room where the meeting was held, an enlarged photograph that brought out most strikingly the reasons for having a horse of the right type. This picture showed a twenty-three-year-old artillery horse that was still able to perform active service. Alongside was another horse that had been in use only one year and had been condemned and was being offered for sale. This latter horse was flat of rib, his rump was steep, he was light in body and flank, and in comparison with the other horse, it was easy to see why one had been able to stand up to the work through many years and the other had broken down in one.

A farmer's experience with pure-bred mares was an interesting part of this meeting. J. H. Armstrong, Lyon County, who is a member of the Lyon County Horse Breeding Company, opened this discussion. His injunction was to buy the right kind of mares in making the start. He said many a man lacking in knowledge of what constitutes a good horse, is apt to find that he has bought a gold brick when he gets his mares to the farm. Mr. Armstrong's personal experience with pure-bred draft horses began in Illinois. He secured the advice of a thoroughly competent friend and bought at a sale a splendid four-year-old mare for \$272.50. This was in 1896, which accounts for the unusually low price. He sold the stallion colt from this mare for \$275 at weaning time, and thus realized more than the cost of the mare. He related that at about that time Iowa men were buying all the good fillies from Illinois they could get. The result was that Illinois had the poor ones were left,

while the Iowa men were making splendid progress in improving their horse stock. Mr. Armstrong pursued the policy of keeping all the best fillies but always sold the horse colts while young. His reason for selling the horse colts was that the farmer breeder is not in a position to develop a young stallion. It is better to sell him at a reasonable price while young, than to attempt to keep him. Men who make a business of handling stallions can take these young horses and grow them out to the best advantage, but the farmer can not do this. We believe this is good advice. The young breeder is frequently tempted to hold his stallion colts, thinking he can develop them and sell them for the higher prices that professional stallion men are able to get. It is very seldom that this can be done, and even though the colts can be grown out properly, it will be expensive and will interfere seriously with the regular farm work.

Mr. Armstrong stated that by following this policy the money he put into his first mare had returned him 60 per cent on the investment. When he came to Kansas he reserved two of the best young mares and brought these with him. Just before coming to this meeting he refused \$500 for one of these eleven-year-old mares. She is in foal, and he stated that he considered the chance for a colt from this mare worth at least \$500. Mr. Armstrong said that he would be willing to work his pure-bred mares against anyone's grade mares or against mules. He said he could take his team of 2,100-pound mares and drag the best team of mules in the country all around the lot. He owns a 2,400-pound driving team and a team of mules, and in actual farm work the past season, his two big mares on a 16-inch sulky plow did as much plowing as did the mules and the light team.

Mr. Armstrong said he felt there has not been a brighter prospect for the horse business in years than at the present time. It takes time to produce horses. There is so much demand for these good heavy horses that it is a common trick of horse dealers to pull out the corner teeth of four-year-olds in order to give them the appearance of being a year older than they are, and thus get them sold earlier. In closing, Mr. Armstrong said that no farmer can afford to keep mature geldings. Just as soon as they are ready for the city business they should be sold.

At the same session at which Mr. Armstrong talked, Mr. Johnstone was again called upon, and he gave a most interesting history of the origin and development of the draft horse. In enumerating and describing the different breeds, it was shown that they have all been developed in the comparatively small territory of Western Europe. America has done nothing in the line of developing breeds of draft horses. We have been content to import horses from France, Belgium and England. "The importing business is done," said Mr. Johnstone. "The war raging in Europe has already almost wiped out of existence some of the draft horse breeds. It is now up to this country to take up in earnest the business of breeding draft horses for the world." He closed his remarks by urging those present to follow Mr. Armstrong's advice to breed and raise better horses.

T. W. Morse, of the American Breeder, gave a talk on "The Farm Horse of Today." In the course of his remarks, he said:

"The horse at its best is the most economical, most flexible, most perfect tractor known. Who has not known horses, which in their time 'wore out' two, three, maybe four team-mates. I grant they were 'tough' or 'wiry' or 'had the wind,' but that does not tell the story. They were perfect machines. There was no friction in their joints. They moved true and did not tire themselves and develop unsoundness under strain. In geldings on such horse is worth (for work) often more than double its well matched teammate; in mares or stallions the value difference is far greater; and until our market is educated to pay that difference, we have not learned what efficiency in horse flesh means. Every war horse buyer is preaching this doctrine to us—in the language of dollars and cents. To them horses are machines, nothing else. They

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are bought to do the work—and die. No consideration can be more practical, and in principle it applies to every kind of horse. If a horse is so wrong mechanically, so imperfect, so liable to disorder, that these buyers will not accept it at any price for even the few weeks of life allotted to 'cannon fodder,' why should the farmer or breeder put up with its inefficiency and allow its reproduction for years. As in many other matters, the remedy for our past failures to do the intelligent thing in horse breeding, lies in education. Sentiment is worth something; it will help in the horses care, but in selecting and breeding, in buying and selling, the horse should be a machine, chosen for the work it has to do and judged on the basis of its ability to convert the purchase price and cost of maintenance into profitable labor. With this as its standard, horse husbandry has the world for its market, and no competition that need be feared."

Appraisal of Condemned Animals.

The federal bureau of animal industry has been severely criticised because of its attitude toward the valuation of animals slaughtered by government order. In his annual report, Secretary Houston discusses this point, and makes some suggestions that breeding value should be considered. This is no more than justice to those who have, through their skill as breeders, developed high class herds of pure-bred animals. Breeders of pure-bred stock will be interested in learning of the present attitude of the the department of agriculture on this question. An abstract from the secretary's report follows:

"In the handling of the problem difficulties arose because of the fact that the department in making appraisements of diseased animals did not feel authorized to take into consideration their breeding value. In some cases fine herds were involved. In all the discussions of the matter before agricultural committees of the congress the beef or dairy value was indicated as the basis for appraisal, and in former outbreaks this basis was used. The suggestion was made that the department be authorized to take breeding value into consideration; but the congress, in making an appropriation to reimburse the owners of the National Dairy Show herd for expenses incurred by them incident to the quarantine, specifically provided that the beef or dairy value only should be the basis of the appraisal. As the disease still prevails in certain parts of Illinois and there is no guaranty that it may not spread, it would seem that for the ensuing year an appropriation equal to the current one should be made. It may not be necessary to expend the appropriation; but it would be exceedingly unfortunate if the disease were to spread or reappear and the department had no adequate funds or authority. The estimates contain an item covering this matter. In connection with it the suggestion is made that in payment for animals hereafter purchased for slaughter the appraisal may be based on the beef, dairy, or breeding value, provided that in case of appraisal based on breeding value no payment for any animal shall exceed three times the beef or dairy value. Both equity and practical expediency justify taking breeding value into account. The practical consideration is this: Prompt action is of the highest importance, and if owners feel that they will not receive a fair return they may resist the federal and state authorities. A maximum limit also seems essential to speedy settlement. The department would exercise the requisite care and is not apprehensive that extravagant appraisements would be permitted."

Denver Live Stock Show.

January 17, the Western National Stock Show will begin at Denver. According to the reports, preparations are under way for one of the most imposing exhibits of pure-bred beef cattle and high-class feeders that has ever been held. The West is hungry for pure-bred live stock. The Western States have been most zealous in guarding against any foot and mouth infection. This has kept breeders from reaching their customers in these states for many months. Colorado is now open to receive cattle from states that have been free from federal quarantine for ninety days. It is likely that other western states will soon fall in line with this attitude toward the reception of live stock from outside.

In many places the roads are almost impassable during a good portion of the school year. This is certainly unfair to those to whom we look for the progress of the future.

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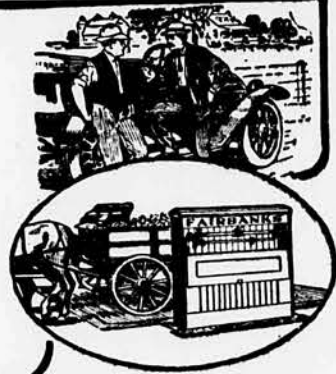
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Winter Care of Poultry

To obtain good results from a flock of poultry during the winter all houses and coops should be put in good condition, only healthy fowls placed in the buildings, and good care given to the poultry. The houses should be thoroughly cleaned, disinfected, and made tight for winter. If the house has a dirt floor, it is well to remove three or four inches from the top and substitute fresh gravel or sand. If the floor is cement or wood, remove all litter and dirt and put in four or five inches of fresh straw or litter. Be sure that the house is tight on three sides and that there is no chance for a draft to strike the hens. If hens roost or are placed in a draft during the fall and winter, colds are sure to develop, which may result in roup and other troubles. The south side, or front, of the poultry house may be left comparatively open, but should be under control, so that the openings may be closed gradually as the weather becomes cold. Have muslin curtains in the front of the house, or leave a window partly open even on the coldest nights to allow some ventilation in the house. Fowls will stand considerable cold air provided it is dry, and ventilation will keep the air thoroughly dry in the house.

The pullets should be brought in off the range and put in winter quarters, but before they are mixed with the older fowls be sure that the hens are banded or that the web of the foot is punched in some way so as to distinguish between the pullets and the hens. In this way the older stock may be culled out whenever it appears desirable, and the young hens kept for further laying. Cull the chickens which are brought into the laying house carefully, and fatten and market, all chickens which are small poorly developed, or in poor condition. These small, poorly developed chickens are apt to catch cold if put in with the other poultry, and develop diseases which quickly spread through the flock. Market all surplus cockerels or older male birds which are not desired for breeding or not wanted for a later market.

Feed the grain in a deep litter on the floor and make the hens exercise for all of their grain. The mash may be fed either wet or dry, and should be so regulated that the fowls will get about equal parts of mash and of the scratch grains. It is necessary to give the fowls plenty to eat to get good results, but the birds should always be eager for each feed. In cold weather feed about one-third of the scratch grains in the morning and two-thirds at night. In this way the hens are forced to exercise more than if they received all the grain they desire at the morning feed. Scratch grains, mash or ground grains, animal protein, green feed, grit and shell should be supplied in the winter. A good scratch mixture may be made of equal parts, by weight, of cracked corn, wheat, and oats; and a mash may be made of two parts corn meal and one part each of wheat bran, wheat middlings, and beef scrap. Green feed, such as cabbages, mangel wurzel beets, cut alfalfa, or sprouted oats, should be supplied to replace the green feed which the fowls have been securing in the fields; and beef scrap, skim milk, cut green bone, or some similar feed is needed to replace the bugs which the fowls have been getting on the range. Beef scrap or feed of this nature is very essential in securing a good supply of eggs during the winter months.

Clean the dropping boards at least once a week, and spray the roosts with kerosene or some commercial preparation for killing mites once a month during the winter. Have a good supply of sand or dry dirt on hand to use on the dropping boards during the winter.

If any of the birds develop colds, put as much potassium permanganate as will remain on the surface of a dime into a gallon of water and keep this mixture in their drinking water for several days, or until the symptoms of the fowls have disappeared. Remove any sick birds from the flock as soon as they are noted and treat them in coops by themselves, or kill and bury them if they are not worth treating.

Examine the pullets and hens for lice, and dust thoroughly with a good insect powder or apply a mixture of two parts of vaseline and one part of mercurial or blue ointment, about the size of a pea, one inch below the vent.

Look out for sudden severe spells. See that the hen house is closed tight when a norther shows its nose.

One cold night is sufficient to freeze the combs of all your fowls, and spoil them for the show at which you intended to exhibit them.

It avails nothing to bewail the fact that the poultry house doors were not closed the night of the storm, after the damage has been done. Shutting the doors before the storm comes is what counts.

Success in poultry culture is simply the result of looking after all the little details connected with the business. Anyone can be successful if he will use a little diligence and common sense.

Supply the flock with a hopper of bran where they can help themselves at will; also supply them with charcoal and grit. In short, do your best to keep them in good health. There is a good deal more sense in preventing a chicken from getting sick than in curing it after it gets ill.

The writer is willing to make an affidavit that a dish more delicious, tender or palatable than a milk-fed Bourbon Red turkey is not to be found on the menu of the best hotel in the country. Such a dish was his and his family's on Christmas day, by courtesy of Mrs. Clyde H. Meyers, Fredonia, Kan., who raises that kind of bird. It weighed sixteen pounds, and was sufficient for a family of seven for three days.

A hot mash on a cold winter morning is a good thing to give the chickens; still, it is not wise to give them all they eat of the mash, for if you do, they will be apt to sit around after they are filled, and become chilled with inactivity. On the contrary, give them about half a feed of mash and scatter small grain in the litter, so that they may be kept warm by scratching for the seeds. This will keep them active and healthy and consequently profitable.

Feeding poultry has not yet been reduced to an exact science, because different breeds require different treatment. An Asiatic hen would become too fat if fed as a Leghorn should be fed. This is because the Asiatics have been bred for large size and to put on fat, while the Leghorns have been bred to produce eggs. Evidently the same treatment for such different results would be wrong. Whatever a feeding ration is composed of, a modicum of common sense should be an important part of it.

With the ground covered with snow, rabbits ought to be plentiful. If you have more rabbits than your family can eat, don't forget that they make the best kind of animal food for the chickens. A few rabbits each week fed to the laying hens will increase egg production sooner than anything else. It would pay to give as much as five cents each for rabbits for the chickens, for the one thing most essential for egg production in the winter is a large portion of animal food in the hen's rations.

Poultrymen who are undecided whether or not to buy a green bone cutter should bear in mind that a good cutter will pay for itself in increased egg production in one season. Provided he uses it after he has bought it. We have seen lots of cutters lying idle in poultry houses, the owners claiming it was too hard work to grind bones. If that is the case with you, it will pay to buy green bone from your butcher at two and a half or three cents a pound. Besides, the increase in egg production, the feeding of green bone adds variety to the ration, promotes vitality and growth and is a cheap and valuable food. You can not get the eggs in winter without feeding some kind of animal food.

It is surprising to note the number of persons one meets at a poultry show who are always desirous of making a better breed of poultry than any in the show room. With all of the seventy or eighty varieties on display, not one of them seems to fill their wants. At a late Topeka show we met a gentleman who was very enthusiastic over the fowls, and declared he intended to go into the poultry business on a large scale, but desired it to be sure and pay,



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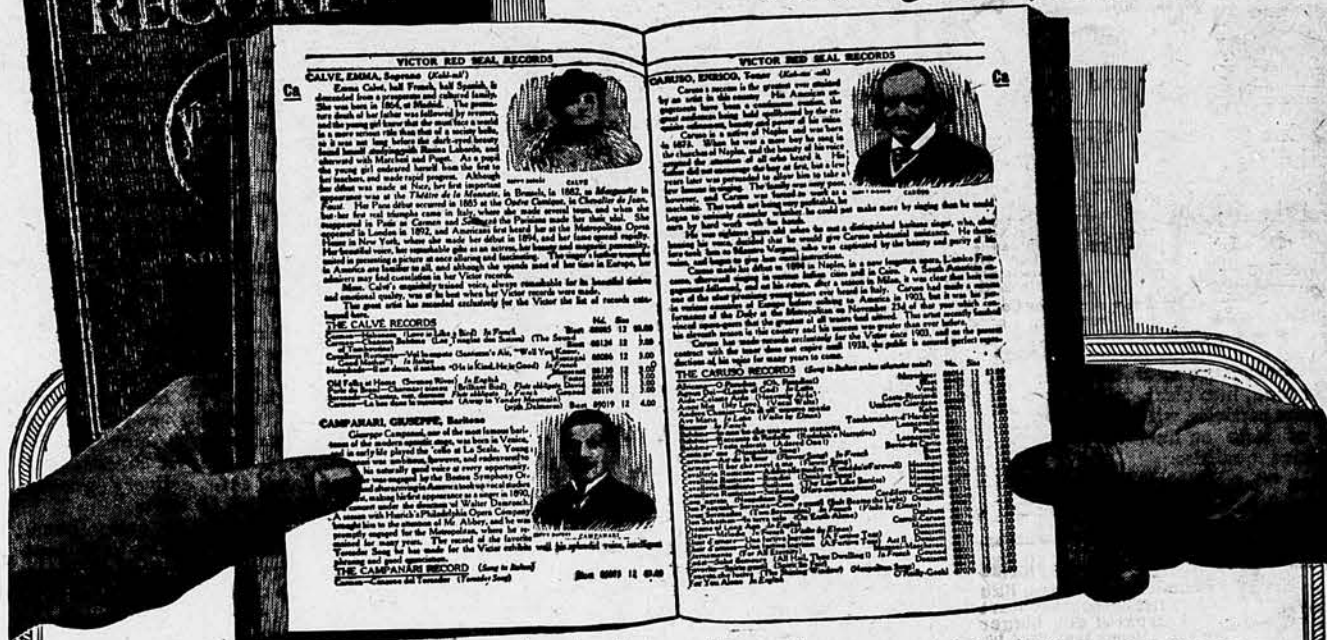
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and for that reason wanted a fowl that would be an extra good layer and have lots of flesh also. He asked us what we thought of a cross of a White Leghorn cockerel on a Light Brahma hen. He liked the contrast in the colors of the Brahma, the black and the white, and thought the great egg-laying qualities of the Leghorns combined with the large meat qualities of the Brahmas would make an ideal fowl; and it undoubtedly would, provided he could combine the good qualities of each into one fowl. We called his attention to the fact that we already had two standard varieties of fowls that conformed to his ideal of color and utility, namely, the Columbian Wyandotte and the Columbian Plymouth Rock. They would be about what a first cross between a White Leghorn and Light Brahma might be. They didn't lay enough eggs for him. He evidently wanted a bird that laid as many eggs as a Leghorn and had as much meat on it as a Brahma. We contended that in a cross the characteristics of both progenitors would be blended, the good and the bad. If the blood of a Leghorn laying 200 eggs per year were blended with the blood of a Brahma laying 100 eggs per year, you would not expect the progeny to lay 200 eggs per year, but must compromise on, say 150 eggs per year. And the same holds good of the flesh. If the blood of a Leghorn weighing four pounds be blended with the blood of a Brahma weighing ten pounds; we can not expect the progeny to weigh ten pounds, but must compromise on six or seven pounds, and these characteristics we had in the Columbian Wyandotte and the Columbian Plymouth Rock. "Well," he said, "how about a cross of 'Buff Cochins and Buff Leghorns?' He was looking just then at Jess Baughman's magnificent Buff Cochins, winners at the World's fair. "What is there about the Buff Cochins that you don't like," we asked him. He said they didn't lay enough eggs, and had feathers on their legs. We then asked him his objections to the Buff Leghorns. They were too small and their combs too large and liable to be frosted. "Well," said we, "do you expect a cross of Buff Cochins and Buff Leghorns to produce a fowl with featherless legs?" They won't do it, and besides, we have a magnificent breed of fowls, intermediate between the Buff Leghorn and Buff Cochins, and that is the Buff Plymouth Rock, and if you are afraid its comb is liable to get frosted we have the Buff Wyandotte, a plump, blocky fowl, good for eggs and good for meat. We asked him if he knew that it took from fifteen to twenty years before a new variety could reproduce itself with any degree of certainty, and that it took at least fifty years to perfect a breed. This gentleman was over seventy years of age, and yet he was talking of perfecting a new breed of fowls as if it could be accomplished in one season. He wanted the good qualities of two breeds combined into one, and the bad qualities of both eliminated. That's the puzzle of ages. The good qualities are all right. But what about the bad qualities? They are in the blood, just as firmly as the good qualities, and they will crop out in the progeny. Possibly we may be wrong in deprecating the making of many new breeds. Possibly if everybody thought as we do, that there would not be as many breeds of fowls as there now are, but we are not so much opposed to folks experimenting with new varieties, providing they have the time and an inclination that way, with a definite object in view and an aggressiveness that will stick in spite of difficulties. What we object to is to see people fooling away their time trying to do haphazard what has already been accomplished by scientific mating and breeding. Would it not be better to try and find a method of feeding that would increase egg production, or a formula of feeding that would improve the quality and flavor of the flesh?

A few years ago, at a meeting of the American Poultry Association, when new breeds were being rushed into the standard at an alarming rate, an incident occurred that was very amusing. After two or three new breeds had been admitted into the standard, and a new one under discussion, an old member who had been sitting in the back part of the room, got up and said: "How many more mongrels are you going to admit into the standard?" That was all he said, and he sat down. Some of the members glanced at him and thought he was demented. The meeting admitted another new breed, and another one came up for consideration. The old member was on his feet again, "How many more mongrels are you going to admit into the standard?" he shouted, and then sat down without another word. The meeting thought him plumb crazy, but adjourned soon after without admitting any more new breeds. We don't believe he was so blamed crazy after all.

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The Kansas Wesleyan Business College is proud of it.

Cleveland, Ohio, December 6, 1915.

Mr. L. L. Tucker, Pres., The Kansas Wesleyan Business College, Salina, Kansas.

Dear Mr. Tucker:

I shall long remember my recent visit to your school and I am sure you will be interested in knowing how my visit impressed me. I was particularly interested in the spirit shown in your school. The biggest thing in an institution is its spirit. The best thing in an individual is his spirit. You seem to have been very successful in creating a very fine spirit in your school, a spirit of enthusiasm, of ambition, of determination, of purpose and of a large ideal to really do something in life that is worth while. I was very much impressed with your chapel exercises and also with your chapel. The fact that your students can get together once a day for a period of half an hour and drink in words of inspiration is really a great thing. This one thing is wonderfully effective in developing the lives and characters of men and women.

Ninety-seven per cent of the men of this country at the age of 65 are dependent either wholly or in part upon their relatives, friends, or charity for support. You realize this fact. Our young people do not. Every individual determines his destiny, but the average youth does not know how to create a successful destiny. Every individual builds into his business what has first been built into his life. The average student does not realize this as much as he should. By teaching character building in your chapel every day, you are showing your students how to develop brain force and character forces that can successfully build into business and life later on, the forces that will enable them to build for success instead of failure. You are doing this in a way that will make better men and women.

You are building for a larger life, a successful life and an ideal life. You are building for maximum manhood and womanhood.

I appreciated the fact that you and the faculty were putting into your work the best you had in you. Your hearts are in the work and I believe that has a great deal to do in developing the inspiration that I found in your school. I am visiting schools and colleges continually and I was very much pleased to notice that your students measure up well with the college and university students of the country. I was also much interested in learning that your students come from half the states in the Union. I can appreciate the reason for that after seeing the kind of work that you do. This country is greatly in need of schools like your own that will go ahead and do for humanity just what you are doing.

Ninety-five per cent of all the men of America are incompetent through lack of proper training to make a success in any trade, business or profession, but they would not be incompetent if they had gone through your school. I wish you were equipped to handle 10,000 students a year instead of 1,000. It would be a great thing for the young men and women of this country.

I congratulate you upon the work you are doing. I also congratulate the students upon the opportunity which you offer and I hope The Kansas Wesleyan Business College will live long in order that it may be able to render the men and women of this country the great service that it is now giving to them. I remain, with best wishes and kindest personal regards to yourself and Mrs. Tucker and the members of your faculty.

JSK:S

Very sincerely yours,

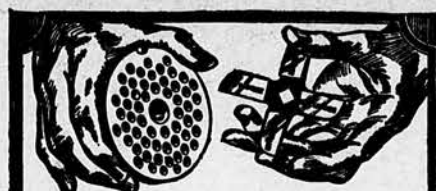
J. S. Knox.

P. S. My visit to your school will always remain a pleasant memory.

No other business school in America ever received a letter like this. Mr. Knox is the most popular Chautauqua lecturer in the United States, and speaks before Business Colleges, Universities and Chambers of Commerce in every state in the Union. This brings him into close relationship with business schools and student bodies all over the country, and his opinion in regard to the K. W. B. C. is therefore entitled to the very greatest weight.

Students may enter any day. Groups of farm boys and girls will be enrolling all this month. Begin work now and get ready for that position, or use this training to make the old farm pay.

L. L. TUCKER, Box 555.
Salina, Kansas.



See It Yourself

To get a meat-and-food chopper that will work right, cut clean, and not mangle, tear and crush, see that it

has this perforated steel plate and four-bladed steel knife; and bears the name—

"ENTERPRISE"

Chops sausage meat, or other food, into clean-cut uniform particles, without loss of taste or hurt to nutritive qualities.

Makes "left-overs" into dainty dishes, and saves on your table.

If you want a lower-priced chopper, get the "Enterprise" Food Chopper with four knives. Small, \$1.25; Family size, \$1.50; Large, \$2.25.

Your dealer can supply you

Four cents in stamps brings you our new edition cook book—the "Enterprising Housekeeper"—over 200 recipes.

The Enterprise Mfg. Co. of Pa.
Dept. 118 Philadelphia

SCHOOLS AND COLLEGES

WANTED MEN

\$75. to \$200 a month!

The demand for capable automobile men exceeds the supply. Our graduates are always in demand to fill good positions as Salesmen, Demonstrators, Factory Testers, Garage Managers, Repair Men, Ignition Experts and Drivers.

\$50 COURSE FREE

Six weeks from the day you enter this great school you will be able to repair any make of automobile or drive any car on the market. All who enroll now receive \$50 course in Lighting and Ignition Engineering Free. Write today for our big Free Book and the \$50.00 Free Scholarship Certificate.

AUTOMOBILE TRAINING SCHOOL
Largest Auto School in the World
1005 Locust St. Kansas City, Mo.

MEN WANTED

LEARN TO DRIVE AND REPAIR AUTOMOBILES AND TRACTORS
Big demand for trained men. Earn from \$75 to \$150 per month. Learn in 6 weeks by the

SWEENEY SYSTEM

of practical experience. You do the real work in machine shop, factory and on the road. No books used. Tools free. Big 64 page catalogue with views of men at work in largest and best equipped auto school in world. Send name today. Address

SWEENEY AUTO SCHOOL
1155 East 15th Street, Kansas City, Missouri.

LEARN TELEGRAPHY

Students Earn Board while Learning. A practical school with railroad wires. Owned and operated by A. T. & S. F. Ry. Earn from \$55 to \$165 per month. Write for catalogue. Santa Fe Telegraph School, Desk F, 505 Kansas Ave., Topeka, Kan.

— OTTAWA —
Business College
OTTAWA, KANS. CATALOG FREE

WANTED, Men to learn the Barber Trade. Lowest tuition ever offered; tools furnished while learning.
TOPEKA SANITARY BARBER COLLEGE
327 Kansas Ave., Topeka.

FINLAY ENGINEERING COLLEGE
Kansas City, Mo. Farmers, mechanics, steam, electric, gas courses. Three months, \$35. Write for information.

New Feather Beds only \$5.40

6-lb. Pillows \$1.00 per pair. New, Clean, Odorless, Sanitary and Dustless Feathers. Best Ticking. Satisfaction guaranteed. Write for catalogue and our wonderful FREE OFFER.
SOUTHERN FEATHER & PILLOW CO., Dept. 1136 GREENSBORO, N. C.

A New Crochet Book
Edgings and Insertions
A special selection of pretty patterns. Large illustrations with complete instructions. Over 50 new designs applied to Handkerchiefs, Towels, Yokes, Curtains, etc.
Every page useful. Price, postpaid, 10c. Pattern Dept.
KANSAS FARMER
Topeka, Kan.



Little Talks to Housekeepers

Helpful Hints Here for the Women Folks of the Farm

The time for gardening seems a long way off, but it will be here before we are ready for it unless we make our plans ahead of the time for making the garden.

Metropolitan Cake.

1 1/2 Cupful granulated sugar
1 1/2 Cupful butter
1/2 Cupful milk
2 1/2 Cupful well sifted flour
2 Teaspoonfuls of baking powder
1 Cupful chopped pecan nuts and citron, mixed
Whites of four eggs
Cream the butter and sugar. Flour nuts and citron before adding. Bake forty-five minutes in moderate oven. Flavor icing with lemon extract.

Gooseberry Catsup.

5 Pints gooseberries
5 Pints sugar
1 Cupful vinegar
1 Tablespoonful cloves
1 Tablespoonful or more of ground cinnamon
Boil the berries; sugar and spice until thick, after having added enough water to the berries to almost cover them. Tie the spices in a sack. When the mixture is thick, add vinegar and boil a few minutes longer. Serve with meats.

The bedding needs airing in the winter even more than in the summer, and the crisp, bright days will do this work very effectively if the coverings are hung on the clothes line.

All Patterns 10 Cents Each.

As owing to the large number of departments, it is not possible for us to illustrate the very many new designs that come out each month, we have made arrangements to supply our readers with a quarterly fashion catalogue illustrating nearly 400 practical styles for ladies, misses and children, illustrating garments all of which can be very easily made at home. We will send the latest issue of this quarterly fashion book to any address in the United States, postage prepaid and safe delivery guaranteed, upon receipt of 10 cents.

This book should be in every home; the very latest issue will be sent postpaid to any address in the United States on receipt of 10 cents.

Contentment and agreeable work are the first round in the ladder to success.

FASHION DEPARTMENT — ALL PATTERNS TEN CENTS

This department is prepared especially in New York City, for Kansas Farmer. We can supply our readers with high-grade, perfect-fitting, seam-allowing patterns at 10 cents each, postage prepaid. Full directions for making, as well as the amount of material required, accompanies each pattern. When ordering, all you have to do is to write your name and address plainly, give the correct number and size of each pattern you want, and enclose 10 cents for each number. We agree to fill all orders promptly and guarantee safe delivery. Special offer: To anyone ordering a pattern we will send the latest issue of our fashion book, "Every Woman Her Own Dressmaker," for only 2 cents; send 12 cents for pattern and book. Price of book if ordered without pattern, 5 cents. Address all orders for patterns or books to Kansas Farmer, Topeka, Kansas.



No. 7263—Ladies' Dress: Cut in sizes 34 to 44 inches bust measure. The plainness of the blouse of this dress is relieved by a Puritan collar in either of two sizes, leaving the neck just a trifle exposed. The sleeves may be long or short. The three-gore skirt may have either raised or regulation waist line. No. 7242—Ladies' Shirt-waist: Cut in sizes 34 to 44 inches bust measure. In this plain waist we have the square yoke back and front and the full lower portion. The armhole is somewhat larger than regulation, and the sleeve long or short. At the neck is a small flat collar, and the closing may be made with or without the band. No. 7257—Ladies' Apron: Cut in sizes 36, 40 and 44 inches bust measure. This novel design shows an apron without shoulder seam and with the entire front of the bodice covered and having small sleeves and back yoke in one piece with front. The skirt portion is gathered at the sides and plain in front and does not quite reach the center of the back. No. 6579—Boys' Suit: Cut in sizes 2, 4 and 6 years. One or two materials can be used to make this suit. The plain waist may be slipped on over the head or closed at the front and made with either long or short sleeves. The trousers, which may be straight or full at the knee, button on to the waist. No. 7270—Ladies' Gathered Skirt: Cut in sizes 22 to 32 inches waist measure. This skirt is made in two sections, one corresponding to a yoke, and the lower portion to a deep flounce. It is gathered at the top with either raised or regulation waist line, and the lower section is also separately gathered. No. 7241—Child's Dress: Cut in sizes 4, 6, 8 and 10 years. This pretty frock is made with a yoke which trims the back of the blouse at the top while the lower portion is gathered in both front and back. The neck is a little open with flat collar, which may be omitted, and the closing may have a band or be left plain.

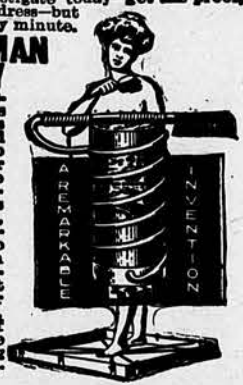
\$1200 IN CASH

Made, Paid, Banked in 30 days, by STONEMAN—\$1500.00 To Date

This offer is open to you—this money—the cold cash—can be yours. You and you alone by waiting too long can lose it. Investigate today—get the proof. Send your name and address—but NO MONEY—this very minute.

\$1000 PER MAN PER COUNTY

Experience unnecessary—business supplies the capital. Payments start the first day—and continue daily up to \$1000.00 per month, per county. For 12 months, we have been quickly picking men from all walks of life, ministers, clerks, farmers, doctors, lawyers, teachers and so on—enabling them with our help and \$50,000.00 appropriation to get what we here offer for you—\$1000.00 per man per county. Some of these men you may have envied without knowing the reason of their prosperity.



INVESTIGATE AND BE AMAZED Demand absolute proof—accept no other kind. Either we have the best thing that ever happened or we're colossal liars. Ask Schleichner, minister, whether it's true that he received

\$195.00 TWELVE HOURS AFTER APPOINTMENT;

Langley, Everyman, \$115 first day; Rep. agent, \$165 in 75 days; Beam, solicitor, \$184.25 weekly for 12 weeks; Korstad, farmer, \$2212 in a few weeks; Zimmerman, farmer, \$3556 in 30 days; Juell, clerk, \$6800; Hart, farmer, \$5000; Wilson, cashier, \$3000 in 30 days. Let us refer you these men, to the U. S. government, to banks, business houses, noted people. Heed this caution from Ohas. Starr, of Mich. "Sorry this field is closed. Should have acted sooner but was skeptical. Your local man's great success has set everybody talking and proves I was a chump. Wonderful what a man can do with a real opportunity." Then read this from Lodewick who acted quickly: "Lucky I answered ad. It's great. Money coming fast." Which will you be, Starr, a victim of "neglected opportunities" or Lodewick the "early bird"? Avoid regret, send a postal this very minute.

SPEND ONE CENT TO MAKE THOUSANDS

Strange invention startles world. Gives every home that long-desired blessing, a modern bathroom with hot and cold running water facilities for only \$6.50. No plumbing—no water works—self-heating. Only ten minutes to install. Gives cleansing, friction, massage and shower baths in every room. Equivalent to any \$200 bathroom. Over 200,000 delighted users. Used by U. S. government.

More remarkable than this invention is our startling plan of universal distribution through special representatives who virtually become profit sharing partners in a business that's immense—exciting—fascinating—dignified—and above all, has enabled them, will enable you, to get \$1000.00 per month, per county. Asking to be known doesn't obligate you one bit. Investigate today by all means.

ALLEN MFG. CO., 109 ALLEN BLDG., TOLEDO, O.

DIRECT TO YOU HOSIERY FROM MILLS TO WEARER

Large stock men's socks selling at mill prices. Satisfaction guaranteed.

Heavy weight cotton, 1/2 doz. \$0.80
Medium weight cotton, 1/2 doz.90
Mercerized Sea Island cotton, 1/2 doz. 1.20
Guaranteed pure silk, 1/2 doz. 1.50
Cash with order. All sizes and colors.

STONE & COMPANY - TRYON, N. C.

FARM LANDS FOR SALE

ASK about a well improved 120-acre farm, \$25 per acre. "Greene," Longton, Kansas.

FINE STOCK FARM
160 ACRES SMOOTH LAND
Twenty acres alfalfa, six-room house, two large barns, silo, good water system. Only \$8,000.
T. B. GODSEY, EMPORIA, KAN.

DON'T OVERLOOK THIS BARGAIN

Fine improved irrigated farm near Carlsbad, New Mexico, all under cultivation, all under ditch. In wheat, alfalfa, and oats. Beautiful new six-room bungalow. Railroad and automobile roads pass farm. Very best of soil, climate can't be beat. Abundance of fruit, fish and game. Big grain fields. Inhabitants well-to-do, good community. Carlsbad a beautiful city of 45,000. Price, \$125 per acre. Nothing like it can be purchased in the valley for the money. Will take all or part in good rental land. Time if desired. Water a government proposition and ten times more than can ever be used. Write owner,
D. W. STONE - Medicine Lodge, Kansas

FOR SALE UNTIL JANUARY 15.

130 Acres, 2 1/2 miles McAlester, city of 15,000. 100 acres strictly first class bottom, 50 acres cultivated. Fair improvements. \$18 per acre. Terms.

SOUTHERN REALTY CO., McAlester, Okla.

For Immediate Sale I offer my east 1/2 of the S. W. 1/4 and the S. W. 1/4 of the S. W. quarter of Section 13, Township 16, Range 24, Miami Co., Kan., 120 acres partly improved small buildings for \$4,000 spot cash.
E. W. Jones, Owner, Crookston, Minn.

NORTON COUNTY FARMS.

160 Acres in Bow Creek Valley, six miles from Denmore, Norton Co., Kansas. 100 acres cultivated, 30 acres bottom land, living water and timber, small improvements, under good fence. Price, \$5,000. Terms, \$1,000 cash, balance 6 per cent, long time. Other good farms.
McAULEY & ELDRED, LOGAN, KANSAS

FOR RENT OR SALE

160 Acres in Lincoln County, Okla., 3 1/2 miles from Chandler, the county seat. 75 acres of fine bottom land, suitable for alfalfa, corn, or any other crop. House not very good but would repair for good party. Two or three teams would be needed to properly handle the farm. Address
WILLARD P. HOLMES
New England Building Kansas City, Mo.

Advertisers in Kansas Farmer are reliable and sell dependable merchandise. Tell them where you saw their ad.

Many women partook of the good things prepared for them by those in charge of the Farm and Home program at Manhattan last week. Their interest and attention evidenced the fact that they felt repaid for having left comfortable firesides in the midst of the holiday season, that they might talk with others of the problems they have in common as housewives. We heard only one criticism—that there were so many good things that it was impossible to see and hear all of them. The keynote of all the meetings was practicability. Only workable suggestions are useful, and this brand alone was distributed.

Rural Schools Analyzed.

One of the Farm and Home Week sessions in which special interest was shown by both men and women was that of the Rural Life Conference in which Miss Julia Stone, one of the two rural school supervisors in the office of the state superintendent, led the discussion on "Rural Education—Standardization of Rural Schools in Kansas." The legislature of 1915 passed a law making it the duty of the State Board of Education to standardize the public schools of Kansas. Miss Stone's talk was centered in the requirements fixed by the board for a standard rural school and toward which standard the board has been working since September. We are here stating the requirements of the board, that our readers may know what will be expected of them, as school patrons, in the future. Read these in the light of the best interests of your children and their future welfare which is greatly influenced by their early training and environments:

Yard and Outbuildings: School grounds at least one acre, and kept in good condition; good approaches to the house; trees and shrubs, where climatic conditions will permit; two well kept, widely separated outhouses, with screened entrances; convenient fuel house properly located; well where possible.

The Schoolhouse: House well built, in good repair, and painted; good foundation; well lighted, light from left side or left and rear; adjustable window shades; suitable cloak-rooms for boys and girls; attractive interior decorations; good blackboards (slate preferred), set about 26 inches from floor; heated by a room heater and ventilator properly placed, or by basement furnace which provides for proper ventilation; floor and interior clean and tidy.

Furnishing and Supplies: Desks suitable for children of all ages, and properly placed; good teacher's desk and chair; good bookcase; a good collection of juvenile books suitable as aids to school work as well as general reading; set of good maps, a globe, and a dictionary; sanitary water supply provided by the district board, thermometer, sweeping preparation; sand table.

The Organization: School well organized; classification and daily register well kept; definite daily program; attendance regular and punctual; discipline good.

The Teacher: Must hold a state certificate, a first-grade county certificate, a normal-training certificate, or must at least hold a second-grade certificate and be a graduate of a four-year high school; must receive at least the average salary of the county, and in no case less than \$385 per year; ranked by the county superintendent as a good or superior teacher; must read Teachers' Reading Circle books, attend institutes and associations, and in other respects show a proper professional spirit.

At the end of Miss Stone's talk many questions were asked her, and these she answered willingly and comprehensively. One was whether or not the teacher has a social duty in the community. It was agreed she does have such duty, and this led to a discussion of the duty of those in the school district to the teacher in providing a comfortable home during the school year—one which will be conducive to thinking about her work and planning it in such way that the best results may be accomplished.

There are many things in connection with our rural education system which are being given serious thought by those who are vitally interested—the patrons of the school districts—and we hope we may see the time when the educational advantages of the farming districts will be adequate for their needs.

A community can have no higher standing than that of the individuals of which it is composed. Do you have on your mind and on your heart the matter of making your community a better place to live, a better and more attractive place for the young folks? Serious thought in this direction will do much toward solving the problem of how to keep the boys and girls on the farm. Our interest in farm life will do more than words, in checking movement cityward.

\$2.25 Aluminum Griddle For 85 Cents in Cash

Special Offer to Karo Users

Read the Offer and Write Today So As to Be Sure to Get Your Griddle

By special arrangement you can get this fine 10½ inch Solid Aluminum Griddle for less than the wholesale price. Go to your grocer, get 50 cents worth of Karo and send us the labels and 85 cents and you'll get the Aluminum Griddle by prepaid parcel post.

You know Aluminum ware—you know how long it lasts, how much easier it is to cook with. It doesn't chip, it doesn't rust and it always looks so bright and clean and inviting.

You don't have to grease this Aluminum Griddle; it does not smoke up the house; it bakes griddle cakes and corn cakes crisp and light—the way you want your griddle cakes to be. And the cakes are far more digestible and better flavored.

At great expense we are seeking to place a Karo Aluminum Griddle in the homes of all Karo users so that Karo—the famous spread for griddle cakes and waffles—may be served on the most deliciously baked cakes that can be made.

Last year the people of this country used 65,000,000 cans of Karo—the largest demand ever given any syrup.

That shows you what people who know Karo think of it, how much better they like it than any of the old kind of syrups.

Take advantage of this chance to get this solid Aluminum Griddle at a clear saving of \$1.40 in cash.

Get the Karo today—and send us the labels and 85 cents (P. O. money order or stamps) at once. We will also send you free the Corn Products Cook Book.

CORN PRODUCTS REFINING CO.
P. O. Box 161 New York Dept. 106



READ KANSAS FARMER'S CLASSIFIED
ADVERTISING PAGE FOR READY BARGAINS



THIS FARMER KNEW—what it cost to do business; knew which crops made a profit; knew which cows were paying and which were boarders; all because he knew how to keep books and figure, and do business.

The Difference Between These Farmers

Farming is the largest business in Kansas.

A very large per cent of the farmers of Kansas are bankers and stockholders in banks, part owners in mercantile establishments, telephone companies, mills, creameries and dozens of other Kansas largest industries.

And best of all, they are the owners of the great business farms, producing millions and millions of dollars worth of food stuffs and live stock every year.

As the farmer's business grows, and his wealth and holdings increase, and as his sons and daughters take an active interest with him, there is a growing need that they fit themselves for these duties by acquiring a business training.

The farmer who knows what crop pays best and what business is making or losing, and how much, is infinitely better able to increase and take care of what he has, than the farmer who, without any specific method or training or business system, merely guesses what this or that crop paid, or that this or that business is a good investment.

Mr. Farmer, train your sons and daughters in business. Send them to Dougherty's School of Actual Business Training. The scientific knowledge of how to keep accounts is just as necessary on the Kansas farm as in any other business.

There are many reasons why you should select Dougherty's. First of all, it is a school of high ideals and situated in the capital of this great state in which you are most interested. Educate in Topeka because it is a clean, live, progressive city, an ideal home city, with numerous schools, businesses, churches, and all conditions wholesome and uplifting.

WE WILL GUARANTEE YOU MORE MONEY OUT OF YOUR FARM

if you will spend from four to six months with us on our Farm Accounting course—Business Law, Business Letter Writing and general business training.

The knowledge any young man or woman can obtain in our School along business lines will be worth many times what it costs, all through life.

WE EDUCATE FOR THE BEST POSITIONS

A good education is the best insurance against hard times. Floods, storms, fires or other destructive agencies can wipe out a fortune, but a trained young man or woman with an education has a fund—a fund of knowledge that can always be drawn upon for the necessities of life.



THIS FARMER GUESSED—that some crops pay—guessed that his cows ought to be paying—guessed that he would be able to meet the interest and that he would make it some day, but never did.

DOUGHERTY'S BUSINESS COLLEGE

We offer the best courses to be had—Business Training, Shorthand, Type-writing, Accounting—under three general heads—Commercial, Stenographic and Stenotype Courses. We give the very best instruction in all business branches, in the most economical and satisfactory manner. An education obtained in Dougherty's Business College is money wisely invested.

TOPEKA OFFERS UNUSUAL OPPORTUNITIES

To both young men and women for earning expenses while attending Dougherty's Business College. We have found hundreds of places—in fact, places for all students who have wanted them, to work and earn their living expenses while attending school.

Centrally located in the business section of Topeka, in commodious quarters and with ample, up-to-date facilities and a large and efficient corps of trained, experienced teachers, you are offered at no greater expense, any or all courses in Dougherty's Business College, from which school hundreds and hundreds of Kansas young men and women have left directly for good salaried positions or to take up the management of their own business.

LEADING BUSINESS MEN SHARE IN OWNERSHIP AND CONTROL OF DOUGHERTY'S BUSINESS COLLEGE.

Among the men whose names are well known in all parts of Kansas, who have a part in this management, are Albert T. Reid, President Kansas Farmer; Frank P. MacLennan, Proprietor Topeka State Journal; Arthur Capper, Governor and Proprietor of the Capper Publications; J. C. Mohler, Secretary State Board of Agriculture; George A. Guild, Cashier Central National Bank; L. M. Jones, Superintendent of Telegraph, A. T. & S. F. Ry.; John F. Eby, County Superintendent; W. R. Arthur, Dean University of Colorado Law School; Chas. S. Elliott, Secretary Capitol Building & Loan Association; Dr. E. S. Pettyjohn, National Medical Director K. & L. of S., and scores of other business men, prominent in various lines and professions.

ENTER AT ANY TIME

Send for free catalog F A today. Address

Geo. E. Dougherty, President, Dougherty Business College
114-118 West Eighth St., Topeka, Kansas.

Read About This New Straw Spreader

The Safest and Easiest Running Machine
On the Market.

VERY LOW PRICE

Every farmer in the wheat belt will be glad to know that the Union Foundry & Machine Company, the machinery division of the Warner Fence Company, largest wire fence and gasoline engine manufacturers in the West, is now manufacturing and selling through local dealers in every town, a straw spreader that "beats 'em all."

This machine, which is called the Perfection Straw Spreader, although it is also an A No. 1 manure spreader, is regarded by farmers and dealers as the "spreadingest" straw spreader ever made.

The design of the Perfection Straw Spreader does away with all of the objections found in old style machines. It works easily, instead of pulling hard. It is simple in construction, instead of a great big cumbersome machine likely to get out of order. And above everything else, it is absolutely safe, because there are no exposed fast-moving parts to mangle the operator in case he should lose his footing and fall on the carrier, which is an easy thing to do on a moving load.



Scores of Kansas and Oklahoma farmers and dealers have tested this machine thoroughly during the past two years, and are unqualified in their statements that it is the lightest running and the best spreading machine on the market. It handles all kinds of dry straw, wet straw, stack bottoms or manure. You can easily cover twenty acres a day with a Perfection. It can be attached to any spreader bars or hay frame. No special tools are required.

The illustration will give you a good idea of the mechanical design of the machine. Its first point of advantage is that it spreads straw or manure over a greater distance than any other spreader with less horsepower. Dry straw can be spread sixteen to twenty feet wide, and wet straw and manure over a distance of from thirty to forty feet, as desired. Notice that the carrier is eight feet long and lays flat in the bottom of the wagon. The pull, therefore, is much lighter, two horses being all that are required to easily pull the load under ordinary conditions.

Another distinct advantage that the Perfection enjoys over all other straw spreaders, is that the straw can be spread thick or thin at the operator's will. This is accomplished by simply raising or lowering the hopper. Some parts of your land need more straw than others, especially the knolls and the parts of the field that are inclined to wash or blow.

Don't think of buying either a manure spreader or a straw spreader until you see the Perfection. You will be surprised to see how much superior this machine is to all others. We want every farmer in the wheat belt to know about the Perfection Straw Spreader. If your dealer is not supplied, write us today, giving the dealer's name. We will see that you are furnished complete information at once, and in addition send you a pleasing souvenir. We will also send you our new straw spreader book which contains complete information regarding the best straw spreader ever made at a farmer's price. This book also contains a large number of letters from farmers who have given this machine a thorough, practical test on their own farms. We will be pleased to send it free on request. Address C. E. Warner, President, Union Foundry & Machine Company, 302 Union St., Ottawa, Kansas.—[Advertisement.]

If on the market for pure-bred stock, read KANSAS FARMER live stock advertisements. You will find what you want.

FARM AND HERD

G. C. Wheeler, Live Stock Editor
W. J. Cody, Manager, Stock Advertising.
O. W. Devine, Representative

Address All Communications to Kansas Farmer and Not to Individuals

Personal mail may have to be held for several days, or be delayed in forwarding, and Kansas Farmer cannot assume any responsibility for mistakes occurring thereby

CLAIM SALE DATES.

Percheron Horses.
Jan. 17—Lee Bros., Harveyville, Kan. Sale at Manhattan.
Jan. 21—L. R. Wiley, Sr., Elmdale, Kan.

Percherons and Other Draft Breeds.
Jan. 25, 26, 27, 28, 1916—Breeders' sale, Bloomington, Ill. C. W. Hurt, Mgr., Arrowsmith, Ill.

Jacks and Jennets.
March 6, 1916—W. J. Finley, Higginsville, Mo.
March 7 and 8—L. M. Monsees & Son, Smith-ton, Mo.

Shorthorns.
Jan. 20—R. Roenick, Morganville, Kan. Sale at Clay Center.
April 5 and 6, 1916—Central Shorthorn Sale, Independence, Mo.

Hereford Cattle.
March 4—Northwest Missouri Hereford Breeders' Association. Sale at South St. Joseph, Mo. Jesse Engle, Sheridan, Mo., sales Mgr. H. D. Cernish, Osborne, Mo., Secretary.

Holsteins.
Jan. 25—Nebraska Holstein Breeders' Sale Co., sale at South Omaha. E. M. Little, Clarks, Neb., Manager.
Jan. 27—E. S. Engle & Son, Abilene, Kan.

Combination Breeders' Sale.
Feb. 15 to 18—S. S. Kirk, Manager, Wichita, Kan.

Durocs.
Jan. 26—R. P. Wells, Formoso, Kan.
Feb. 8—J. A. Porterfield, Jamesport, Mo.
Feb. 15—Kansas State Agricultural College, Manhattan, Kan.
Feb. 16—Thompson Bros., Garrison, Kan.

Poland Chinas.
Jan. 20—O. H. Fitzsimmons, White City, Kan.
Jan. 22—L. R. Wiley, Sr., Elmdale, Kan.
Feb. 2—Will G. Lockridge, Fayette, Mo.
Feb. 4, 1916—J. A. Godman, Devon, Kan.
Feb. 5—Fred B. Caldwell, Howard, Kan.
Feb. 8—L. V. O'Keefe, Stillwell, Kan.
Feb. 9—H. L. Faulkner, Jamesport, Mo. (Spotted Poland Chinas.)
Feb. 15, 1916—Herman Groninger & Sons, Bendena, Kan.
Feb. 15—Kansas State Agricultural College, Manhattan, Kan.
Feb. 17—H. C. Graner, Lancaster, Kan.
Feb. 18—H. B. Walter, Effingham, Kan.
Feb. 19—Belcher and Bennett Bros., Lee's Summit, Mo.
Feb. 19—Olivier & Sons, Danville, Kan.
Feb. 23—U. S. Byrne, Saxton, Mo. Sale at St. Joseph Stock Yards.
Feb. 23—F. E. Moore & Son, Gardner, Kan.
Feb. 26—A. J. Erhart & Sons, Ness City, Kan.
March 1—Clarence Dean, Weston Mo. Sale at Dearborn, Mo.

O. I. C. and Chester Whites.
Feb. 2—J. H. Harvey and F. B. Goodspeed & Son, Maryville, Mo.

Hampshires.
Jan. 15—G. S. Lawson, Anadarko, Okla.

Spotted Poldans.
Jan. 15—G. S. Lawson, Anadarko, Okla.

Ira Romig, of Topeka, Kan., owner of one of the good herds of pure-bred Holsteins, recently added 100 head of choice high grade Holsteins to his herd. Mr. Romig is one of the successful Holstein breeders, and has found good producing Holstein cows profit producers.

A. R. Enos, of Ramona, Kan., owner of one of the good herds of big type Poldans in this state, writes that he has bred a choice lot of tried sows and spring gilts for early spring farrow. Mr. Enos has the big, easy feeding type, and keeps his herd immune at all times.

Iowa is noted for its great number of choice herds of pure-bred Aberdeen Angus cattle. Among them is the famous herd of Chas. Escher, Jr., of Botana, Iowa, and Escher & Ryan. These herds number over 600 head of imported and home bred Angus cattle.

H. B. Cowles, of Topeka, owner of Braeburn herd of Holsteins, reports that his herd made a fine record this year. Mr. Cowles owns one of the heavy producing herds in the state. They are the kind that always show a good profit on the investment at the end of every year regardless of conditions.

Mahlon Groemiller, of Pomona, Kan., owner of the noted Coburn herd of Red Polled cattle, and also one of the good herds of Percheron horses in this state, reports that both herds have done well this year. A feature of the herds at this time is the choice lot of young stock. The young Percherons include a number of outstanding young stallions.

Everaux, of Harvilltown, the \$10,000 Aberdeen Angus bull, owned by E. F. Caldwell, of Burlington Junction, Mo., died recently. Mr. Caldwell is president of the American Aberdeen Angus Association and bought this bull at Brandon, Manitoba, Canada, for \$4,500, and was recently offered \$10,000 for the animal, which was the champion of his class in the country.

Fred Chandler, owner of the famous Chandler Percheron Farm near Chariton, Iowa, reports that his herd is doing fine and that there is a good demand for high class registered Percherons. A feature of the Chandler herd at this time is the choice lot of young stallions, weighing from 2,000 to 2,200 pounds. They are the type that make good.

The Holstein herd owned by M. E. Moore & Co., of Cameron, Mo., was established thirty-five years ago. It was started with the best producing stock that could be obtained at that time. By using only sires backed by records, the owners have succeeded in building up one of the very heavy producing herds now in existence. This is the kind of Holsteins that, with proper care, will return a good profit on the investment every year.

The Holstein herd of S. W. Cooke & Son, of Maysville, Mo., is one of the herds that is drawn upon heavily for breeding stock. The foundation stock of many of the heavy producing herds now in existence was from Cooke & Son's famous herd. They report the recent sales of two very fine bulls to Kansas breeders, one of them going to Reynolds & Sons, of Lawrence, and the other T. C. Torkelson, of Everest.

J. D. Holman, of Curryville, Mo., is one of the successful Jack breeders of that state. Mr. Holman breeds the mammoth kind, and at this time has thirty head of very fine Jacks in his herd.

James Arkell, of Junction City, Kan., one of the very successful breeders of pure-bred Poland Chinas in this state, reports that his herd is doing fine this winter. Mr. Arkell makes a specialty of developing hogs for breeding stock. He has the big, easy feeding type that mature early to a good weight with a minimum amount of feed. His herd of brood sows is one of the good ones, and his herd boars, Longfellow Again, and Chief Big Bone, are among the great sires of the breed. Mr. Arkell has bred a large number of outstanding fall yearling gilts and a lot of choice spring gilts for spring farrow.

Inquiries for catalogs indicate that breeders are interested in H. L. Faulkner's sale of original, big boned, spotted Poland China bred sows to be held at Jamesport, Mo., February 9. Mr. Faulkner has cataloged a very useful offering of big, spotted sows for this sale, and all of them will be bred to the famous boars now in service in that noted herd.

E. S. Engle & Sons, of Abilene, Kan., have cataloged twenty-five head of choice high grade Holstein cows and heifers for their sale to be held January 27. They breed in case from yearlings to mature cows. Some of them now in milk, others to freshen soon. The entire offering is in tuberculin tested, and all are bred to registered bulls. This will be one of the useful lots of Holsteins that will be sold at public auction this winter.

Joseph M. Nolan, of Paola, Kan., is one of the very successful farmers and breeders of Miami County. He owns one of the best farms, well stocked and equipped for farming, near Paola, and has paid for this farm by breeding draft horses. He has today seventy-eight head of mares, stallions and colts that are hard to beat. Mr. Nolan is building a new \$6,000 home in Paola, and having rented his farm, will close out his entire lot of Belgian and French draft mares and stallions.

S. J. Miller, of Chillicothe, Mo., owner of Oakland Stock Farm, is demonstrating the value of pure-bred stock in connection with general farming. Mr. Miller owns one of Missouri's best equipped stock farms, and his herds of pure-bred draft horses, mammoth Jacks and Jennets and Shorthorn cattle are among the best in that state. Mr. Miller is one of Missouri's consistent workers for improved stock on every farm. At this time he has a large number of choice mares from two to six years old; some of them imported. The young Jacks and Jennets on the farm are a very fine lot.

Geo. C. Tredick, of Kingman, Kan., owner of Tredico Farm and one of the choice herds of registered Holstein cattle in the West, reports that his herd is making a splendid record this winter. Mr. Tredick has a herd of heavy producers headed by Iwana De Cola Walker, whose dam made 812.25 pounds of butter from 18,447 pounds milk.

R. C. Watson, of Altoona, Kan., owner of Walnut Grove Breeding Farm, and a successful breeder of Durocs, reports a good demand for breeding stock. He reports the sales of the herd boar, Defender, and a number of younger boars of choice breeding, also ten choice tried sows and a number of gilts. At this time Mr. Watson has a choice lot of young stock, including an outstanding lot of spring and summer boars and spring gilts. He has bred a large number of gilts to a son of Otey's Dream for spring farrow.

John Belfer, of Raymore, Mo., and Bennett Brothers, of Lees Summit, Mo., announce February 15 as the date of their combination bred sow sale. This announcement will be of interest to Poland China breeders. Last year Mr. Belcher made the highest average of any breeder in Missouri on bred Poland China sows. These sows were bred to the great boar Smooth Columbus, the boar that was admired by all breeders attending the Missouri State Fair, 1914. Bennett Bros., of Lees Summit, have purchased a one-half interest in Smooth Columbus and Mr. Belcher and Bennett Bros. will hold a combination sale at the Bennett farm February 19, and a choice offering from these two great herds will be cataloged for the sale.

G. M. Shepherd, of Lyons, Kan., owner of the famous Rice County herd of Durocs, reports a good demand for high class breeding stock. Mr. Shepherd has one of the big herds in this state this year. He raised over a hundred head of very fine fall pigs. A feature of his herd at this time is the choice lot of boars and gilts by the grand champion, Illustration II, and G. M.'s Crimson Wonder. This lot includes some choice herd header prospects. This year he has bred a large number of choice tried sows and gilts of Crimson Wonder, Illustration II, Good Enough and Defender breeding, for early spring farrow.

Indiana has a number of very fine herds of old original, big boned spotted Poldans. This breed is rapidly becoming popular with farmers and feeders. Geo. Henry of Jamestown, Ind., is one of the consistent workers in the interest of the spotted Poldans. He is vice president of the American Spotted Poland China Record Association, and owns one of the great herds of that breed in Indiana. His show herd won fifty first and second prizes at state and leading county fairs in 1915.

Catalogs are out for Fred B. Caldwell's Poland China bred sow sale to be held at Howard, Kan., February 5. Mr. Caldwell has cataloged forty-five head of big type sows and yearling gilts. There will be sixteen tried sows of Expansion, Bell Metal, Big Chief and M's Giant Wonder breeding; twenty yearling sows, seventeen of them by the great boar Elkmore Jumbo; nine spring gilts by Elkmore Jumbo and one by Big Bob Wonder; nineteen of these sows will be bred to Caldwell's Big Bob Wonder bred by H. B. Walter, others to Orphan Boy by Big Orphan and a number to O. U. Wonder, a grandson of Old A Wonder.

POLAND CHINAS.

Palmer's Poland Chinas

Herd headed by Sir Dudley, first in senior pig class, junior and reserve grand champion Kansas State Fair, Hutchinson. Pigs, either sex, by this boar; also sows and gilts bred to him. For prices and description write CHAS. B. PALMER, Route 5, Marion, Kan.

PERFECTION SPOTTED POLANDS

Special prices on summer boars—the old original spotted kind. Booking orders for fall pigs and gilts bred for spring farrow. Get our prices and free circular before buying elsewhere. The Ennis Stock Farm, Horine Station, Mo. (Just South of St. Louis.)

Henry's Big-Type Poldans

March gilts, sired by Big Bob Wonder, Big Bone Jr., and Grand Orange. Bred or open. Also fall pigs, not related. Write me. JOHN D. HENRY - LECOMPTON, KAN.

ENOS IMMUNED POLANDS.

Fall and spring boars sired by the noted herd boars, Orphan Chief and Mastodon King. Will sell a choice lot of my herd sows and gilts bred for early spring farrow. One hundred head to pick from. Everything guaranteed immune. Write or phone. A. B. ENOS - RAMONA, KANSAS

PINE GROVE POLAND HERD

Choice big-type spring boars and gilts, a few fall gilts, by Sunflower King by King of Kansas and Major by Designer by Expansion. Tops, \$25; a few for \$20. Also a few spring gilts. N. E. COPELAND, WATERVILLE, KANSAS

FAIRVIEW POLAND CHINAS

FOR SALE—A few good heavy-boned boars. Also splendid lot of fall yearling and spring gilts, bred for March and April litters. All priced to sell. F. L. WARE & SON - PAOLA, KANSAS

POLAND CHINA BOARS AND GILTS

A few serviceable boars and bred gilts for sale. Send for my bred sow sale catalog. Sale will be held March 1 at Dearborn, Mo., on electric line out of St. Joseph. Write CLARENCE DEAN, R. D., WESTON, MO.

LONE CEDAR POLANDS

Cholera immune. Up-to-date large-type breeding. Some good March and April boars. Gilts bred or open. Also young tried sows bred. Bargain prices. A. A. MEYER - McLOUTH, KAN.

ARKELL'S POLANDS.

Choice Fall Yearlings and Spring Gilts. Yearlings by Longfellow Again, bred to Chief Big Bone. Spring gilts by Chief Big Bone, bred to Longfellow Again. Priced for quick sale. JAMES ARKELL, R. 4, Junction City, Kan.

SPOTTED POLAND CHINAS

June and July farrow. Pairs or trios. Not akin. Recorded pedigree with each hog. GEO. HENRY, JAMESTOWN, IND.

SCHNEIDER'S BIG-TYPE POLANDS.

Extra good boars, serviceable age, sired by Referendum 2d out of choice dams. Priced to sell. Joe Schneider, Nortonville, Kan.

OLD ORIGINAL SPOTTED POLANDS.

Spring boars, fall pigs, bred sows. Bargains. A. S. Alexander, Route 2, Burlington, Kan.

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BIG-TYPE BERKSHIRES FOR SALE

Sired by grand champion boars of Illinois and Missouri State Fairs. Also S. C. Black Minorca chickens. J. V. FISH, Route 7, Bollivar, Mo.

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Choice bred gilts from \$25 to \$35. Bred to two first prize state winners. Choice fall pigs ready to go at \$25 per pair. C. G. NASH, ESKRIDGE, KAN.

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SHAW'S HAMPSHIRE 150 registered Hampshire all ages, nicely bolted, best of breeding, all immune double treatment. Satisfaction guaranteed. Priced to sell. WALTER SHAW Route 6 - Wichita, Kansas

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Choice breeding. Bred sows and gilts. Outstanding boars. Priced to sell quick. ATTEBERRY & SON - LANCASTER, MO.

IMMUNE HAMPSHIRE—Choice gilts, bred or open, with size, finish and prolific qualities. Louis J. Paulsen, Cordova, Neb.

RED POLLED CATTLE.

RED POLLED BULLS

TWENTY yearling bulls, big rugged fellows, sired by ton sires; all registered and priced reasonably. Will sell a few females. E. E. FRIZELL, Frizell, Pawnee Co., Kan.

Coburn Herd Red Polled Cattle AND PERCHERON HORSES.

A few choice bulls. Eight extra good two-year-old stallions for sale at reasonable prices. MAHLON GROENMILLER, Pomona, Kan.

RED POLLED CATTLE

FOR SALE—1915 bull calves by Rose's Grand Champion 17998, a 2,400-pound bull; also a few good cows and heifers. AULD BROTHERS, FRANKFORT, KAN.

John A. Edwards, of Eureka, Kan., is making a success with a good herd of Jacks and Jennets. Some of the best Jacks now in service were from the Edwards' farm. This year Mr. Edwards has a choice lot of young Jacks and Jennets of the type that make good.

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Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 300,000 readers for 4 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

SITUATIONS WANTED ads, up to 15 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

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MOTORMEN-CONDUCTORS, \$80 MONTHLY. Interurbans everywhere. Experience unnecessary. Qualify now. State age. Book-let free. Electric Dept., 807 Syndicate Trust, St. Louis, Mo.

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DAIRYMAN WANTED—FARM NEAR Emporia, completely equipped for dairying. Good opportunity for young man who knows cows and hogs. Write me for terms. J. H. Giotfelter, Oshkosh, Wis.

MEN AND WOMEN WANTED EVERY-where. Government jobs. \$70 month. Short hours. Vacation. Big chance now for farmers. Write immediately for list of positions now obtainable. Franklin Institute, Dept. F-82, Rochester, N. Y.

MEN WANTED IN EACH COUNTY with rig or auto to engage in a profitable, dignified business. Big money and easy work selling the famous Seelye Products, Wassa-Tusa, Fro-Zona, etc. Needed and wanted in every home. They sell themselves. The Seelye Company, 438 Seelye Bldg., Abilene, Kan.

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WANTED—GOOD FARM OR UNIM-proved land from owner. H. L. Downing, 134 Palace Bldg., Minneapolis, Minn.

OZARKS OF MISSOURI, FARMS AND timber lands, from \$5 to \$40 per acre. Write for list. Avery & Stephens, Mansfield, Mo.

WANTED—TO HEAR FROM OWNER of good farm for sale. State cash price and description. D. F. Bush, Minneapolis, Minn.

WANTED—GOOD FARM, WELL LO-cated; possession next spring. Give price and description. Address S. Lamb, Box 754, Chicago.

FREE GOVERNMENT LAND—250,000 acres in Arkansas now open to homestead entry. Send 50c for revised township map of state and copy Homesteaders' Guide Book. L. E. Moore, Little Rock, Ark.

WANTED—FARMS AND RANCHES. Owners send description. We have cash buyers on hand. Don't pay commission. Write Up-to-Date Realty Exchange, LaSalle, Illinois.

FOR SALE—A MODERN HOME IN Topeka, located on a good street, near school and business district; two lots, modern seven-room house, barn, a choice location. Will sell at a bargain. No trades. Address Z, care Kansas Farmer.

CATTLE.

RED POLLED, WILKIE BLAIR, GIR-ard, Kan.

FOR SALE—REGISTERED HOLSTEIN bulls. Smith & Hughes, Route 2, Topeka, Kan.

FOR SALE—TWO PURE-BRED HER-ford yearling bulls. Priced reasonable. W. J. Blison, Eureka, Kan.

EIGHT REGISTERED SHORTHORN bulls, eight to fifteen months old. One herd header. John J. Thorne, Kinsley, Kan.

FOR SALE—TWO REGISTERED GUERN-sey bulls, Glenwood Reputation 33d, four years old; Rhea's Glenwood of Neosho Breeze, eight months. John Perrenoud, Humboldt, Kan.

ALYSDALE SHORTHORNS FOR SALE—Four good young Shorthorn bulls of serviceable age, red in color. Priced reasonable. Write or call upon C. W. Merriam, Columbian Bldg., Topeka, Kan.

PUBLIC SALE OF GUERNSEYS AT Newlin Dairy, Hutchinson, Kan., January 11. Sixty head of yearling and two-year-old heifers and heifer calves, sired by our two great herd sires. Will also sell one pure-bred bull and a few high-grade bulls. Entire offering out of cows that cost from \$150 to \$200 per head. The Newlin Dairy, Hutchinson, Kan.

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RICH, DELICIOUS EXTRACTED HONEY 50 pounds, \$4.00; 120 pounds, \$7.50. F. Monaghan, Mesilla Park, N. M.

HONEY—FANCY WHITE EXTRACTED, two 60-pound cans, \$11; light amber, \$10; amber, \$8.50. Single cans, 25 cents extra. Bert W. Hopper, Rocky Ford, Colo.

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TRAINED COON AND WOLF HOUNDS and greyhounds. Tom Rice, Garnett, Kan.

\$35 TAKES TWO SURE TREERING COON dogs. Cunningham, 820 Filmore, Topeka, Kan.

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WANTED—NICE WHITE WOOLY ES-kimo-Spitz puppies, about six weeks old. Brockway's Kennels, Baldwin, Kan.

WANTED—TO BUY POP-CORN. SEND samples and prices wanted. Hayes Seed House, Topeka, Kan.

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EXCHANGE PIGEONS FOR INCUBATOR. Clyde Rees, Emporia, Kan.

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OATS—GENUINE RED TEXAS GROWN, 70c per bushel. Special prices on large lots. Write for sample. Hayes Seed Co., Topeka, Kan.

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SHETLAND PONIES, GELDINGS, MARES and colts, all colors. C. H. Clark, Leocompton, Kan.

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VIOLIN FOR SALE, CHEAP. SENT ON trial. Write Miss Bertha Mardiss, Route 5, Rosedale, Kan.

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KENTUCKY'S BEST NATURAL LEAF tobacco by parcel post, prepaid, 4 pounds for \$1.00; 10 pounds for \$2.00. Special prices on larger quantities. State if you want chewing or smoking. S. Rosenblatt, Hawesville, Ky.

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PARTRIDGE COCHINS—ALL FULL-blooded stock, prize winners. Fifteen eggs, \$3. Hens or pullets, \$2 each; cockerels, \$4 each. Nicholas Bach, Hays, Kan.

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WHEN WRITING ADVERTISERS, MENTION KANSAS FARMER

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GOOD SCORING EXTRA LARGE BONED fine S. C. dark red cockerels and pullets, \$2.50 and \$5.00. Satisfaction guaranteed. Lela Osterfoss, Hedrick, Iowa.

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RHODE ISLAND REDS—FIFTEEN EGGS \$3; hens or pullets, \$2 each; cockerels, \$2 to \$15; cocks, \$5. All good ones. Nicholas Bach, Hays, Kan.

\$2.50 SENT TODAY WILL BUY ONE early-hatched Rose Comb Red cockerel, bred from World's Fair winners. Great laying strain. J. M. Clark, 1012 Baltimore, Kansas City, Mo.

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SINGLE COMB RHODE ISLAND REDS—Won first cock, Nebraska State, 1915 first, second, third cock, first, second pullet, second, fourth cockerel and pullet special, Wyoming State, 1915. Write for prices. C. H. England, Broken Bow, Neb.

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CANARIES—BEAUTIFUL GOLDEN, guaranteed singers, \$2.50; pair, \$3.50. Mrs. Iver Christenson, Jamestown, Kan.

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DUFF'S MAMMOTH BARRED ROCKS—A. H. Duff, Larned, Kan.

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WHITE ROCKS, SIZE AND QUALITY. Satisfaction guaranteed. G. M. Kretz, Clifton, Kan.

PURE BARRED ROCK COCKERELS—Large, vigorous, well marked, \$1.50 each. Call soon, get the best. S. R. Blackwelder, Isabel, Kan.

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BARRED ROCKS EXCLUSIVELY. BAR-gains now at \$1 each. Fifteen years a breeder. Florence Belle Ziller, Hiawatha, Kan.

BARRED PLYMOUTH ROCK COCKER-els. Strong healthy birds, \$1.50 each, three for \$4.00. Harper Lake Poultry Farm, Jamestown, Kan.

PITTIS' BARRED ROCKS—HEAVY laying strain. Sixty choice cockerels. Dark and light mating. \$2 to \$5. Mrs. P. A. Pettis, Wathena, Kan.

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BUFF ROCK COCKERELS BRED FROM Frisco World's Fair champions, \$5 each; elegant breeders. C. R. Baker, Box F, Abilene, Kan.

LINDAMOOD'S BARRED ROCKS—VERY best laying strain. Fine cockerels for sale, hatched from prize winning pens. Light and dark matings. Price \$2.50 to \$5. C. C. Lindamood, Walton, Kan.

WHITE PLYMOUTH ROCK COCKERELS for sale at very reasonable prices. Bred from our Kansas City, Missouri State and other winners. A. E. Glass, Harrisonville, Mo.

BARRED PLYMOUTH ROCKS—FIRST winners; best exhibits Missouri, Nebraska, Kansas, Oklahoma. Exhibition and breeding males. J. K. Thompson, 205 The Drive, Topeka, Kan.

FOR SALE—CHOICE BARRED PLY-mouth Rock cockerels from champion colored cockerel at Kansas City Poultry Show, January, 1915. Prices, \$2.50 to \$5. L. P. Coblentz, La Harpe, Kan.

ONE HUNDRED BARRED PLYMOUTH Rocks, cocks, cockerels, hens, pullets, bred from prize winners. Thompson and Bradley blood, about as good as they grow. Write your wants. J. L. Deeds, Lyons, Kan.

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Two very choice yearling bulls, big-boned and beefy; few nice heifers also. Priced \$100 to \$125.

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20 bulls and heifers sired by Duchess Searchlight 848529, a 2,500-pound bull, and from cows weighing 1,400 to 1,600 pounds. Good milkers. Come or write.

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Big, growthy, richly-bred gilts, bred to a choice son of the great boar, A. Critic, for spring farrow. Outstanding spring boars. Also a choice herd boar. Prices right.

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One herd boar 4 years old, sired by Buddy K 4th, \$50. Twenty spring and summer boars, \$15 to \$20. Twenty spring gilts, weight 175 to 230, safe in pig to a good son of Otey's Dream, \$25 to \$30. Forty fall pigs at \$10.

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Boars and gilts, not related. Big-boned easy-feeding kind. Best of breeding. Priced right.

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Extra good March boars, outstanding February and March gilts bred to choice boars for March and April farrow. All big, easy-feeding type. All immune. Priced right. Satisfaction guaranteed.

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JERSEY CATTLE.**OLIVER'S JERSEYS.**

For Sale—Jersey bull dropped Nov. 15, 1914. Solid gray fawn, shading darker on sides and neck. Sire, Blue Belle's Owl 79641; dam, Fawcett's Wild Rose 25822, imported, ten months record milk 6,842 lbs.; fat, 328.44 lbs., on every-day care and dairy feed. This is a magnificent bull, guaranteed to please. Price, \$100. Address

ROLLA OLIVER, Box 701, St. Joseph, Mo.

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BLUE BOY BARON 99018
Five years old, solid light fawn, blue ribbon winner. Must change. Keeping his heifers. His sire, half brother to Noble of Oaklands, sold for \$15,000. His first five dams on his dam's side made 102 lbs. butter in seven days. Also four of his sons, serviceable age, and a few females. Will sell very cheap.

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Oakland Sultan, first Register of Merit sire in Kansas, is dead. Last chance to get one of his daughters. \$100.

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They are bargains and will soon go at prices asked; 2 to 5 months old. Write today. Parkdale Farm, Vandalla, Mo.

BARGAINS IN JERSEY BULLS.

Two-year-old brother of Pride of Topeka, also one son of serviceable age.

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A. Latimer Wilson, the well known horse-man of Creston, Iowa, reports a good demand for choice home bred stallions. Mr. Wilson has been in the business for many years, and has made Creston one of the draft horse centers. Breeding stock from the Wilson barns is making good in many of the best herds in the country.

NEWLIN'S**GUERNSEY SALE**

At Newlin Dairy Farm, Hutchinson, Ks.

TUESDAY, JANUARY 11, 1916

60 - CHOICE YOUNG GUERNSEYS - 60

Yearlings and two-year-old heifers and heifer calves. Also one pure-bred bull eight months old, and a few high-grade bull calves. The entire offering was raised here on the farm from cows brought from Iowa and Wisconsin at from \$150 to \$200 per head in carload lots. They were sired by our two pure-bred herd bulls, two of the best Guernsey sires in the state. Ask Department of Dairy Husbandry at Manhattan, or Secretary of the Board of Agriculture, about this herd.

We are keeping the herd of cows, fifty in number, that have produced us in 1914 more than \$10,000 in milk and have finished the year of 1915 with almost as much money to their credit.

We are also offering ten pure-bred Duroc gilts and four boars of our own raising. They are Tatarax and G. M.'s Tat Colonel breeding.

Parties coming from a distance will call Phone 839 and arrangements will be made for their transportation from the city to the farm, a distance of only 1 1/2 miles from the end of the Monroe street car line.

THE NEWLIN DAIRY, Hutchinson, Kan.

DISPERSION SALE OF DUROCS

AT MY FARM NEAR
MARYSVILLE, KANS.

**THURS., JANUARY 20, 1916**

Eight Tried Sows, Forty-five Summer and Fall Gilts, Two Herd Boars that are tried sires and proven breeders. I am leaving the farm and will sell my entire herd of valuable Durocs.

Catalogs are ready to mail out. Send for one today.

JOHN O. HUNT, Marysville, Kansas

FARM AND HERD.

G. S. Lawson, of Ravenwood, Mo., has announced January 15 as the date of his dispersion sale of Hampshire and spotted Poland China hogs to be held at Andarko, Okla. Mr. Lawson has cataloged twenty-six choice spring Hampshire gilts and six extra good tried sows, also a choice lot of spotted Poland China gilts. All will be bred to extra good boars for March and April farrow. He has also cataloged a number of Hampshire and spotted Poland China boars. Mr. Lawson is one of the pioneer breeders of pure-bred hogs, and his Hampshire show herd was one of the attractions at the big fairs in 1915, and captured their share of the winnings. In 1914 he was awarded the trophy offered by the Hampshire Advocate for the four best Hampshire pigs raised in Missouri.

A. S. Alexander, of Burlington, Kan., owner of one of the good herds of old, original, big boned, spotted Poland China hogs, reports a good demand for spotted Poland breeding stock. He also reports his herd doing fine. He has bred a choice lot of tried sows and spring gilts for early spring farrow. The boars in use in his herd are among the good sires of the breed.

C. G. Nash, of Eskridge, Kan., the well known Berkshire breeder and showman, writes that his herd is doing well and that the demand for high class Berkshire boars has been good and sales very satisfactory. Mr. Nash has made a great success as a breeder of pure-bred Berkshires. He has succeeded in developing a herd of big, easy feeding, high quality Berkshires that have made a record both in the show ring and as profitable feeders. He is the originator of the "Buster Black" and "Circus Girl" families. Buster Black 159428, weighed 1,010 pounds and won forty-one first prizes and eight grand championships. This herd has one of the greatest show records of the breed. Mr. Nash is breeding a large number of choice gilts to state fair first prize winners for spring farrow.

The sale announcement of J. A. Godman, of Devon, Kan., will be of interest to breeders of Percheron horses, jacks and jennets, and Poland China hogs. Mr. Godman has sold his farm, and on January 3 and 4 will disperse his herds of Percheron horses, jacks and jennets, Poland China hogs, also a lot of mules and farm mares. He will catalog fifty-five head of choice, big type Poland China sows bred to Big Wonder, a grandson of A. Wonder, and Dan Hadley 2d by Big Hadley. The hogs will be sold on February 4. The Percherons, jacks and jennets cataloged for sale February 3 are a very high class and useful lot of breeding stock that will be profitable on any farm.

Dairy cattle breeders will be interested in the sale announcement of William Newlin, of the Newlin Dairy, Hutchinson, Kan. On January 11 Mr. Newlin will sell sixty head of choice young Guernseys, consisting of yearling and two-year-old heifers and heifer calves. Also one choice pure-bred Guernsey bull eight months old, and a few high-grade bull calves. This offering was sired by Mr. Newlin's two great herd sires. They are out of heavy producing cows that cost from \$150 to \$200 per head in carload lots.

Catalogs are out for the breeders' sale, January 25-28, which will be held at the Coliseum at Bloomington, Ill., under the management of C. W. Hurt, of Arrowsmith, Ill. Some of the very best Percherons, Belgians, Shires, Clydesdales, trotting bred horses, Shetland and Welch ponies, that will be sold this year are cataloged for this sale. A large number of noted breeders of the country have consigned some of their outstanding show stallions and mares for this sale. They will probably not have the large numbers of previous years, but it will be the largest sale of draft horses that will be offered in 1916. The consignment will be from Maple-L-Stock Farm, Innisfield Farm, D. Augustin & Sons, Sunny Plain Farm, Rowe Bros., G. B. Loper & Sons, Wm. Day, J. W. Bowers, E. R. McKown, A. W. Blue, J. W. Ott, Leroy Knight, C. Becker, Harold Keys, H. J. Campbell, Albert Klett, J. W. Barclay & Son, W. H. Coultrip, Jno. McClelland, Alfred Phillips, Walter Severs, W. C. Seibel, F. E. Tollinger, R. G. Crum, A. H. Springer, D. S. Forrest, A. E. White, O. R. Thompson, Lewis Land, W. L. Candor, C. A. Hendrickson, J. W. Stubblefield & Son, I. C. Evans, and sixty other consignors. Ponies and trotters will be of the usual, consigned by W. C. Adams, Dixon Pony Farm, Jones Bros., M. P. Lantz, Charles Strawn, R. B. Ross and others.

The sale announcement of W. J. Brinigar & Sons of Blythedale, Mo., will be of unusual interest to breeders of Hampshire hogs throughout the corn belt. On January 13 the will sell at Blythedale, sixty head of choice tried sows, fall yearlings and spring gilts. They were sired by noted prize winners and breeding boars of the Hampshire breed; some of them by the great boar, Blythedale Jim, sire of many champions, others by Lancaster Duke and Brinigar's Choice. They are bred to Lancaster Duke, Blythedale Jim, Cherokee Plummer, Jam's Lad and Brinigar's Choice, all prize winners. This is one of the great Hampshire herds in existence. Their show herd has won 700 prizes in six years, one-half of which were firsts and championships.

A. A. Meyer, of McLouth, Kan., one of the very successful breeders of pure-bred big-type Polands, writes that his herd is doing fine and that he has the best lot of September pigs in the history of his herd. Mr. Meyer reports that he is breeding a choice lot of young tried sows and gilts for spring farrow.

Duroc breeders in Kansas will be interested in the announcement of a dispersion sale of Durocs on January 20 by John O. Hunt, Marysville, Kan. Mr. Hunt is leaving the farm and selling his entire herd of Durocs. It will be remembered by a number of older breeders that Mr. Hunt has one of the good herds in the state. For a number of years he has shown at Nebraska and other state fairs and won a good share of the premiums. A few of the attractions cataloged for this sale are two valuable herd boars and eight extra good tried brood sows.

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CALDWELL'S POLAND CHINA BRED SOW SALE

HOWARD, KANSAS, FEBRUARY 5, 1916
45- HEAD CHOICE BIG TYPE SOWS -45

Sixteen tried sows of Expansion, Bell Metal, Big Chief and M's Giant Wonder breeding.



Twenty yearling sows, seventeen of them by Elkmere Jumbo.

Nine spring gilts by Elkmere Jumbo and one by Big Bob Wonder.

Fourteen of these sows will be bred to Orphan Boy by Big Orphan.

Twelve will be bred to O U Wonder, a grandson of old A Wonder.

Fifteen will be bred to Caldwell's Big Bob, bred by H. B. Walter.

SEND FOR CATALOG EARLY.

SALE IN HEATED PAVILION.

FRED B. CALDWELL,

Howard, Kansas

HOLSTEIN CATTLE SALE

AT FARM NEAR
ABILENE, KAN.

JANUARY 27, 1916



Twenty-five choice high-grade Holstein cows and heifers from yearlings to full aged cows. Some giving milk, others to freshen soon. All tuberculin tested, clean in every way. All cows have dropped living calves within last year. All bred to registered bulls. This offering is high class in every way. Come if you want good Holsteins. Send for catalog.

E. S. ENGLE & SONS, Abilene, Kansas

AUCTIONEERS—Jas. T. McCulloch, C. W. Curphy, J. G. Engle.

BREEDERS' SALE OF 300 REG. HORSES

IN COLISEUM, BLOOMINGTON, ILL., JAN. 25, 26, 27, 28, 1916



- 200 Imported and native-bred registered Percheron, Belgian, French Draft, Shire and Clydesdale stallions and mares.
- 100 HEAD of imported and registered stallions and mares of the very choicest breeding.
- 50 HEAD of the best registered mares that ever went into an auction ring.
- 50 REGISTERED STALLIONS of the very choicest breeding and individuality.
- 60 REGISTERED TROTTERS, Grade draft stallions and mares.
- 60 HEAD OF PONIES—Imported and native-bred registered Shetland and Welsh.

Entries Close December 20.

D. AUGUSTIN, Pres. CATALOG READY JAN. 10, 1916. C. W. HURT, Mgr., Arrowsmith, Ill.

DISPERSION SALE HAMPSHIRE AND SPOTTED POLAND HOGS

AT ANADARKO, OKLAHOMA, JANUARY 15, 1916



Twenty-six choice Hampshire spring gilts, four spring boars and six extra good tried sows.

Nine Spotted Poland spring gilts and two fine spring boars. All sows and gilts bred to good boars for March and April farrow. Send bids to auctioneer in my care. Send for catalog.

G. S. LAWSON, - - - - - ANADARKO, OKLA.
AUCTIONEER—ED HERRIFF.

Brinigar & Sons' Hampshire Sale Blythedale, Mo., Thurs., Jan. 13, 1916

PRIZE-WINNING BLOOD, WON 700 PRIZES IN SIX YEARS. ON-HALF WERE FIRSTS AND CHAMPIONS.

Twenty-five Tried Sows and Spring Gilts, Thirty-five Fall Yearlings, sired by such boars as Blythedale Jim, sire of many champions; the champion Lancaster Duke by the noted Gen. Tipton, and Brinigar's Choice. They are bred to Blythedale Jim, Lancaster Duke, Cherokee Plummer, first prize junior yearling; Jim's Lad, first prize junior pig, and Brinigar's Choice, first prize senior yearling. All mail bids sent to auctioneers in our care will be given careful attention. Send for catalog at once.

W. J. BRINIGAR & SONS - - - - - BLYTHEDALE, MISSOURI



Faulkner's Famous Spotted Polands

We are not the originator, but the preserver of the OLD ORIGINAL BIG-BONED SPOTTED POLANDS. Now booking orders for spring pigs to be shipped when weaned, pairs or trios, not akin.

Arrange to attend our
ANNUAL FEBRUARY 9 BROOD SOW SALE.
For information and catalog address
H. L. FAULKNER, BOX K, JAMESPORT, MISSOURI

IMPORTED AND HOME BRED

ABERDEEN-ANGUS

HERDS NUMBER
OVER 600 HEAD

Champion herds, including aged herd, young herd and calf herd, Kansas State Fairs, Topeka and Hutchinson.
ONE HUNDRED BULLS AND ONE HUNDRED FEMALES PRICED FOR QUICK SALE.
CHAS. ESCHER, JR., BOTNA, IOWA. ESCHER & RYAN, IRWIN, IOWA.
Sixty Miles East of Omaha.

REGISTERED HEREFORD CATTLE

A large herd from which to select choice individuals and car lots.
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BELVUE, KANSAS

HORSES AND MULES.

HORSES AND MULES.

58 Head Registered Stallions and Mares 58

Percherons, Belgians and French Drafts, from Yearlings to Seven Years Old.

I have rented my farm and am quitting farming. Must sell all my horses by March 1. Nothing reserved. All priced reasonably—the first buyer to come will get a bargain. I mean business and must sell my entire herd. Come and see me.

J. M. NOLAN - - - - - PAOLA, KANSAS



ROBISON'S PERCHERONS

Forty young stallions from two to six years old. A few young mares for sale.

J. C. ROBISON, Towanda, Kans.



LAMER'S PERCHERONS

Have just received a new shipment. Also have a barn full of my own raising. A choice lot to select from.

WHITE, WIRE OR PHONE.

C. W. LAMER, SALINA, KANSAS
OFFICE, LAMER HOTEL.



REGISTERED PERCHERON STUDS

We have them, BIG FELLOWS, 1, 2, 3 and 4 years old. Real drafters, BIG BONE, lots of quality and action. Grown right, will go out and make good both as to sires and foal getters. You lose money if you don't look at BISHOP BROS.' STUDS before buying. Twenty miles east of Wichita, on Mo. Pacific Ry.

BISHOP BROS., BOX E, TOWANDA, KANSAS



HORSES AND JACKS



FOR SALE—Span of 6-year-old mares, ton, imported; span of 2 and 3-year-olds. All in foal and showing good to imported horse, Kosuth. Three spans of yearlings, coming two. All of the above as good as ever grown. Twenty head of two-year-old jacks, the big Missouri kind; ten head of jennets, all bred. This stuff, for the purpose of making room, I will sell at rates to suit purchaser. Can show sire and dams of all stuff. Cash or time.

OAKLAND STOCK FARM, Box 207, CHILLICOTHE, MO.



MAMMOTH JACKS, JENNETS and PERCHERONS



Jacks 15 to 16½ hands standard, two to five years, very best bone and quality. Stallions, ton weight and over, with finish.

AL E. SMITH, PROPRIETOR - - - - - LAWRENCE, KANSAS

REGISTERED JACKS and PERCHERONS



A few tried imported black Percheron ton stallions; Brilliant blood, good enough for herd headers. Twelve big black registered jacks, two to five years old, 14½ to 16 hands high, well broke and quick performers. Good herd of registered jennets headed by large Spanish Jack.

J. P. & M. H. MALONE, CHASE, KANSAS
Rice County.

HIGH CLASS JACKS

We offer 25 head to select from. Herd headed by Mo. Chief's Boy 6815. One imported gray Percheron stallion, first prize at Kansas State Fair. Write or phone us.

LOUIS MILLS & SON, Alden, Kan.



FOR SALE—Two extra good registered Percheron stallions. Two choice registered mares, extra large, in foal to registered stallion.

H. A. RITTER
Klowa - - - - - Kansas



JACKS AND JENNETS

10 Large Mammoth Black Jacks for sale, ages from 2 to 6 years; large, heavy-boned. Special prices for fall and winter sales. A few good jennets for sale. Come and see me.

PHIL WALKER,
Moline, Elk County, Kansas.

HARRIS BROS. 90 PERCHERONS 90

Sixty Mares and Fillies. Thirty Stallions, from weanlings to five years old. At live and lot live prices.

Route 6,
GREAT BEND, KANSAS.



Jacks for Sale

I have three good young jacks for sale and worth the money. Also a few very fine jennets.

JOHN A. EDWARDS
Englewood - - - - - Kansas



Registered Percheron Stallions—Nineteen ton and 2,200-pound 4 and 5-year-olds. 34 coming 3's, 17 coming 2's. Grandsons International champion Pink. 23 registered mares for sale. Just above Kansas City. Fred Chandler Percheron Farm, Route 7, Charlton, Iowa.

REGISTERED PERCHERON STUD COLT

Eighteen months old, bay color, heavy bone, will make ton horse. Will sell reasonable.

D. BALLANTYNE, HERINGTON, KANSAS.

A. LATIMER WILSON, Creston, Ia. Home-bred draft stallions \$250 to \$400, except two. Imported stallions cheaper than anywhere else.

THIRTY HEAD MAMMOTH JACKS And Jennets for sale. The big kind. Priced to sell.

J. D. HOLMAN - - - - - CURRYVILLE, MO.

MISCELLANEOUS.

YOU CAN BUY THEM HERE

Registered Percheron Stallions and Mares. Registered Mammoth Jacks and Jennets. Registered Holstein Bulls, Cows and Heifers. M. G. BIGHAM & SONS, OZAWKIE, KAN. 20 Miles Northeast of Topeka.

ANGUS CATTLE

CHOICE ANGUS BULLS
Eight registered Angus bulls, yearlings and calves, choice individuals, best breeding. Also a few choice cows. Prices reasonable. On Santa Fe, 18 miles south of Topeka.

GEO. A. DETRICH, CARBONDALE, KAN.

POLLED DURHAM CATTLE.

POLLED DURHAMS AND SHORTHORNS
By Scottish Baron.

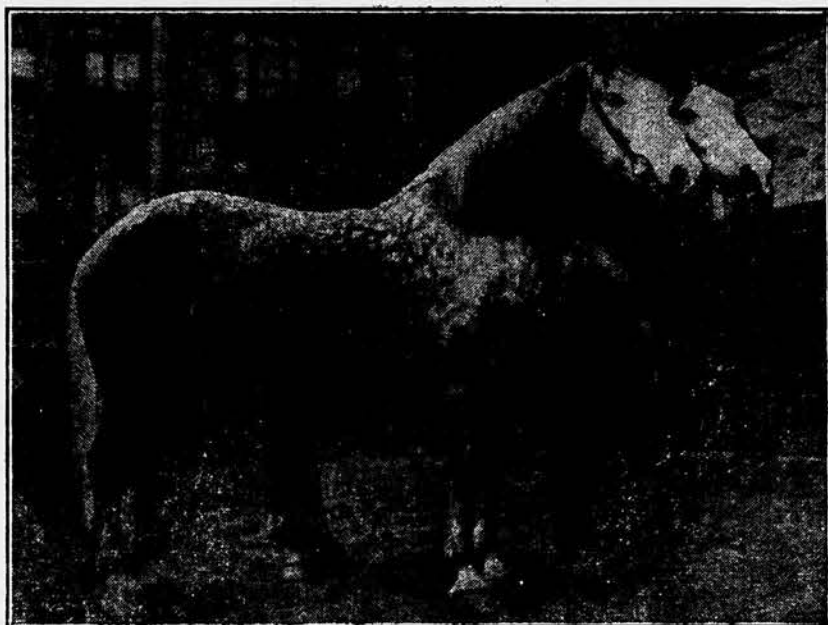
Young bulls of serviceable age, including Sultan's Kind, a choice young bull, son of True Sultan. A few young cows and heifers bred to Select Goods and Sultan's Kind for sale. JOSEPH BAXTER, Clay Center, Kan.

LEE BROTHER'S ANNUAL SALE PERCHERONS

JANUARY 17, 1916

AGRICULTURAL COLLEGE SALE PAVILION, MANHATTAN, KANSAS

40 - Imported and American Bred Mares and Stallions - 40
THIRTY MARES—TEN STALLIONS.



Twenty mares are either bred to or sired by Scipion. Several imported mares, some bred to Glacis, the imported stallion that topped J. C. Robison's sale. Our whole show herd sells, including grand champions at two state fairs, the first prize two-year-old stallion of Oklahoma sired by Scipion, one first prize yearling stallion, one first prize yearling and first prize two-year-old filly sired by Scipion. Send for illustrated catalog containing a number of beautiful pictures of Percherons and Holsteins. We have 200 head of Holstein cattle on our farm. Don't fail to get our catalog. Write at once to

LEE BROTHERS, Harveyville, Ks.
AUCTIONEERS—JONES, BRADY, SNYDER, CREWS AND CONDRAY.

ROENIGK'S SHORTHORN CATTLE SALE

At CLAY CENTER, KAN., JAN. 20, 1916

25 Head of Richly Bred Shorthorns



Nineteen Females, consisting of choice cows, three-year-olds, two-year-olds and yearlings. Three-year-old heifers weighing 1,300 pounds, cows weighing 1,400 to 1,500 pounds. Some of them splendid milkers.

The bulls include my great herd bull, Kirklevington Lad 373446. This bull is four years old, a splendid breeder, very gentle, weighs close to 1,900 pounds, and a show bull. Will also sell two choice bull calves and three fine yearlings.

Sale will be held at Dr. Monney's barn, one block east of Rock Island Depot, Clay Center. Send at once for catalog. Address

RICHARD ROENIGK, Morganville, Kansas

AUCTIONEERS—Col. Jas. T. McCulloch, Col. C. C. Hagenbuch.

HOLSTEIN CATTLE.

CLYDE GIROD—At the Farm.

HOLSTEIN FRESIAN FARM

M. M. MERCEDES PIETERTJE HOMESTEAD 156587 AT HEAD OF HERD. Pure-bred and high-grade Holsteins, all ages. Large selection, 225 head to choose from. One hundred fifty springing cows and heifers, all the right type, in calf to pure-bred bulls strong in the blood of the best milking strains, to freshen soon, as well as fresh cows on hand. Our pure-bred heifers are choice, some with A. R. O. records under three years of age. Fifteen pure-bred bulls, ages 6 to 24 months, all out of A. R. O. dams and from record sires. Bring your dairy expert—the better informed the easier to please. Write or wire your wants.

GIROD & ROBISON, Towanda, Kansas

HOLSTEIN CATTLE.

F. W. ROBISON—At Towanda State Bank.

260 - HOLSTEIN COWS AND HEIFERS - 260

If you want Holstein cows, springers or bred heifers, see my herd. I have them. They are very large, good markings, out of the best milking strains, bred to pure-bred bulls of the very best blood. Special prices on carload lots. Want to reduce my herd and will make bargain prices for thirty days.

J. C. ROBISON

TOWANDA, KANSAS



TORREY'S HOLSTEIN HEIFERS

High-grade Holstein heifers in single lots or car loads. Prices reasonable. Write, wire or phone.

O. E. TORREY

TOWANDA, KANSAS



Purebred Registered

HOLSTEIN CATTLE

Probably the longest and most exhaustive tests of dairy cattle in the world, made by the Wisconsin Experiment Station, showed that the registered purebred Holstein-Friesian cows far exceeded all other breeds when the tests were extended over a number of years, due to their more regular breeding, and higher uniformity of butter production every year. The Holstein cow Johanna in a five-year test averaged 480.81 pounds of fat and an average yearly net profit of \$90.17. Investigate the big "Black-and-Whites."

Send for FREE Illustrated Descriptive Booklets. The Holstein-Friesian Association of America F. L. Houghton, Sec'y Box 114, Brattleboro, Vt.

HOME FARM HOLSTEINS

OFFER HEIFER CALVES

Five months up to 15 months; grand-daughters of De Kol Burke, Fobes Tritonia Mutual De Kol and Walker Korn-dyke Segis. Official record and untested dams. Prices, \$95 to \$325.

W. B. BARNEY & SONS, Chapin, Iowa.

Regier's Holsteins

FOR SALE—Holstein-Friesian A. R. O. bulls. One A. R. O. 15.78 pounds butter cow, gave 12,386 pounds milk in 292 days, will be fresh December. Price, \$275.

G. Regier & Sons

WHITEWATER - KANSAS

IN MISSOURI

Eight bulls, 2 to 8 months, \$100 to \$175 each. Always have a few good cows and bred heifers for sale. Nothing but registered Holsteins.

S. W. COOKE & SON, MAYSVILLE, MO.

BUTTER BRED HOLSTEINS

Registered bull calves. Prices reasonable. Write today. These bargains will not last long.

J. P. MAST, SCRANTON, KAN.

REGISTERED HOLSTEINS

For Sale—Choice young bulls, also a few females. Have bred Holsteins 35 years on the same farm. Come and see our herd.

M. E. MOORE & CO., CAMERON, MO.

Bonnie Brae Holsteins

Ninety head of high-grade heifers and young cows. Some fresh now. Many heavy springers. Heifer calves. Registered bulls from 7 to 14 months of age.

IRA ROMIG, STATION B, TOPEKA, KAN.

Golden Belt Holstein Herd

Canary Butter Boy King No. 70508 In Service. Herd has won more prizes from Holstein-Friesian Association for yearly production than any herd in Kansas. Young bulls for sale from heavy producing cows.

W. E. BENTLEY, MANHATTAN, KANSAS

FOR QUICK SALE

Fifty head of highly-bred registered Holstein-Friesian cows and heifers; good ages and good producers. Several bulls from calves up to yearlings. Ready for service.

HIGGINBOTHAM BROS., ROSSVILLE, KANSAS

SUNFLOWER HERD

A few bred heifers and cows in calf to one of King Walker's best sons. Bull calves 3 to 6 months old.

F. J. SEARLE, OSKALOOSA, KAN.

CHOICE HOLSTEIN BULLS

Four registered bulls, out of A. R. O. cows. Two ready for service. Best breeding. Choice individuals.

BEN SCHNEIDER, NORTONVILLE, KAN.

CHENANGO VALLEY HOLSTEINS.

For quick sale, 100 head high-grade nicely marked cows and heifers, due to freshen in September and October; also fifty fancy marked yearlings, all tuberculin tested. Prices reasonable.

F. J. Howard, Bouckville, Madison Co., N. Y.

Walter Shaw, of Wichita, reports his herd of pure-bred Hampshire hogs doing fine. Mr. Shaw has succeeded in building up one of the good herds of that breed. He has the big, easy feeding type, and he now has a herd of over 150 head of registered Hampshires.

FINE HOLSTEIN CALVES from heavy milkers, \$20 each. Registered yearling bull, \$85. Edgewood Farm, R. 3, Whitewater, Wis.

BRAEBURN HOLSTEINS

Product of twenty years breeding. Write me for a good bull calf. Two ready to use.

H. B. Cowles, 608 Kansas Ave., Topeka, Kan.

Did You Know that the Dam of Iowa De Cola Walker, who heads

TREDICO FARM HERD

Made 812.25 pounds of butter from 18,047.0 pounds of milk?

TREDICO FARM, Route 44, Kingman, Kan.

EWING'S HOLSTEINS

Watch this space in future issues for something good in Holsteins.

T. M. EWING, INDEPENDENCE, KANSAS

HEREFORD CATTLE.

MODERN HEREFORDS

HAZARD PLACE

Robert H. Hazlett, William Condell
Proprietor, Herdsman
EL DORADO, KANSAS

HEREFORD CATTLE

For Sale—One carload breeding cows, one carload heifer calves, 75 yearling bulls, 25 two-year-old bulls. Come and see our herd.

PERRY BROS.
Alta Vista, Wabaunsee County, Kansas.

STAR BREEDING FARM

FOR SALE—Herefords and Durocs: 65 yearling and two-year-old bulls by Tophon 4th, Hessiod, Anxiety, March On and other good sires. 25 females, some have calves at foot and bred again. 10 head heifer calves. 30 head of registered Duroc gilts sired by a son of Ohio Chief and son of Buddy K 4th, out of sows by grand champions. Come and see me.

SAM DRYBREAD - ELK CITY, KANSAS

GALLOWAY CATTLE.

CAPITAL VIEW HERD

200—Galloway Cows and Heifers—200 All of the same blood lines as my show cattle. Priced within the reach of farmers or ranchmen.

G. E. Clark, 205 W. 21st St., Topeka, Kansas

GALLOWAY BULLS

FORTY yearling and two-year-old bulls, strong and rugged; farmer bulls, have been range-grown. Will price a few cows and heifers.

E. E. FRIZELL, Frizell, Pawnee Co., Kan.

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SIX TWENTY FIVE
JACKSON STREET Topeka, Kans.

A creamery is to be run in connection with the Central High School of Duluth, Minnesota. This is the first enterprise of this kind that has ever been carried out, so far as we know. Of course, its purpose is to furnish practical instruction to students in the high school. It is of special value in states like Minnesota where co-operative creameries are operated so generally.

TWO DAYS SALE

PERCHERONS, JACKS, JENNETS and POLAND CHINAS

On Thursday and Friday, February 3-4, 1916

At Farm Two Miles From Devon, Kan., Ten Miles From Ft. Scott, Kan.

I WILL SELL ALL MY HORSES, JACKS, JENNETS, MULES, AND POLAND CHINA BRED SOWS.

Have sold my home farm and will sell my entire herd of three registered Percheron stallions, five jacks (including two herd jacks), ten jennets, six draft farm mares, twenty head of yearling and two-year-old mules (one of the best eighteen-months-old mare mules in the state).



The Sales Managers.

45 - Head of the Best Poland China Bred Sows That Will be Sold - 45

Forty-five head of the best Poland China bred sows that will be sold this year will be sold on the second day, February 4. They are the tops of fifteen sales, 1914 and 1915, and sired by such noted boars as Grand Look, Tecumseh Hadley, Gold Medal, Long Prospect, Palmer's Orphan, Expansion Hadley, King Blain by Blain's Wonder, Wedd's Long King, Wales' Missouri King, Expansion Hadley and Wedd's Expansion. Bred to Big Wonder, a grandson of A Wonder; Dan Hadley 2d by Big Hadley, and Sure Prospect by Expansion Sure. I am selling my three herd boars and herd sows. Am not quitting, but moving to another farm, one mile from Ft. Scott, where I expect to improve and keep one of the best herds of Poland Chinas that I can collect together.

Send for illustrated catalog and arrange to attend both days. A special coach will leave Ft. Scott at 10:00 a. m. and return each evening after sale. O. W. Devine will represent Kansas Farmer at hog sale. Write today for catalog to

J. A. GODMAN, DEVON, KANSAS

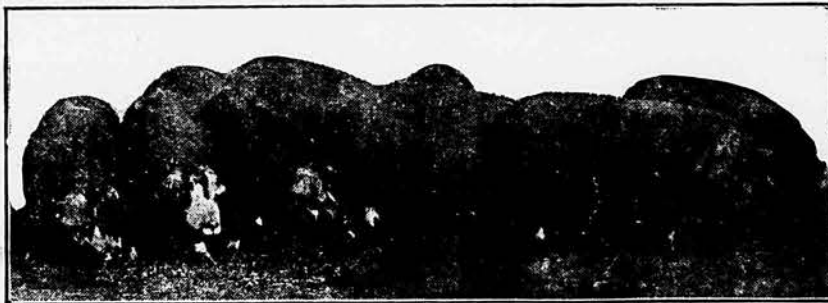
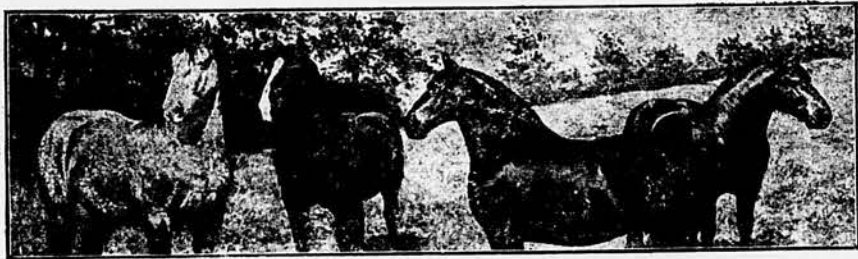
Auctioneer, Col. R. L. Harriman.

TWO DAYS SALE

PERCHERONS, BELGIANS, AND POLAND CHINAS

ON FRI. and SAT., JAN. 21-22, At the Old Pile Barns, EMPORIA, KANS.

I will sell my entire herd of imported mares and herd stallions, consisting of fifty Percherons and Belgians, thirty-five brood mares and fillies, twenty-five mares showing safe in foal, fifteen young stallions, and two herd stallions. The Percheron mares are in foal to our imported ton stallion, Loke (99063) 98901. The Belgian mares are bred and showing safe in foal to our imported ton Belgian stallion, Pickard (5790). The mares range from three to six years old and all are showing safe in foal, broke to work, kind and gentle—just the right kind for farm use. Sold with an absolute guarantee.



SEND FOR CATALOG AND COME TO MY TWO DAYS' SALE AT ONE EXPENSE.

50 - Stallions and Mares Sell on January 21 - 50 **40 - Pure Bred Poland Chinas Sell on January 22 - 40**

40 - REGISTERED, BIG TYPE, POLAND CHINA SOWS and GILTS - 40

Will be sold on January 22 following horse sale. The sows and gilts are sired by a 900-pound hog, Mo. Governor by King Ex 3d and a 750-pound hog, George Garnett by Kansas Hadley, and are bred to a very promising young hog, Big Superba by Superba, the grand champion at the Panama-Pacific World's Fair, 1915. Big Superba was one of the best young boars sold in Missouri this fall. My sows and gilts are large and smooth. This is my first sale and I guarantee a good offering. Send for catalog and come to my sale. O. W. Devine will represent Kansas Farmer at the sale. Sale at old Pile barn, West Sixth Avenue, Emporia, Kansas. For catalog write

AUCTIONEERS

Cols. Carey M. Jones, John Snyder, John McClinden, Col. Gross, Lefe Burger.

L. R. WILEY, Sr., Elmdale, Kansas

NOTE: Even after its experience of three-quarters of a century, Case is not content to publish advertisements unless based on the very latest authoritative information. This is one of a series of messages to farmers, prepared after visiting tractor demonstrations, talking to hundreds of farmers and carrying on a national investigation through our sales organization and by mail to find the gas tractor needs of the farmers.

What an Authority Says About Tractors—And Our Answer

Many conflicting things are being said about tractors nowadays. So it is a fine thing when a recognized authority devotes itself to the study of gas tractors in order that real advice may be spread among the farmers.

Many farmers are led to think more about the appearance of a tractor than its work. Some are attracted by its stagey accomplishments rather than by day-in-and-day-out work. Others look upon tractors as an additional outlay, rather than a lessening of expense and an increase in production and profits. Others are baffled by the large number of tractors on the market, which seemingly makes a selection difficult.

All these problems are real ones, and we recognize just how the farmer views the tractor situation. So we are anxious to do our part in collecting vital information and transmitting it to you. You can hardly afford to disregard the statements made below—they put the situation before you in the form of a cold, scientific analysis.

What The Scientific American Says:

"The average farmer, one operating not over 160 acres of land and keeping probably not over six work horses or mules, besides young, driving and breeding stock, needs a tractor; one simple enough for him, his son or his hired man to operate;

"light enough in weight to spare bridges and culverts;

"low enough in pressure per unit of ground surface to avoid packing his well-tilled land;

"powerful enough to replace at least five horses in plowing, thereby handling two plows;

"and priced not to exceed the value of the horses which may be sold when the tractor comes to the farm to stay.

"The Middle West has seen literally hundreds of minor concerns start, experiment and quit, perhaps lasting long enough to sell a few engines and include the customers in the final disappointment.

"Building a small tractor is no child's play. Without exception, the tractors so far announced at sensation-ally low figures have either been materially increased in price or disappeared entirely from the market.

"There is a distinct tendency toward the four-cylinder motor in the higher types of tractors."

Speaking of the one large wheel drive, the writer continues: "One difficulty lies in the fact that there is no second driver to assist in case the one strikes a soft spot, as in a two-wheel drive having a differential that may be locked.

"In the design of one tractor, the drive wheel runs in the furrow and undoubtedly creates a hard-pan similar to the 'share hard-pan' formed by one horse's feet and the plow share."

What Case Says:

"Our smallest tractor, the 10-20, like the other Case machines, is designed with the utmost simplicity and freedom from complicating parts. It is easy to operate and handle.

"Our 10-20 weighs 4800 lbs.—much less than others of equal capacity.

"With the weight of this tractor distributed over three wheels, running on unplowed ground, with a combined width of 40 inches, the packing is less per square inch than that of horses.

"This tractor will replace more than five horses, and handle three plows, under ordinary conditions.

"Our 10-20 is priced at \$890, f. o. b. Racine. Compare this with the value of horseflesh in your neighborhood.

"Since 1842 we have been manufacturing machinery for the farmer. Our first experimental tractor was built 24 years ago, and since that time we have spent hundreds of thousands of dollars in developing our present Case light tractors.

"Backed by 74 years of manufacturing experience, particularly in the tractor field, this 10-20 and all Case tractors represent values which cannot be duplicated, because they are built like other Case products, to endure and to produce results over years of time.

"This is quite true in the smaller types. The Case 10-20 tractor has a four-cylinder motor, which we believe is absolutely essential in any light tractor, as conditions demand a well-balanced engine to do away with vibration. The motors are built by us exclusively for these tractors.

"The second rear wheel of the Case tractor is arranged with a clutch, operated from the operator's seat, so that it can be clutched in and used as a drive wheel in the soft spots or on hard pulls.

"In this Case tractor the drive wheel is on the unplowed ground. With a 22-inch face the pressure of this wheel is reduced to that less than the pressure of horses' hoofs. For instance, the ground pressure of our 10-20 is but 6¼ pounds per square inch, while that of the average horse is 18 pounds per square inch. The pressure of our 12-25 is but 7 pounds per square inch. Even our 20-40 is but 12½ pounds—all less than that of a horse."

Then Go Still Further in Your Investigation

Only by study and investigation can a man acquaint himself with the merits of any tractor. Only by studying Case features point by point and making comparisons can one realize how far ahead we have gone. One must study the Case Catalog, then the tractors themselves. Then he must review the Case history and credit its honorable standing among farmers. He must remember our 44 branch houses and 9,000 dealers, which mean service.

Of course, there are many mechanical excellencies in each of the four Case gas tractors—too many to explain on this page. But here are five important details in the Case 10-20:

1. It is adapted for all kinds of farm work—it drives an 18-inch Case separator, hauls to market, cuts ensilage, pulls binder, does road work, fills silo, works hay-baler, pulls stumps, crushes stone, etc.
2. All its parts are accessible. Suppose, for instance, you want to gain access to the main bearings. Merely remove the covers for access to crank case. No dismantling necessary.
3. All working parts enclosed or fully protected. The transmission gearing is fully housed and runs in an oil bath.
4. Larger shafts—all high-carbon steel, heat treated. Also larger bearings.
5. Bull pinion of steel—case hardened. Next to it is a high-duty Hyatt Roller Bearing.

If you will write today we will send you descriptive matter. You will then be able to inform yourself on the subject of tractors, and be better able to judge for yourself. No progressive farmer can miss being posted on such a vital topic. Write right now.

(358)



The sign of mechanical excellence the world over.

Leaders in Other Lines of Agricultural Machinery

Case steam engines, Case threshing machines, Case road machinery, Case automobiles, and every Case product is each a dominant factor in its own field. Write today for our complete Case Catalog. It is an album of information that should be under the reading lamp in every farm sitting room. It is beautifully printed, with many interesting scenes and reproductions in color. No farmer should miss having it. Especially when it costs you only one penny for a postal card to get it. Merely write, "Send me your general machinery catalog." **IT IS FREE!**

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TO DAY**
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Your Name on a
Postal Will Do

J. I. CASE THRESHING MACHINE COMPANY, Inc. (Founded 1842) 711 Erie Street, RACINE, WIS.