

KANSAS FARMER

For the improvement  of the Farm and Home

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THE only conquests with no regrets are those won over ignorance.

In ignorance men planted crops in the moon; had their wheat turn to cheat; dug wells with a wand; had their fruits blasted by witches; suffered disease through the malignant evil eye and lost wealth to insect plagues brought on by personal sin.

Now they plant in the earth, clean their seed, dig wells where they want them, study sanitation and spray against the blasting fungus and dip against the devastating insect. The curse of Adam continues down the ages and its burden is mostly due to fungus and insects. He who will not spray only spends his labor to feed the bugs and molds and pays a heavy tax to his own ignorance or carelessness.

Man is not saved by good works but he cannot be saved without them.

LET US SPRAY.

—I. D. G.



With the Spray the Farmer Eats His Fruits; Without it, He Boards the Bugs.

Studebaker

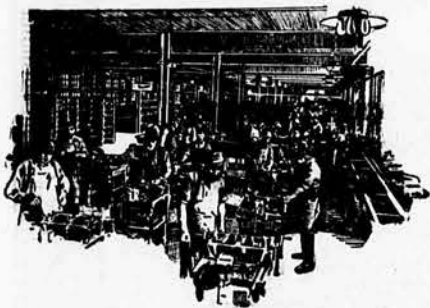
How Studebaker Automobiles Are Made

A Heart-to-Heart Story. No. 3

In this series of articles concerning the manufacture of Studebaker automobiles we have already described the four main opening channels of the Studebaker factories—the forge shop, foundry, steel stamping mill and heat-treating ovens—and also some of the many intricate milling and grinding operations which must all be wisely planned and well done before even the single parts of a Studebaker car are ready for assembling.

This issue describes farther steps in manufacturing which carry the car towards completion.

From the time some mighty forge hammers a molten block of steel into the form of a finished part, that part



A motor assembling department. The stock is drawn from bins at either side.

starts on a long journey through the Studebaker factories. It is milled, ground, heated white hot, baked, tempered and ground again in the course of its journey, but ever the process brings it one stage nearer its final adjustment in the finished car. The process is ceaseless. That stream which we call production always goes on.

Because Studebaker manufacture is organized in this way we are able to get better workmen at every point in the process. And this is how we do it.

The men who grind Studebaker gears, for example, are master mechanics of a single job. They grind gears, and nothing else. It is skilled labor brought to a high degree of specialization—incidentally, too, very well paid. As Sheffield workmen are famous for cutlery and South Bend watchmakers for watches—so Detroit workmen are famous for skill in building automobiles. And in no plant is there more attention paid to high standards and the most efficient labor than in the Studebaker factories.

The Studebaker factories have been making automobiles for years and our financial and factory resources are large—naturally this draws to us the best workmen because we can offer them regular employment. We keep our men and as we keep them they gain in specialized expertness. This is one of the important reasons why a concern like The Studebaker Corporation is able to produce the very highest quality of goods.

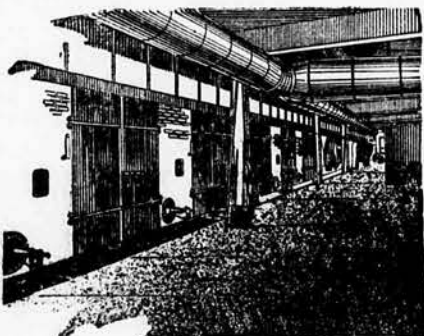
From each of the departments, as parts are completed they are sent to the big stock rooms where they are laid away until assigned to the assembly department; but before they are accepted by the stock department they are put through a final test, which is in addition to the many tests they have had during the process of their manufacture.

We want you to appreciate this kind of organization. We maintain a separate department known as the efficiency department. This group of engineers study the methods and organization of Studebaker plants and constantly seek to improve them. All the machines, benches and shops are charted. The journey of every part is charted on big paper charts which show exactly how it passes through the factory. The efficiency engineers study how this journey can be shortened; how handling can be reduced; how by manufacturing universal joints for example, in one shop instead of another a little less time will be consumed in the process; how the change of a bench here, the addition of an electric light there, will enable time and money to be saved. And all this means a better car for less money.

The department where the parts are brought together in a car is called an assembling department. There are six great assembling departments in the Studebaker factories; the small parts assembly; the motor assembly; the rear axle assembly; the steering gear assembly, the control assembly, and the chassis or final assembly.

In the small parts assembly small units of two or three parts are put together. For instance, the clutch, the universal joints and other similar small units are assembled and made ready to join with the larger assemblies in the chassis.

The motor assembly is one of the most important assembling departments



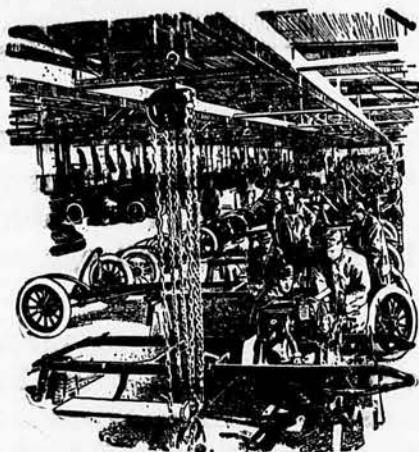
Enamelling room where the finish is baked on Studebaker fenders and hoods. The enamel is baked for hours at a time.

in the factories. Here the cylinders, the crank shaft, the cam shaft and other parts are brought together and built into a motor. Expert workmanship is absolutely necessary. If the motor is to run true there must not be the slightest looseness or any distortion or unevenness of balance. In fact, each pair of pistons and connecting rods are balanced to within a fraction of an ounce so that the crank shaft will revolve perfectly smoothly.

Did you ever think how rapidly the parts of a motor must move and how, in a good motor, every part must be fitted true to the last degree of accuracy? It is because of the fine workmanship that Studebaker motors run so silently. You can seldom hear them and so efficiently that Studebaker motors deliver, through the transmission to the rear wheels, a larger proportion of the power developed by the exploding

gas than any other motor yet designed.

When the motor is assembled it is clamped to a solid frame and belted to an electric motor which drives it for several hours under heavy lubrication in order to "work in" all the bearings. Later the same motor is taken to the motor test room and run for many hours under its own power. If a "knock" or any imperfection should develop, it is corrected then and there. In this motor room 75 motors are constantly running under their own power yet it is so quiet that no one need to speak above an ordinary tone of voice.



A final or chassis assembly room in the Studebaker factories. Notice the traveling crane in the foreground.

Before a Studebaker motor is finally approved it is tested for horsepower by a dynamometer. If it shows up perfect in every respect it is passed to the chassis assembly to be placed in its chassis.

If you will reflect a little here, you will see how perfect must be our system of manufacture in order that the different parts of a car may be drawn from stock and yet always each exactly fit the other. If we did not manufacture to the finest limits the cost of assembling would be prohibitive. This is how an owner in Bombay, India, or in Mobile, Alabama, or anywhere in the world may send to us for any part needed on any car we ever built and get a part which may be slipped into the car and fit exactly. This is what we call real interchangeability of parts.

Another important assembly department is where the rear axle and transmission are built up, in much the same way as the motor. When the rear axle and transmission are ready they are belted to an electric motor. It will be remembered that these gears have already been tested for accuracy and silence. They are now tested in permanent relation to each other and must be perfect before they are passed. It is such care as this which is producing Studebaker rear axles on the new cars which are noiseless at all speeds.

When the rear axle passes its final test it is sent to the chassis or final assembly.

These rooms are huge and in them 150 cars are built at one time. Labor is reduced to a minimum. Electrically-driven travelling cranes run the length of the room and the chassis pass down

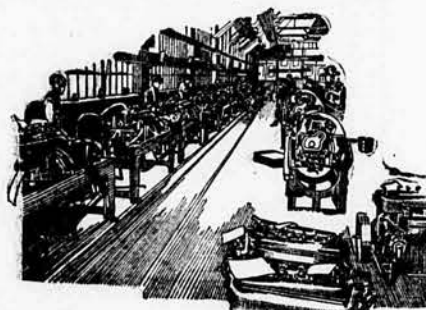
the line of workmen, each doing his part as the cars pass by. One skilled workman places the steering gear or the control mechanism in the chassis; two others working together place the springs on the frame; two more put in the axles; others bolt in the motor, and so on until the chassis is completed.

If you have read between the lines of this story you have already seen how quantity production not only lowers prices but also does better work. The effect of specialized skilled labor is everywhere apparent in the finished Studebaker car.

When the chassis is finally finished, it is ready for the road test. The final adjustment of the carburetor must be made and the little finishing touches which tune up the car to prepare it for the owner's hands.

We have 35 testers, young men and automobile experts, who put a rough body on the chassis, and take it out for a long, hard drive on the country roads. It is run at slow, medium and highest speeds over hills and through sand. Of course on the road test old wheels and tires are used. The skilled eye of the driver watches every part of the car and his ear detects instantly any variation or defect in the car's running capabilities. Any necessary minor adjustments are made on the road and when the tester returns he turns in to an inspector a complete report on the car. If changes are necessary they are made and when the inspector finally passes it the car is sent to the painting department, where it is cleaned by steam to take off every particle of oil, sand and dirt.

We have gone over these matters in detail because in the aggregate they account for the remarkable value of



A section of the motor test room. In this room 75 motors are tested under their own power at one time, yet it is so quiet that the workmen speak in ordinary tones.

Studebaker cars. We want you to believe in Studebaker cars because you know that they are manufactured by most efficient, honest and up-to-date methods. It is for such reasons that friendship and confidence grow strong, and we hope you will come to have real friendship for and confidence in Studebaker cars and Studebaker business principles.

The fourth of this series—and next to the last—will appear in the March 15th issue. It will be worth reading. Remember to look for it.

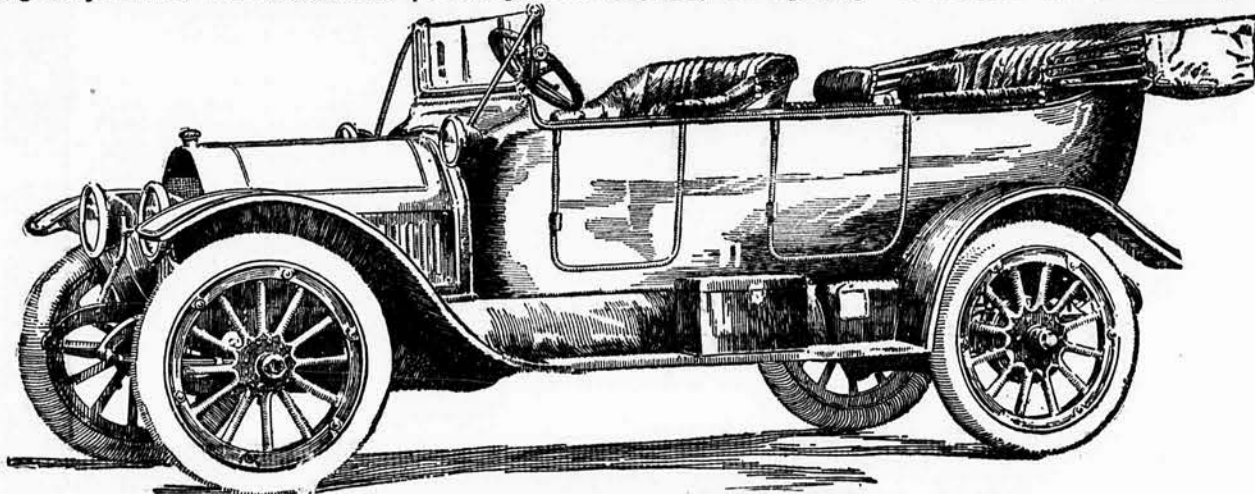
Many other important matters of Studebaker automobile manufacture we have described in our "Proof Book." It explains things about an automobile which few people know but which every buyer ought to know. It is free. Send for it now on the coupon below.

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KANSAS FARMER

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ABOUT EXPERIMENT STATIONS.

Bills providing for two new agricultural branch experimental stations to work out dry farming problems have within the last few days been passed by the Senate. It is proposed that one such station shall be located near Lakin in Kearney County, and the other near Colby in Thomas County. For each station there is to be an appropriation of \$15,000, or a total of \$30,000 for the two. The Kansas State Agricultural College is not behind the establishing of additional experiment stations notwithstanding the fact that in the argument for these stations it was said that President Waters and Director Jardine were in favor of them.

KANSAS FARMER remarked early in the legislative session, when there was much talk about increasing the number of experiment stations, that the establishing of additional stations was for no purpose other than to throw dust in the eyes of the farmer. Every time a legislator has a desire to do something for his farmer constituents he proposes establishing an experiment station; then he forgets that it needs money for its support and the station amounts to nothing.

Kansas now has experiment stations established at Dodge City and Garden City. These two stations are so situated that the work of both, if there is any difference in the lines now pursued, can be followed with equal success at either point. If, farther west in the Arkansas Valley there is need for another station, either the Garden City or Dodge City station can be moved and re-located. At Tribune is a station started two years ago. This station will permit the working out of high land problems with entire satisfaction to a dozen or more counties surrounding the county of Greeley. The pumping of water by windmill for irrigation purposes, conducted on a small scale, has at this station fairly well demonstrated that the irrigation of a few acres from a single well and a single windmill will go along way toward supplying the western farm with the garden stuff necessary for the family wants, and that more wells and more windmills will irrigate a larger acreage with profit.

At Ogallah and Hays, on the Union Pacific, about thirty miles apart, are two stations identically situated in so far as soil and climatic conditions are concerned. Hays, next to Manhattan, is the important experimental station of Kansas. With the money the Hays station needs for development to its full possibilities, Hays could become by all odds the most important station in the state, and will work out all the problems for western Kansas. There is absolutely no excuse for the Ogallah station. This is a station which could be re-located at Colby in Thomas County, or at some other point in the northwest.

By re-locating either Dodge City or Garden City station and the Ogallah station, the number of experiment stations need not be increased and the burden to the state and to the State Agricultural College would in no way be increased.

In re-locating these two stations or in locating others in western Kansas, the matter of investigation into crops should become the minor consideration. Stations located at Colby and at Lakin, along with the Tribune station, should have their scope of investigation widened to demonstrate the possibilities of the production of feed, the possibilities of live stock farming, and the profitability with which twelve to fifteen of the common cows of the country could be fed and milked. Along with this revised plan would of course go investigation with reference to the possibilities of maintaining and feeding for market, sheep, hogs, and calves. In other words, the western Kansas experimental investigations should be directed from crop farming as a main issue to mixed and diversified farming, pointing largely to live stock and dairying.

The editor well remembers how ten years ago nearly every farmer in the north half of the western one-third of Kansas was milking a few cows and maintaining himself and his family by so doing. In so far as the actual and

certain income of these farmers was at that time concerned, they were then in a much more permanently prosperous condition than now. Within the last ten years the wheat fever has advanced in this section to the point that everything has been lost sight of except wheat farming. There is little question but that this condition has resulted in serious injury to western Kansas. The only excuse which justifies the establishing of experimental stations in these sections is to prove the advantages of live stock and dairy farming and the possibilities of deep well irrigation.

It is not more experiment stations to be conducted in a small way resulting from poor support, that Kansas needs. It is a re-location of some of the stations we now have and such stations provided with sufficient means to make them really worth while. The experiment stations of Kansas are located—with the exception of the Manhattan station—in the western one-third of the state. Southeastern Kansas is in need of an experiment station to investigate problems peculiar and important to that section of the state. When legislators are disposed to do something for the agriculture of Kansas, why not raise a hand for a well supported experiment station to work out the problems of the undrained, sour and acid soils of the southeastern part of this great commonwealth?

EDUCATIONAL APPROPRIATIONS.

A close view of the appropriation situation in so far as it has to do with the educational institutions indicates that the agricultural college will get \$80,000 for an addition to its agricultural building. It would seem, too, that the manual training school at Pittsburg would also get a new building. These are the only buildings which the legislature will supply for the educational institutions during the next two years. The result is that the total of appropriations will be considerably less than the amount asked for by the several schools.

It is believed that the appropriations for salaries, running expenses, equipment, etc., which are necessarily fixed expenses, will, in all probability, be as liberal as in recent years, and in fact larger than those allowed by the legislature for these purposes two years ago. The growth of the several institutions has made this necessary. All in all, it seems that the educational institutions of Kansas will not be seriously affected by the disposition of the present body to establish a record for economy.

The heads of the institutions have properly taken the one-board-of-control law philosophically. As a matter of fact, they could do nothing else. When you have to take medicine it is just as well to take it pleasantly. The officials of the several institutions promise to give the new board their hearty co-operation with the idea of making the new system of management as successful and in every respect as efficient as possible.

LAST CHINCH BUG CHANCE.

In every neighborhood there is fear of the chinch bug. Everywhere we go farmers ask how they can best combat the chinch bug next summer and fall. So we cannot refrain from saying a "last word" regarding the chinch bug situation.

The chinch bug can be fought when he begins to do damage. But not so easily or so effectively as now.

Get busy—organize the farmers and townspeople of your township into a vigilance committee.

See that every township in the county organizes.

Burn over the pastures and meadows. Burn out the hedge and fence rows. Burn out the bunch grass and weed patches wherever they are found.

The organization can center around the Grange, the farmers' institute or the school districts of the county.

Read February 15 issue of KANSAS FARMER and follow the Cherokee County organization.

Burning is effective—that is certain. The chinch bug is still in his winter quarters—get him there.

Burn just as soon as it is dry enough. This will be the last chance before crops grow.

It will be only two days' work to clean up your county—one day to organize—one day to burn.

There will be a lot of fun on both days.

Don't stop until the whole county has been burned over.

If every township gets busy—every county and finally the whole state will have destroyed 90 per cent or more of the existing bugs.

THE PAINT BILL.

A bill regulating the sale of paint and providing that the formula for the mixture be placed on every paint can, found its way before the present legislature and brought a flood of protests from manufacturers and dealers. The bill, of course, was aimed at paint makers who sell dope for paint. It is manifestly unfair to require the paint man to give to the public and to competing manufacturers the formula by which his paint is mixed. The formula is, in fact, the only thing of real value in paints, medicines, etc., and to compel the giving away of these formulae results finally in the confiscation of property. The federal food and drugs act does not require the formula on anything, neither does the Kansas food and drug act. These acts, however, do require that if a statement is made at all regarding composition, purity, etc., it must be a truthful statement. This sufficiently protects the consumer and user. This is especially so, in Kansas, when the provisions of the act are administered by so active a department as we have.

It is not unreasonable to require of paint manufacturers that the net weight or measure be placed on the label. Also that labelling statements regarding purity, etc., be correct. The latter provisions are much more important and afford much greater protection to the consumer. The formula in the case of paint does not mean anything on account of the wide variation in qualities and price of lead and oil, which may be pure or not pure. A paint might be made of the poorest quality of lead and oil and still be pure, but also be the poorest paint on the market. A high class manufacturer might be scientifically combining one or two elements like asbestos with a small percentage of high grade lead and oil, and the very best paint be the result.

So in paint it is not altogether a question of materials. It is the grinding and mixing that counts. In other words, it is the skill used in addition to the material. Ohio has repealed the formula clause of its paint law and has created a law which now simply but effectively prohibits the mislabeling or false description of the oils, leads, paints, etc. The reputable paint trade should welcome a law of this sort, just as have the reputable food manufacturers welcomed the required truthful labeling of food products. The paint trade justly protects against a law that places reputable advertised products upon the plane which permits duplicates quantitatively made by any imitator who has a set of measures and scales and the advertisers' formulae.

The senate last week killed Senator Balie Waggener's bill to refund the inheritance tax paid by heirs of Kansas persons during the life of the recently repealed inheritance tax law. The original bill carried with it an appropriation of \$250,000 for the purpose of reimbursing heirs who had paid the state inheritance tax. Senator Waggener said that the inheritance tax law was vicious legislation and that the state of Kansas should be big enough and broad enough to right any wrong.

Uncle Sam's crop figures show that the total value of field crops, excluding live stock, orchards, etc., was \$2,181 to the square mile of land in Missouri last year. Oklahoma figures show \$1,957, Kansas \$1,892, Arkansas \$1,798, and Texas \$1,643 to the section.

NO TAX REDUCTION.

The budgets of the ways and means committees of the present body indicate that there is no chance for a reduction in the state tax levy. The budgets indicate that as much money will be required for the running expenses of the state during the next two years as was used during the preceding two years. The farmers of Kansas, who now pay 58 per cent. of the taxes, can consider themselves fortunate, however, if the levy for state taxes is not increased—and it is our judgment that an increased levy will not be required. When you stop to consider the situation you can see how, with all our institutions established and the need for funds already created, it is quite impossible to reduce appropriations without depreciating present investments and in some instances rendering them non-productive. The present rate of taxation is not to be so much deplored as is the ever constant tendency toward increased taxation.

The closest figures made so far call for a total appropriation of \$7,928,796. This does not include \$196,000 for the completion of the Memorial hall, recommended by the senate ways and means committee. It appears that it will be impossible to hold the total under eight million dollars, even if no appropriation is made for the completion of Memorial hall. The total appropriations two years ago were \$8,375,502.

The \$225,000 appropriated to carry out the provisions of the bill calling for the state publication of text books filled up a big hole that had been made by cutting other appropriations. The state educational institutions have been given \$352,000 more than was given them two years ago.

A desperate effort has been made during the present session to modify the existing game laws to suit the pleasure of the so-called sportsman. The modification, however, will not be forthcoming. Those who are interested in the modifying of our game laws, seem to lose sight of the fact that game laws are not made for the benefit of the hunter but are made for the benefit of the farmer. The quail, prairie chicken and fish are primarily the property of the farmer. It is for him to say how and when they shall be hunted, if they shall be hunted at all, and his wishes are to be followed. It is altogether likely that the killing of quail and prairie chickens will be prohibited. With the law providing for this prohibition will be a provision that there shall be no hunting on any land without the permission of the owner, neither shall a person hunt on any farm unless he is accompanied by the owner of the land or his authorized agent.

COLONEL BELLOWES DEAD.

On Monday, February 17, the lifeless body of Col. George P. Bellows was found under his automobile at the end of a bridge near his farm at Maryville, Mo. No particulars are known, as there were no witnesses of the tragedy. Colonel Bellows was very widely known as a fieldman, a Shorthorn breeder and an auctioneer. A man of sterling character and untarnished reputation, he was cut down in the very prime of life and in the midst of his great usefulness. He has left thousands of friends behind to whom his life will be an inspiration and his memory a benediction.

The federated commercial clubs of Missouri plan an extensive campaign to secure more farmers for that state. An appropriation of \$100,000 has been made to defray the necessary expense.

Don't forget to run the roller over the wheat field this spring. Experiments show that rolling increases the yield in every case.

Neglected fruit trees are like a lazy man. Of no more use than a dead one, and they take up more room.

The Percheron Society of America will give a series of special prizes at the Kansas State Fair at Topeka next fall.

WHAT'S MATTER WITH KAFIR

By H. M. COTTRELL

WHAT is the matter with our Kafir? It does not yield as it once did. The Kafir all through those districts in Kansas and Oklahoma where Kafir has been grown for eight years or more are asking this question. They say that the heads are not as solid and heavy as they were when this crop was first grown. In large districts, sometimes including several counties, in both states the yield in 1912 was only 15 to 25 bushels an acre, although there was a fair season.

The farmers have, year after year, been going to the bin at planting time and taking out enough Kafir for seed. This method has given them seed from weak heads, sprangly heads, small heads and all kinds of heads, and from good and bad heads from weak stalks.

Kafir crosses with the sweet sorghums, with broom corn, milo, feterita and the so-called Egyptian corn or desert wheat. These crosses produce a mongrel strain of Kafir that cannot be made to yield a heavy crop. The Kafir with sprangly and loose, open or fluffy heads are the result of such crosses.

The character of the stalk has a strong influence on yield. Seed from good heads, grown on plants of medium height with thick short-jointed stalks, will produce one-third higher yield than seed from good heads grown on tall stalks, with long joints. Yet not one Kafir grower out of 500 considers the stalk when he selects seed.

The result of the careless method of getting seed is that in a large part of the country where Kafir has been grown for a number of years the crop has run out and can not be made to produce over half a crop.

Mr. George Bishop, who has been district agent for the United States farm demonstration work in 26 counties in western Oklahoma, states that in these counties not over 2 per cent of the Kafir is pure. At a stop of the Kafir special train in Oklahoma a Canadian County banker reported a yield of only 11 bushels an acre, and he was trying to keep his patrons from planting Kafir. One of the best farming districts in Grady County reported an average of only 15 to 25 bushels, and many of the farmers in Kingfisher and Garfield counties reported like yields. In many sections of Kansas the yield is too low because degenerate seed is planted.

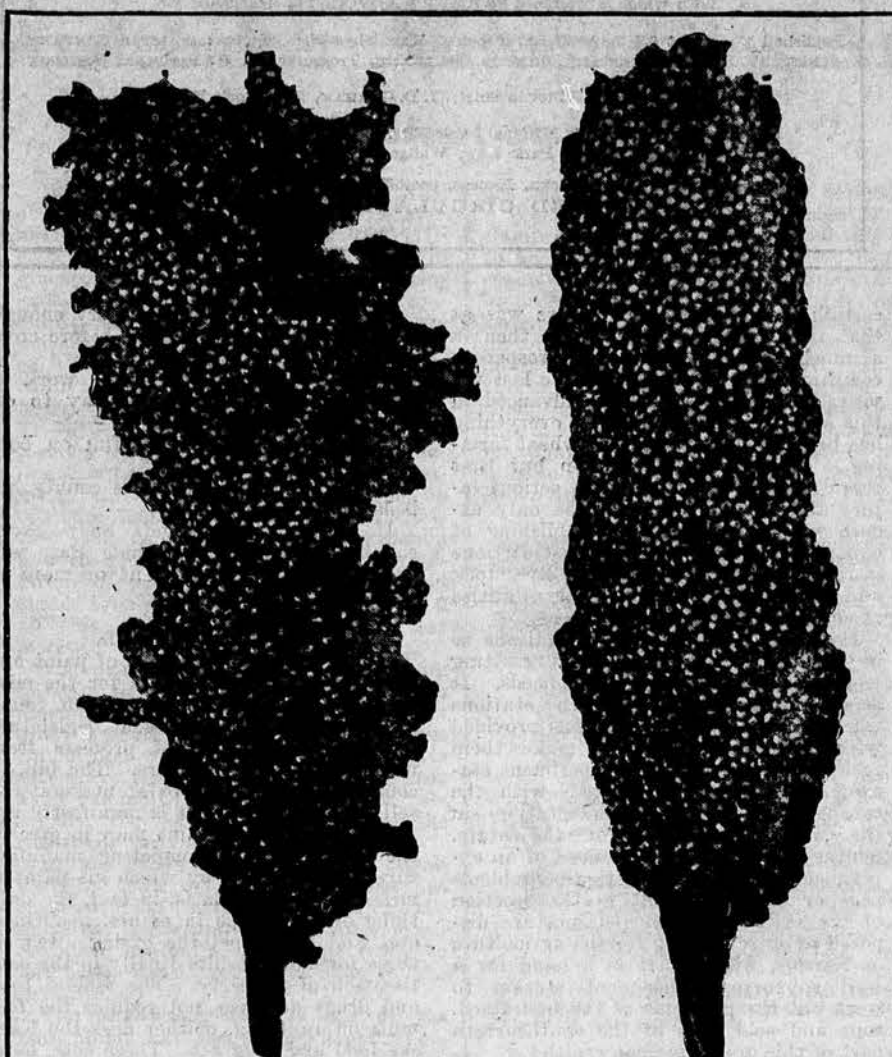
In Greer, Carter and Johnson counties there are districts where Kafir was grown in 1912 for the first time and the seed having been purchased and shipped in, choice yielding strains were procured. In these districts there were many yields of 65 to 85 bushels an acre. Neither soil nor climatic conditions were more favorable than in the districts where 11 to 25 bushels an acre were grown.

The farmers in central Kansas or central Oklahoma who raised less than 40 bushels of Kafir an acre in 1912 with good conditions and methods of tillage should get new seed or use great care in selecting heads for seed from their own crop.

John Fields, George Bishop and H. M. Cottrell have for years been studying carefully this problem of what ails Kafir. Each has been a close observer of the growing and feeding of Kafir since its introduction in the early nineties. The business of each has required the traveling of thousands of miles annually in Kafir growing districts and the inspection of hundreds of Kafir fields. In this special investigation the grain heads and stalks were examined in hundreds of fields of Kafir. Particular attention was given to the character of head and stalk in fields producing high yields and in fields producing low and medium yields. Their findings in regard to the type of head and stalk to select are given below:

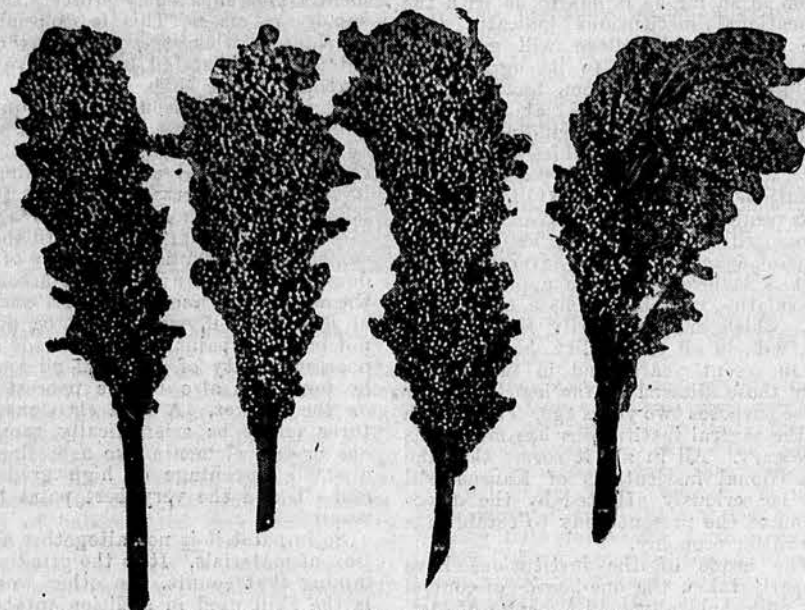
"A head of Kafir for seed should be three or four times as long as broad. It should be only slightly pointed. A head with a sharp pointed tip or a loose fan shape tip should not be used for seed. The base of the head must show that it was pushed clear out of the boot. The base of the head should be well set with seed stems and should be free from mold or discoloration. The head should be compact, having the short seed stems beginning at the bottom that hold the seed not farther than two inches apart. The short seed stems should be well set with grain their entire length, both inside and outside, with a seed in every place made for a grain.

"The center or main stem on which the head is formed should extend well toward the tip, usually to within three

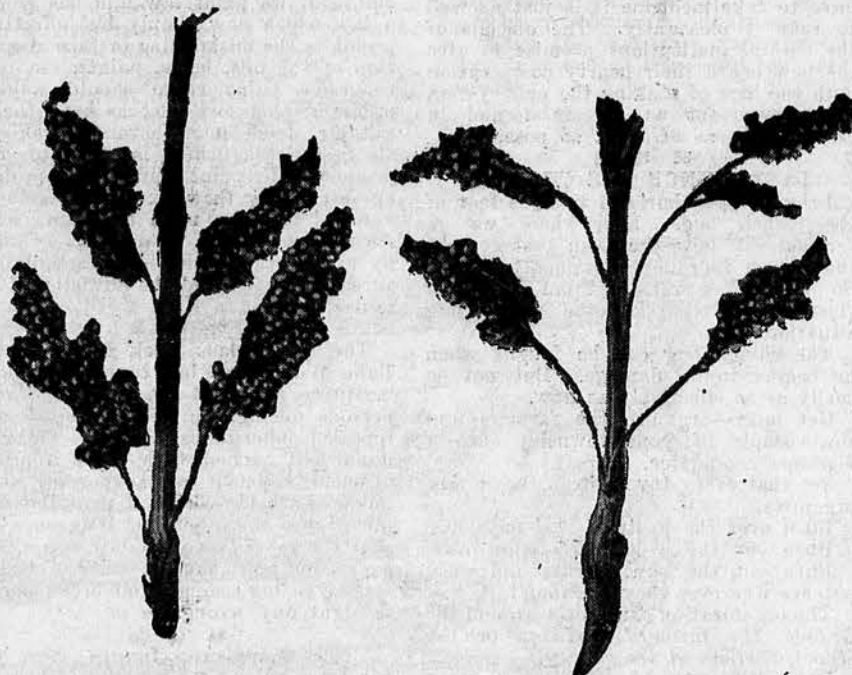


TYPICAL HEAD FROM FIELD
YIELDING 15 BUSHELS AN ACRE

TYPICAL HEAD FROM FIELD
YIELDING 80 BUSHELS AN ACRE



TYPE QUITE TOO COMMON—TYPICAL OF LOW YIELDS



HEADS WITH SHORT SEED
STEMS YIELD MOST GRAIN

LONG SEED STEMS ARE CERTAIN
INDICATIONS OF LOW YIELDS

inches or less of the extreme end of the tip. This is the most important indication of a high yielding strain and one that heretofore has been seldom mentioned or thought of. This is the first point to look for in selecting a head for seed, and if the center stem lacks length the head should be rejected, no matter how good the other characters.

"In 'run out' strains of Kafir, where the yield is low it is often found that the center stem extends but half way or a little more between the base of the head and the tip. With this degenerate type, a thick bunch of seed stems start out from the end of the main stem, making a loose or fluffy head. Often when the main or center stem is very short the tip of the head will spread out like a loose plume on a lady's hat. Reject for seed every head where the center main stem is short.

"Strains of Kafir that produce compact, heavy heads give high yields under average conditions and withstand drought much better than strains with loose, open heads. The grain should be large. It should be white with a small pink speck near the point and should be firmly held in a black hull.

KAFIR PLANT THAT PRODUCES LARGE YIELD.

"A field of well-bred Kafir, on good soil, shows the plants of even size almost as though cut to measure. The stalks are stocky, the joints short and the heads long and uniform in appearance. This type withstands the winds and waits long for harvest without the stalks blowing down. Seed should be selected from fields that show this good breeding and from plants uniform in height and type. It is too late to do this this spring and it is only possible to use the utmost care in selecting heads. Next fall, when it comes time to select seed, as much attention should be given to the stalks as to the heads.

"In many fields of Kafir in Kansas and Oklahoma the mature plants are very uneven in size and height. Usually there are many very tall stalks with sprangly heads and the rest of the field is uneven in height and size of stalks and in the foliage on different plants. Kafir in the broom corn districts is the poorest and most uneven, but the conditions are generally bad wherever sorghum and Kafir are planted close together. The mongrel plants that make up so many fields of Kafir return low yields and usually the more mixed the character of the plants the lower the yield. Every grower of Kafir should study along these lines his own Kafir and that of his neighbors with a view of improving this standard and thereby increasing the yield."

KEEP THE SEED IN THE HEAD.

The seed should be kept in the head until the day it is planted, and the heads should be kept dry from the time they are ripe and in a place where dry air will circulate around them.

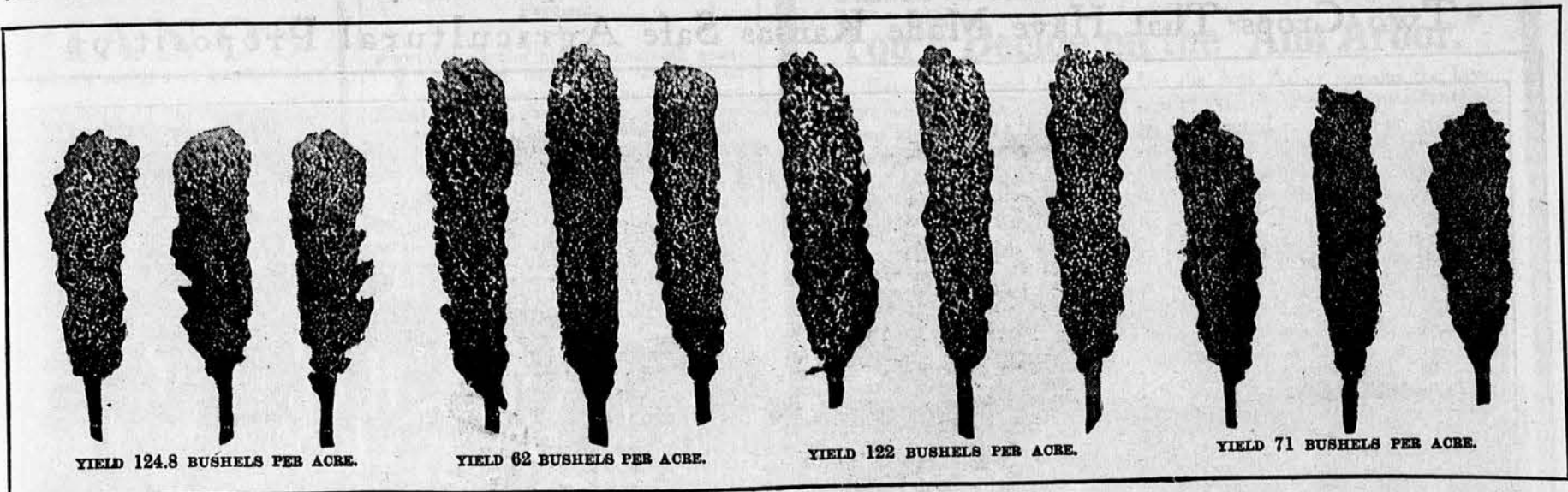
Kafir growers lost heavily last year from heated seed. All through the Kafir growing districts of Kansas and Oklahoma are farmers who had to plant Kafir three times in the spring of 1912 and then many did not get over three-fourths of a stand. In some cases this loss was due to unfavorable conditions of soil and weather, but the chief cause was seed that had heated after it was threshed.

A farmer in southern Kansas bought choice Kafir seed and tested it just before planting. It germinated well. He planted part of a large field when he saw a rain coming. He took the seed not planted to the house and put it in a dry room before any rain fell. In about a week the rain was over and the ground dry enough to plant. The remainder of the field was planted, using the same machine and the rest of the seed. The seed planted before the rain gave a full stand. The seed planted after the rain did not give one-fourth of a stand. Although kept in a sack in a dry room, it absorbed enough moisture to make it heat sufficiently to kill its germinating powers.

During the germinating period Kafir and milo absorb moisture and begin to heat very easily. Sometimes the heating is sufficient to weaken the vitality only, but not to kill the seed. When it is the case, the growth is weak and uneven. Often, very often, the heating is sufficient to kill the life in the seed and no stand at all is secured.

Seed that shows strong germination may be kept in a dry place and yet heat sufficiently in 24 to 48 hours to make it unfit for planting. For this reason it is safest to keep the seed in the head until the day it is to be planted, each

SELECTING KAFIR FOR SEED



morning threshing out enough for the day's planting.

There are two easy ways of threshing Kafir seed. Place a head on a board laid across a wash tub and scratch off about half the seed with a curry comb. The seeds that shell off most easily are the ripest, strongest seed to plant. Throw what is left of the head to the stock. Rub a head on a wash board; most of the good seed will come off quickly.

Seed threshed by either of these methods can be easily cleaned and graded by a fanning mill or can be thrown up in a wind that will blow away the chaff.

In buying Kafir for seed, insist on getting it in the head. First, so that you will then know that it will not heat before planting time, and second, because it is the only way you can be sure to get seed from the prolific type of head. If you buy threshed Kafir seed you do not know whether it came from a large head or a small one, a compact head or a loose sprangly one. The difference may make a difference of 50 bushels an acre in your yield.

Last summer a farmer had a field of Kafir that was very uneven because he had used mongrel seed. At least one plant in ten showed the broom corn type strongly. Of course the yield was low. The seed was threshed and run through a grader so that it made a good appearance. It was shipped to Kansas for seed. If you buy Kafir seed threshed you are likely to get some like this.

SELECTING KAFIR FOR SEED.

SOME strains of Kafir yield 15 to 25 bushels an acre under good conditions, other strains under like conditions yield 40 to 80 bushels an acre. The low yielding strains have heads very different from the heads of the high yielding strains. By careful selection of head and stalk the average grower of Kafir in Kansas, Oklahoma and Texas can increase the yield from 25 to 50 bushels an acre.

It is worth while for a farmer who grows Kafir to spend two or three days or a week in selecting the heads that are of the high yielding type for seed. When a grower finds upon examination that a large proportion of the heads are of the wrong kind, he had better not attempt to plant his own seed, but when most of the heads are heavy, fairly compact and of good shape, it will pay to make a rigid selection from them.

A study of the pictures in this issue of KANSAS FARMER will show that the heads from high yielding fields of Kafir are three or four times as long as broad, about the same width at all places from butt to tip, and that the heads are compact with no indication of being loose or fluffy. Only such heads as have this appearance should be considered for seed.

Select several hundred heads that are heavy and have the right shape. When you pick up a head, if it is light weight throw it out, no matter how good it looks.

Make a long narrow table by taking two boards a foot wide and 12 to 16 feet long and place them across two barrels or boxes. Place a hundred or more good heads on the board nearest you, having all the butts towards you.

Carefully spread the short seed stems apart along the whole length of the center of the head so that you can examine the main or center stem from base to tip. If the center stem is short or is long jointed, throw it into the feed pile. The main or center stem should extend to within three inches or less of the tip, and the more joints it has the better.

This is the most important indication of a high yielding strain.

Place the heads with good center stems on the second board and keep up the examination until you find a sufficient number of heads to cover the second board. Then go over each of these selected heads again, examining separately each detail of the head. Examine the center or main stem. It should be short jointed. The short stems that bear the seed grow in a circle around the main stem at each point where two joints meet. If the center or main stem is short jointed these circles of seed-bearing stems will be numerous and the head will be a large yielder of grain. When the center or main stem of the head is long jointed there will be fewer circles of short seed-bearing stems and the head will not be a good yielder of grain.

The seed-bearing stems should be short, close together around the main stem, and the seed on them should begin close to the main stem and the inside of these short side stems should be thickly set with seed.

When the seed stems are long there is usually no seed on their lower half. This makes a light yield. Often a well-shaped, good sized, good appearing head of Kafir will be light in weight. Examine such a head and you will find that the outside of each seed stem is

well filled with seed, while the inside bears very few seeds—another loss in yield.

Examine the butt. In the heaviest yielding plants the head is entirely out of the boot or upper leaf. In poorer yielding plants, the boot or upper leaf closes around more or less of the lower part of the head, and from one to three inches of the butt bears no seed. This is a small loss on one head, but the aggregate loss on all the heads of an acre is considerable. Where the boot encloses the lower part of the head, that part is likely to mold or be discolored.

The seed stems at the butt grow in a circle around the main stem. The seed stems in this circle should be close together, so that there will be many of them. They should grow out from the main stem, instead of growing nearly upright, making a slightly rounded square butt as broad as the head is at its middle.

A head that yields well in grain has the tip made up of short seed stems. When the seed stems that form the tip are long, the upper part of the head is loose and open. If the seed stems that form the tip are very long the head is sprangly, often resembling broom corn. This seriously reduces the yield.

Very few farmers are acquainted with the inside of a Kafir head. A close ac-

quaintance will reveal many surprises, it will be found very interesting, and will show the imperative need of thorough selections.

KANSAS FARMER EDITOR'S NOTE.

THE foregoing articles by H. M. Cottrell, agricultural commissioner of Rock Island lines, and formerly agriculturist of Kansas Agricultural College, contain much valuable information to Kafir growers. In fact this is the first published results of an exhaustive examination into the several types of Kafir heads showing relation of type to yield. Our conversation with Mr. Cottrell, in which we made extended inquiry into the facts surrounding his investigation, proves to us the correctness of the conclusions at which he has arrived.

Our first talk with Mr. Cottrell on this subject was early last fall when KANSAS FARMER readers began making inquiry into the cause of gradually decreasing Kafir yields. We had on our own account made investigation which justified us in the reply we made to these inquiring subscribers, namely, that our Kafir seed was "running out," by which we meant that it was becoming so badly mixed with various other sorghums that fields were not yielding as they would if the Kafir seed were pure. Continued investigation, both by personal examination of fields together with correspondence with Kafir growers, not only supports our contention as first stated, but is verified by the matter printed herewith and resulting from Cottrell's investigation over a large area and in many fields.

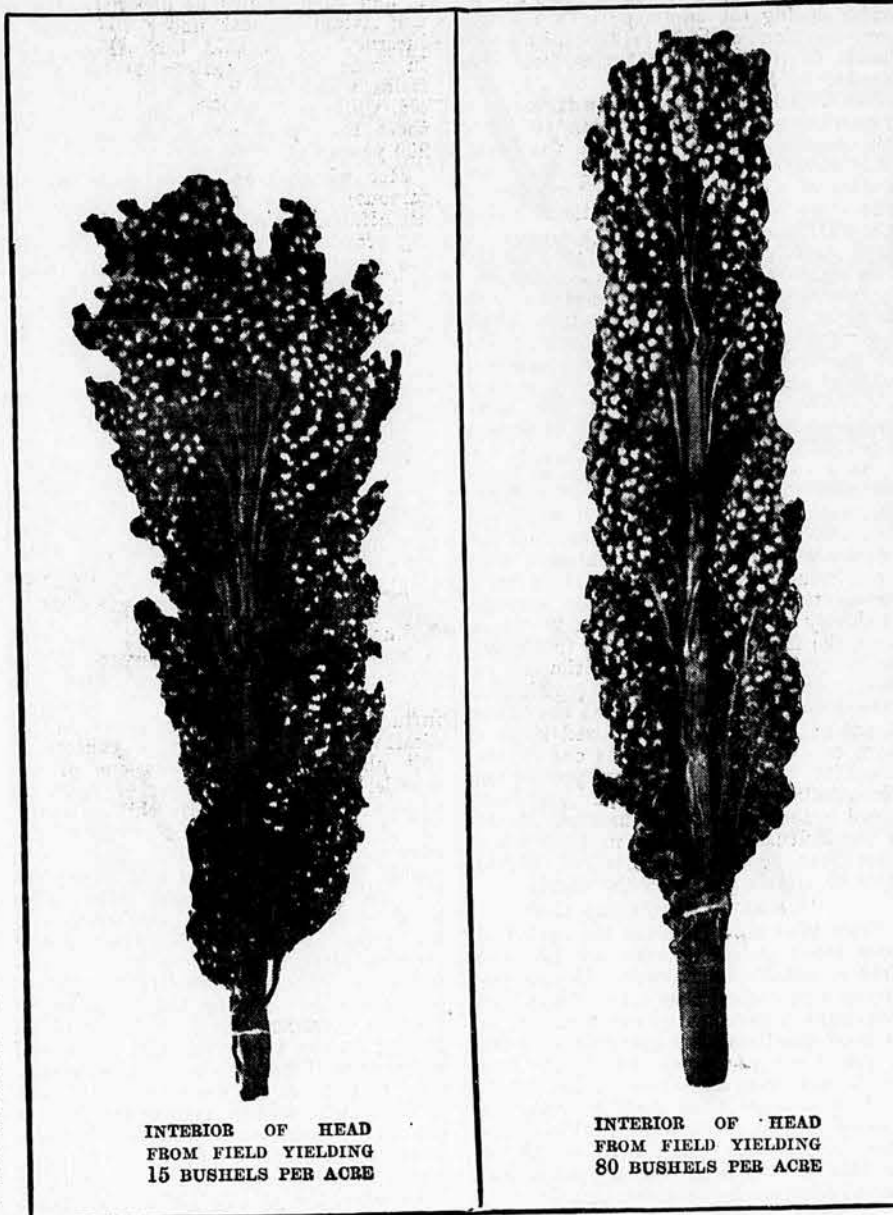
There is no question but that Kafir growers must look carefully to the seed they plant. They should obtain seed in the head from heavy yielding fields. The right type of head and the relation of that type to yield, together with all other information incident to the proper selection of pure Kafir, is contained on these two pages. It will pay you to read and re-read these articles, and to save them for future reference. It will pay you to examine the heads of Kafir produced in your own fields and compare these heads with the engravings found on these pages and so indelibly stamp in your mind not only the right type of Kafir head, but also why it is the right type.

This is a complete study of Kafir. We have known for years the same essential principles in the case of selecting corn for seed. In so far as the uniformity in size and shape of ear and kernel is related to yield, the same identical principles are involved in the case of Kafir.

There is no getting away from the fact that the acreage of Kafir must increase if we are to keep more live stock and feed that stock better. Kafir gives a much greater assurance of feed than any other forage and grain crop available for at least the western two-thirds of Kansas, the western three-fourths of Oklahoma, and eastern Colorado. The effects of deterioration are apparent on every farm where seed from the bin has been planted. If we are to have the yields of Kafir we can and must have, then the precepts of these articles must be followed.

Butler is the large Kafir producing county of Kansas. Its Kafir carnival has made it famous. The Kafir used in the carnival decorations invariably are of the heavy yielding type of head, and our personal inquiry and investigation in Kafir methods in that county lead us to the conclusion that the county's success in growing Kafir lies wholly in the use of seed from heads of the right type.

—T. A. BORMAN.



ABOUT ALFALFA AND KAFIR

Two Crops That Have Made Kansas Safe Agricultural Proposition



KAFIR IS THE CORN OF THE DRYER SECTIONS, AND THE SOONER THIS FACT IS RECOGNIZED AND ADOPTED, THE SOONER WILL COME CROP CERTAINTY.

By I. D. GRAHAM

THERE have been four epochs in the agricultural history of Kansas. The first of these was of course the settlement of the state, but as this was a political measure first and an agricultural event second, it is of importance in this connection simply because there could have been no agricultural history without a beginning. The pioneers who came to this state brought with them their methods and the crops with which they were familiar in the states and countries whence they came, so that the earlier history of Kansas was a record of heroic attempts to subdue the wild soil to agricultural purposes and to grow the crops which were not acclimated as yet. The beginnings were made in the culture of corn and spring wheat as practically all of the crops that were seeded. There were oceans of wild grass for pasture and winter feed and it was only gradually that other crops became generally adopted.

The next epoch in the history of the state came with the discovery that Kansas was pre-eminently adapted to the production of winter wheat. The grasshopper pest had wrought havoc in the early 70's and this, perhaps, more than anything else, except the chinch bugs, had taught the people the advantage of winter wheat which would make its crop and be out of the way of the ravages of dry winds and certain insects. The adoption of winter wheat as a general crop over the state brought prosperity and gave the state a reputation which induced settlers to make their homes here. In many counties wheat raising is still the principal agricultural industry, though it is noticeable in most cases that the yield per acre grows materially less as the years go by. Wheat raising is the crudest form of agriculture and while it produces a ready revenue in a new country it takes a heavy toll from the soil and abandoned methods must follow or else abandoned farms will follow. Kansas still remains a great wheat state, but this crop is very generally raised in rotation with other crops and not as a single crop covering whole congressional districts.

ALFALFA.

The next important event, and perhaps the most important one in the history of Kansas, was the coming of the alfalfa plant. The adoption of this wonderful crop by the farmers generally was a matter of growth. It was grown for years in the state before it was recognized as a crop in the statistics published by the State Board of Agriculture. It is impossible to tell who was the first grower of alfalfa in Kansas, but the first record that has been found is that of a farmer who returned from California with a few pounds of seed and planted one acre in Franklin county near Pomona in 1871. As this effort was a failure it need count nothing in the history more than as an incident.

The Kansas State Agricultural College began experimenting with alfalfa in the early 70's, and KANSAS FARMER contained an article written by Professor E. M. Shelton of that institution in

1874 in which he told something of the results that had been obtained in the small experimental plants, about one rod square, on the College farm.

In the first number of the Industrialist which has been the official organ of the State Agricultural College since 1875, the leading editorial was written by Professor Sheldon under the title of "Tame Grasses" but was devoted partly to alfalfa.

The first serious attempt to grow alfalfa as a crop on a Kansas farm that we can learn of was made by J. R. Blackshire on his farm five miles above Elmdale in Chase county on the Cottonwood river. Exact information as to the dates of the seeding of this tract of ground to alfalfa is not obtainable now. The writer helped to harvest the crop off of about 40 acres in a bend of the river during the summer of 1878 and a conversation with Mr. Blackshire's son lends to the belief that this field was seeded in 1877.

This Chase county field was really a remarkable one. In addition to being the pioneer field of alfalfa in the state, it is credited with having been the foundation of a very respectable fortune and the same field is still in alfalfa. During the earlier days a knowledge of how to seed and handle this crop was sorely lacking. It was seeded rather sparsely on the ground so that the stems grew large and woody and it was harvested at such a time that there was a great loss of the leaves and the stacks resembled piles of hazelbrush much more than they did stacks of hay. In spite of this, however, the live stock liked it and it proved a profitable crop.

As a result of the teachings and experiments of the Agricultural College, the articles on alfalfa which appeared frequently in KANSAS FARMER and the success attained by these farmers who were induced to give it a trial in various sections of the state, the acreage gradually increased during the 20 years from the first known planting in Franklin county. It was not until the end of this twenty years of alfalfa growing in various parts of the state that the State Board of Agriculture recognized it as a farm crop and included it as one of the items in the total of crop production which builded Kansas wealth. The first record in the statistics of the State Board of Agriculture was made in 1891 when there was reported a total of 34,384 acres of alfalfa grown in the state.

A RAPID INCREASE.

From 1891 may be dated the period of most rapid growth in the acreage and yield of alfalfa in Kansas. During the 20 years preceding that time it had had little chance to become known except as its good qualities were recognized in the neighborhood of farms where it was grown, but from that time it has developed in acreage until now Kansas has planted in this most wonderful and ancient crop nearly one-fourth of all of the alfalfa that is grown in Continental United States. In 1892 the area devoted

to this crop had almost doubled and the number of acres reported was 62,583. Five years from the first record the acreage was 139,878 and ten years from the first record, or in 1900, the acreage was 276,008. Five years later it had grown to 602,560 acres, and yet another five years when it totaled 926,492, while in the year 1912 the total number of acres of Kansas planted to alfalfa was 1,000,785. It is no small thing for Kansas to be able to boast of raising one-fourth of the total alfalfa crop of the United States when it is realized that alfalfa is the most valuable crop known to man. It is also the most ancient crop known, and while it was supposed to have reached Kansas from the south and west, where it had been introduced by the Spanish conquerors of the country, it had been known at an early day on the Atlantic Coast under the name of lucerne. It is said that there exists in some of the eastern states alfalfa fields which are known to be 75 years old, while in California and New Mexico there are those which are said to be 200 years old.

Her wheat crops have made Kansas famous; her corn has made her rich; but her alfalfa has made her as safe a farming proposition as exists anywhere with the possible exception of small irrigation districts. In making known the merits of this wonderful crop and thus causing its more general adoption by the farmers and its increase in area until the state produces one-fourth of the total crop of the Union, KANSAS FARMER claims no little credit. Reporting the small plot experiment made at the Agricultural College in their beginnings and developing knowledge about the culture of the plant, its influence on the soil and its value as a feed, there have been rare numbers of KANSAS FARMER which did not contain some article or reference to alfalfa.

FIRST ALFALFA CLUB.

Since this editor's first connection with KANSAS FARMER the area devoted to this plant in Kansas has multiplied five times and in addition to the powerful influence exerted by this paper in the dissemination of knowledge concerning this plant, the writer was one of the founders and for a number of years an officer in the first alfalfa club on earth. The reports in KANSAS FARMER of the proceedings of this club have been copied far and wide and this paper has been called upon to furnish information to government officials and enterprising farmers in other states who are now growing alfalfa in sections of the country where this was formerly thought to be impossible. During the 50 years of KANSAS FARMER activity it has done no greater service to the farmers of its own state, as well as to those of other states, than to tell the truth about alfalfa, and as this truth became known, the fear of the hot winds and droughty seasons which so terrorized the early settlers, was brushed away. If the weather is seasonable, the alfalfa yields from three

to five crops per year. If it is unseasonable this wonderful plant yields a bountiful supply of high quality seed which may be even more valuable than its hay would have been.

SWEET CLOVER HELPS.

In studying that alfalfa plant and learning of its habits of growth, its feed value and the best methods for its conservation, certain facts have been developed which have added a new crop to western agriculture. Alfalfa is a clover belonging to the great botanic family of Legumes. In common with other members of this family it develops nodules on its roots in which are found a bacterium with power to secrete nitrogen from the air. This plant then not only grows without extracting the nitrogen from the soil, but it actually increases the nitrogen content of the soil. But alfalfa will not grow everywhere, nor will it stand unlimited dry weather. The similarity which was found to exist in the appearance of the plant with that of sweet clover has led to investigations resulting in a knowledge that sweet clover has practically all of the good qualities possessed by alfalfa with an added power of resistance to adverse weather conditions which makes it possible to grow it as a preparatory crop on land which could not be seeded to alfalfa without its aid. Sweet clover with its long penetrating roots, breaks up the subsoil and adds the necessary bacteria to the soil so that this alfalfa may be grown on land which has been cropped to sweet clover. Sweet clover is now recognized as a crop where it had before been regarded as a persistent road-side weed. Its only objectionable feature is found in the bitter principal contained in its leaves and stems which compels stock to learn to like it. This bitter principal, however, is the element which prevents bloat in the cattle and sheep that pasture upon it, and it is to the credit of alfalfa that this new crop has been added to Kansas agriculture.

KAFIR THE LAST NEW CROP.

The next and last important epoch in the agricultural history of Kansas is the general adoption of Kafir as a grain crop. While it is the boast of Kansas farmers that they have extended the corn belt westward until they have practically reached the western boundary, the fact remains that corn is not a certain crop over a considerable portion of this area. Kansas is one-third larger than either of the great corn states, Missouri, Iowa and Illinois, and her records for corn production in the eastern two-thirds of this state, which corresponds in size to the states named, would be nearly equal to that recorded for those states, but when the western third of the state is included in the corn crop statistics, it sometimes happens that the average yield for the whole state appears very low.

Yet these farmers in middle and western Kansas must have a grain crop. While it is true that farm animals may be raised to marketable condition by the use of alfalfa alone, that plant does not

(Continued on page eight)

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TWO BIG THINGS

Co-Operation Among Farmers and Rural Credit Are Important to Kansas Farmers.

TWO of the biggest business questions of interest to farmers and agriculture are 'Co-operation' and Rural Credit. The Kansas Agricultural College believes in both," said J. H. Miller, of the Extension Division of Kansas Agricultural College to KANSAS FARMER recently. "It believes in some form of rural credit that will enable the tenant farmer to become a land owner; that will enable a steady young son of a worthy farmer to take his small patrimony and with the aid of state or nation purchase and in a reasonable time pay for a farm. Then the Agricultural College believes in Co-operation among farmers. It recognizes the practical impossibility of a half million farmers uniting in one organization for better prices of their products.

For more than forty years organizations have been "born" and have "died" that have had the lofty purpose of solving the problem of higher prices for what the farmer has to sell and lower prices for what he has to buy. That they have not succeeded better, may be due partly, at least, to the natural independence of our farmers, the willingness to sink self into the interest of the whole. Every organization is expected to serve its own members first. No organization that has had for its purpose the handling of produce has ever tried to serve the public, except as said service helped the organization.

Therefore it would seem that the state should in some way aid in this big movement. What part of the state government what institution can better serve the whole public in this matter than the Agricultural College? We have for many years aided in the distribution of good seed, grains, corn, wheat, oats, etc. Over a year ago we aided probably fifty apple growers to find a market for their fruit. In October, 1912, the college aided in the sale of probably two hundred cars of apples. Last winter we handled a good many cars of feed for western Kansas.

"At Hutchinson in November, several farmers proposed the perfecting of an organization that would unite all existing organization and handle farm produce and become a sort of marketing bureau. Several meetings were held at Hutchinson and it was decided there to call a mass meeting of people interested, the meeting to be held in Manhattan, on January 1, 1913, in connection with the State Farmers' Institute. Two special meetings were held in Manhattan and then a whole afternoon from two to six o'clock, January 1, was devoted to this, with F. E. Wentz of Burlington presiding. The last speaker of the afternoon, A. C. Bailey, of Edwards County, urged that the Agricultural College be asked to develop a complete Co-operative Bureau and that no organization be made and then introduced a series of resolutions and these were immediately adopted.

"The Agricultural College by the authority of President H. J. Waters, a thorough believer in co-operation among farmers, will undertake therefore to establish a Co-operative Bureau for the purpose of meeting the need so keenly felt by all farmers. This will take time. We cannot afford to make many mistakes. It must be remembered that this is the last half year of our biennial period and that naturally all appropriations are almost exhausted or at least provided for. The college has no man to set apart for this exclusive work even if it had a man peculiarly qualified to do it.

"Then too what work has been done has been carried on very informally with no records kept at all and depending almost entirely upon the people and newspapers to inform both producer and consumer of the existence of the Bureau. Now the college has two important things to do—to find a man big enough to head the Bureau, not an easy task, and then to develop a permanent system of organization, that will be efficient here and also to work out a system of co-operation with all kinds of organizations. We do not expect to have the Bureau in very good working order before September, 1913, although we will do the best we can to meet the demands and needs of the farmers who may write us this spring. We can do practically nothing until after March 1. We shall be pleased to hear from all who may have any suggestions to make. This work is to be principally for the farmers and now we hope a hundred farmers will write suggestions."

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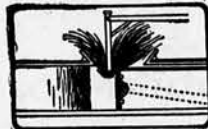
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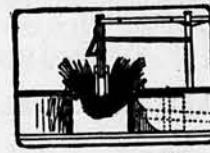
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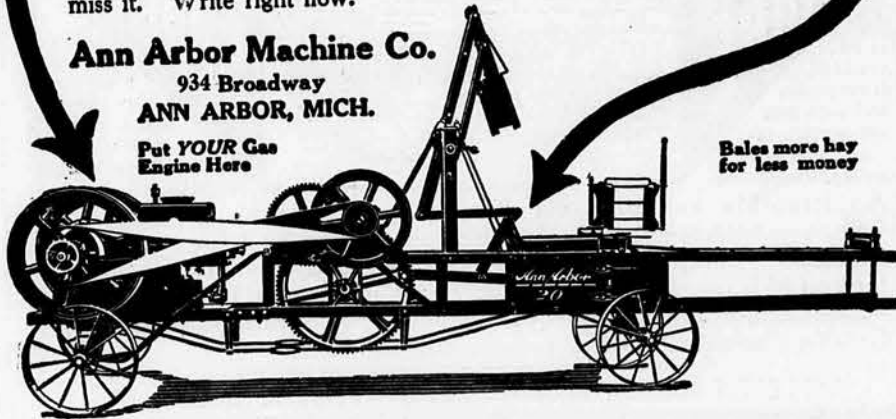
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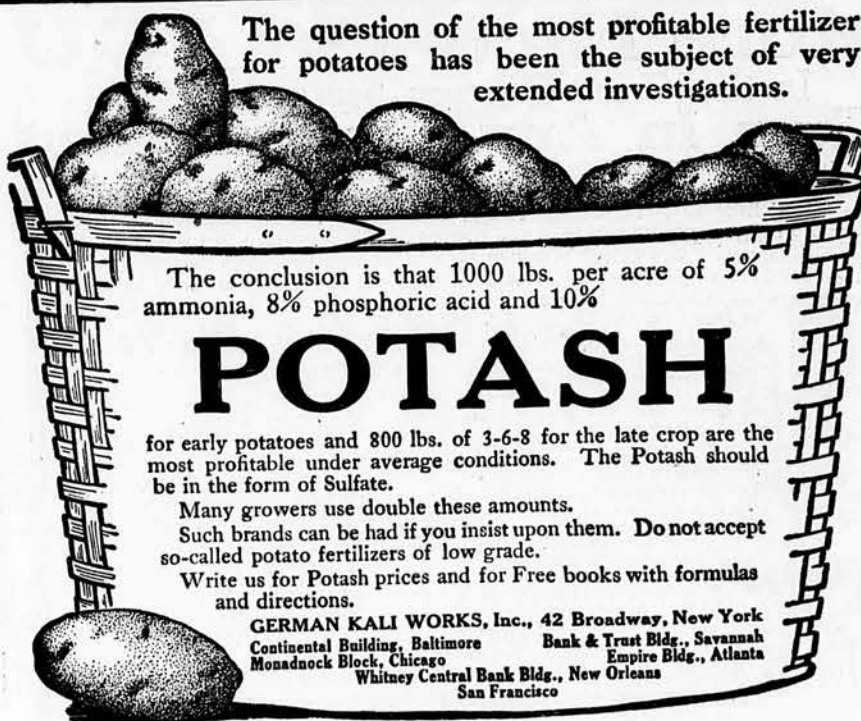
for early potatoes and 800 lbs. of 3-6-8 for the late crop are the most profitable under average conditions. The Potash should be in the form of Sulfate.

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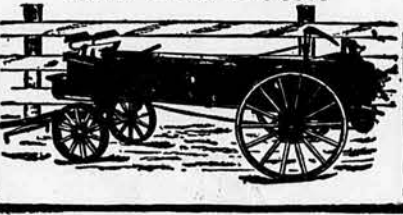


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About Alfalfa and Kafir

(Continued From Page Six)

furnish a balanced feed because it is too rich in protein. Necessity resulted in experimentations with many different kinds of crops to supply the grain needed in our western agriculture. The sorghums generally afforded the most promising field from which to select and, in the earlier years, large quantities of saccharine sorghums were grown for both hay and grain. This was unsatisfactory for feeding purposes and its place was gradually taken by Kafir, which is a non-saccharine sorghum, or by milo maize which is a near relative. All these sorghums were grown for feeding purposes in different sections of the state, and in varying amounts for a number of years, but it was not until 1893 that the figures representing the acreage found their way into the records of the State Board of Agriculture. In that year there were reported 46,911 acres. This shows that so far as official recognition is concerned, Kafir is two years younger than alfalfa as a farm crop in Kansas.

KAFIR STATISTICS.

Kafir has a feeding value that is practically equal to that of Indian corn. It has much greater drought resisting qualities and is a sure crop in sections where corn is very uncertain. It is noticeable that in 1894, the second year of the official record, the acreage of Kafir in Kansas had more than doubled and was given as 95,237 acres. From this period the acreage grew by leaps and bounds until 1902 when a maximum of 748,176 acres was reported. This was during the season following the dry period of 1901 and from this maximum the acreage then decreased steadily until 1907 when it amounted to 508,485 acres. Since that time it has gradually grown until now the total acreage reported for this crop in Kansas in 1912 was 1,432,114 acres. From these statements it will be seen that a large increase in acreage of Kafir invariably follows a dry year when there has been a more or less heavy loss in the corn field. The largest increase occurred following the season of 1911 when about 500,000 more acres were planted to this crop than ever before.

The records concerning this crop differ materially from those of alfalfa for two reasons—in the first place, it is an annual crop where alfalfa is perennial, and it can be changed in one season. In the second place, alfalfa has shown a steady and regular growth in acreage from the beginning while Kafir acreage always shows a large increase following a dry year in which there has been a reduced yield of corn.

The value of Kafir corn as a grain has been recognized in southern Kansas by the holding of a great Kafir Carnival at

Eldorado in which the decorations were composed entirely of this plant and to which thousands of people from Kansas and visitors from other states came. Readers of KANSAS FARMER have been familiar for many years with the value of Kafir as a farm crop, by this means its drought resisting qualities, the certainty and volume of its yield, and the means of cultivation and storage have been disseminated until now this crop has a fixed place in the agriculture of Kansas and other states. Not only is it grown for hay, on occasion, but it is a better crop than corn in its locality as a grain crop. Its feeding value is only slightly less than that of corn, but the increased yield and certainty of the crop makes it more profitable than corn.

KANSAS A LIVE STOCK STATE.

Nature's hand pointed out the proper place for Kansas in the world's economy when this state was peopled with the myriad herds of buffalo. These wild cattle were followed by the domesticated animals in almost equal numbers in the earlier ranch and range days. Success with these semi-wild cattle was possible because of the luxuriant growth of grasses, the abundance and purity of the water supply and the mildness of the climate. But as the farm supplanted the ranch and the wild grass was turned under to give place to cultivated crops, a change in methods became necessary. In order to raise cattle and other live stock, feed must be produced, and permanency of the business depends upon the certainty with which the feed supply is produced and saved. Corn is the most universal live-stock feed within the corn belt, but it is not always a certain crop in certain sections of Kansas and in certain years. Wild grass has given place to cultivated fields and the narrower area available to each farmer makes a larger production per acre necessary than was possible under wilder conditions. The necessities growing out of this change in the environment of the Kansas farmer have served to spur on the development of alfalfa and Kafir until now this state has better facilities for the breeding and feeding of live-stock than any other section of the known world.

With from three to five tons per acre of alfalfa each year and with a certainty of 35 to 40 bushels per acre of Kafir the Kansas farmer grows the cheapest balanced ration that can be produced with so small a number of crops, and these two are available either in the field, in the stack, the hay mow or the silo. Whether he engage in dairy farming or meat production he has within his grasp these two crops to form a balanced ration with the succulence of June preserved the year round.

Retiring on the Farm

By W. C. PALMER, North Dakota

RETIRING from one's work is one of the most serious steps that a man can take. Especially is this true of the farmer. Usually it means moving to town. Life in town is entirely different from life on the farm. One accustomed to farm life can hardly adapt himself or herself to town life at that period of life. This results in being out of touch with one's environment, in the absence of activities to keep one occupied. From being an important factor in the farm community one often becomes a negligible one in towns or even worse—a knocker.

WHY MOVE TO TOWN?

The reasons given for moving to town are many—educating the children, modern conveniences in home, less work, etc., etc. The schools in towns are as a rule better than those in the country, but the reason they are better is that the town people tax themselves so as to have the money necessary to maintain a good school. By consolidating the schools and putting up the school tax as high in the country as in the city just as good schools can be provided in the country as in the town.

The modern conveniences can be had in the country now as well as in the town and usually at a less cost.

Less work in town—less work of some kinds—but after all no one can be happy and healthy unless the mind is occupied. The one who is used to active, muscular work for a good many years will not remain healthy without some exercise.

A good way for a farmer to retire is

to select a lot of 5 to 15 acres on the old farm and build on it the modern house, a small barn, also with modern conveniences, and a poultry house. Here one can live the life that one is used to in the way that has become second nature to one. Here there will be something to hold one's attention and to supply some work to take the place of the accustomed activity.

The school problem can be solved by consolidating the schools. In this way as good schools can be had in the rural district as in town. In fact it will be a better school as it will be in closer touch and harmony with the farm and farm life.

In most cases it is a sad mistake for the farmer to retire to town, and especially so when the things that he moves to town for can be had on the farm, and with all the advantages of the country in the bargain.

Colt Feeding at K. S. A. C.

Prof. W. A. Cochel of the Animal Husbandry department of K. S. A. C., who made such a record in his horse feeding experiments at the Pennsylvania station, is now conducting a colt feeding experiment at the Kansas Agricultural College. Twenty draft bred colts are divided into lots of five pure-breds and five grades; five fillies and five stallions, and a ration consisting of oats, alfalfa hay and corn fodder will be compared with another ration from which the oats are omitted but having the same feeding value.

Western Kansas Irrigation

Subscriber, J. E. Fitzgerald, Lucerne Farm, Jamestown, Kan., writes: "I read your article in Kansas Farmer regarding a bill now before the House providing for an appropriation of \$50,000 for irrigation experimental work. This is a worthy bill and your discussion of it was consistent. I hope the bill will pass. I have had correspondence with the Kansas Agricultural College in regard to establishing an irrigation experimental station in western Kansas where we are sure of an abundance of water at from 90 to 160 feet. What we would like to know is whether or not this water can be raised and distributed to the growing crops profitably. To irrigate from shallow wells, proves nothing to the farmer living on the divide where the wells must necessarily be deeper.

"We have millions of acres of rich divide land with water in sufficient quantity underlying to irrigate the surface. We want to know if it can be pumped 90 to 160 feet profitably. I own some fine land at Weskan, Wallace county. I would be glad to donate five acres, or even more, to the college or state for irrigation experimental work. The land is rich and level and lies right for irrigation. Thousands of acres surrounding this point can be irrigated without any expense for grading.

"After we know certainly that the water can be raised profitably, we will

then need some one to teach us how to handle the water, when to put it on and how much to use. There are thousands of farmers in western Kansas who have the means to put in their own irrigation plants if they knew more about whether or not irrigation would pay and how to proceed with the work."

Kansas Farmer has printed much regarding deep well irrigation in western Kansas. The last article appeared in issue of January 18, in which was given the experience of C. M. Niquette, McCue, Kan., with pictures illustrating the article. In this article it was stated that his wells were 127 feet deep and his pumping plant was described and a statement given as to the kind and cost of machinery used. This was an engine pumping plant, the fuel used being coal oil.

F. H. Mahler of Scott county is pumping with windmills. He has ten mills. These are kept going constantly. They pump into a reservoir. These mills have irrigated 160 acres of land with results that have been everything that could be desired. We do not know just how deep these wells are, but they are so-called deep wells.

The probable reason that the Kansas Agricultural College did not avail itself of Mr. Fitzgerald's offer to contribute land for irrigation experiments is that the institution had no money for experimentation along such lines.

TEST THE SEED CORN

Otherwise You Do Not Know
If It Is Fit To Plant

LAST year's corn will give the Kansas farmer normally good seed—it will be as good as the average seed he plants. That is poorer seed than he ought to plant. The average stand is not satisfactory. One bad ear used as seed will reduce the crop eight to ten bushels. So every ear planted should be a strong, live ear. The necessity for testing to obtain the best seed is important this spring, as it has ever been. Here is what E. S. Shafer, instructor in crops at Kansas Agricultural College, says about the 1913 corn and the need for testing:

"We have not as yet made extensive examination of this year's seed corn. We have, however, made a number of tests which grade high. I think we have not tested any corn below 90 per cent good in vitality. I have very little fear of this year's seed corn if the farmers will carefully examine it.

"The work required for making a general test of seed, however, is so small that I think no farmer can afford not to make at least a preliminary test. If this proves the seed corn to be all right, no other investigation is necessary. If we find by later testing that the seed corn is not as good as we feel it is at this time, I will be glad to give you further information."



Corn, Beans and Peas

Our subscriber, L. S. Parsons, Kan., asks these questions: "What variety of corn is best adapted to Labette county? Will a two-horse disk harrow do as good work as a four-horse machine? Are soy beans better producers of hay and seed than New Era cow peas? What variety of soy beans is best for this county and how should they be planted for hay?"

The varieties of corn to be recommended for your section are Hildreth, Kansas Sunflower, Commercial White, Boone County White, Reed's Yellow Dent, Golden Beauty and such varieties as have been grown successfully in your locality.

A two-horse disk should do as good work as a four-horse disk, but in practice the small disk does not do as good work as the larger machines. To obtain good work from a disk, the machine itself should be heavy or weighted and enough horsepower attached to make it cut into the ground.

We do not think that soy beans will in Labette county produce either as much hay or seed as will cow peas. In the drier sections soy beans will produce more seed and as much hay as cow peas. The soy bean is an erect growing plant with branching, hairy stems, and its principal use is that of producing beans. It withstands the drouth as well as kafir or sorghum. The

grain is a richer protein feed than linseed meal and the plant enriches the soil on which it is grown. The soy bean matures in 75 to 130 days, depending on the variety. At the Kansas station Early Yellow is considered the best suited for the semi-arid conditions of Kansas.

The several varieties of cow peas will produce, under favorable conditions, such as we believe are general in Labette county, more hay and more seed than soy beans. For hay, the erect varieties are preferable to those of recumbent habit. The Whippoorwill and New Era are of such variety and are well known in Kansas. The yield of peas as a rule, though not invariably, parallels the yield of vines. The varieties of cow peas named mature in 60 to 80 days from time of planting.

The usual rate of seeding both cow peas and soy beans is two to three pecks in rows, four to five pecks when sown with a grain drill, and six to eight pecks when sown broadcast, these figures being based on varieties of medium sized seed; in the case of varieties producing small seed or large seed, the amount used should be varied accordingly.

Cow testing has saved many a good cow from the butcher and many a poor one from the dairy herd.

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ON CORN GROWING

Big Yield Follow Breaking Up of Old Pastures

By H. O. TUDOR, Holton, Kan.

THE corn around Holton was better last year than any place else in the state. We had some larger yields than we have ever had since the settlement of this country.

I believe that some of our farmers now have their land in better shape to grow large corn crops than at any time since it has been placed under cultivation. We have on Bill Brook Farm, 300 or 400 acres of old bluegrass and alfalfa sod that will grow better corn than has ever before been grown on the farm. We had about 250 acres of corn on the farm this year that averaged about 60 bushels to the acre. Most of this was bottom land. Some of it was on heavy gumbo and part was timber bottom. We have one field of 130 acres that is tilled. The parallel rows of tilling are about 100 feet apart. The tilling should be closer than 100 feet in this heavy land.

The major portion of our corn was checked on the surface. The land had been double-disked and then plowed and put in good condition with the harrow. After planting, we ran the weeder over it and cultivated the corn three times.

The portion we listed was double-disked, then listed, and the corn planted with drill following the lister. We began working the corn as soon as it was large enough and worked it twice with disk and cultivated twice.

One small field of alfalfa sod made about 100 bushels per acre. This field was surface planted with drill corn planter, dropping 16 inches apart. Over this field we went once with the hoe and thoroughly cleaned it from weeds. It was plowed three times.

Part of our surface planting was fall plowed. I believe that spring plowing this year gave just as good corn as fall plowing.

Our corn was all pure-bred Boone County White. I believe that the best yields can be obtained by planting some

good variety of pure-bred corn adapted to the soil and climate in which it is to be grown.

John Hinnen, Jr., just east of Holton, had a remarkable field of 65 acres of corn, making about 85 bushels of corn to the acre for the entire field. This field was all bottom. Part of the field was heavy land, the wetter parts having been tilled. This field was double-disked and listed out very early in the spring. The field lay in this condition until the latter part of April, when it was again listed and planted, but the stand not being satisfactory it was again listed and planted with drill planter about May 10.

From this planting Mr. Hinnen obtained almost a perfect stand which came up quickly and grew remarkably fast. I never saw corn in better physical condition. After planting, the corn was gone over with sub-surface packer and harrowed and cultivated three times.

Mr. Erdley, who lives on the adjoining farm to Mr. Hinnen, had a field of old bluegrass sod of about 25 acres. This was plowed late in the spring, then disked and listed quite late. I do not approve of this way of handling a stiff sod, but this method gave good results in this instance, notwithstanding that the cutworms almost totally ruined six or seven acres. The stand was very poor. However, the 25 acres produced 2,250 bushels of weighed corn. Two acres of the best of the field yielded 227 bushels. These two acres were measured and the corn weighed. This field was upland and had been manured and fed upon for years.

I might add that these two farms have sold in the past two years for \$200 and \$235 per acre, respectively.

We had other large yields of corn around Holton last year. Among others, Thomas Nugent's, on a large acreage, made 65 bushels per acre.

PRACTICAL, READABLE AND SENSIBLE

"YOUR article in issue of February 1 giving your experience in breeding up a herd of dairy cows is such a practical, readable and common sense article that I would be pleased to have ten or twelve copies of that issue for distribution among the farmers of this community.

"I have been convinced for some time that the best paying thing on the average farm is a good herd of dairy cows, and I keep at it incessantly, trying to convince our farmers of that fact."—W. W. PATTERSON, President The Bank of Bronson, Bronson, Kan.

Varieties of Corn For Kansas

DOZENS of inquiries have been received the past few weeks as to the varieties of corn best adapted to the different sections of Kansas. These inquiries are answered in general by the accompanying map and the subjoined matter. The map and the varieties listed for each section are made up from data compiled from information obtained from the various sections and through which has been reported the varieties commonly grown in the sections indicated. Besides these varieties there are a great many local varieties grown. The map, together with the following matter, has been supplied KANSAS FARMER by E. G. Schafer, instructor in crops at the Kansas State Agricultural College.

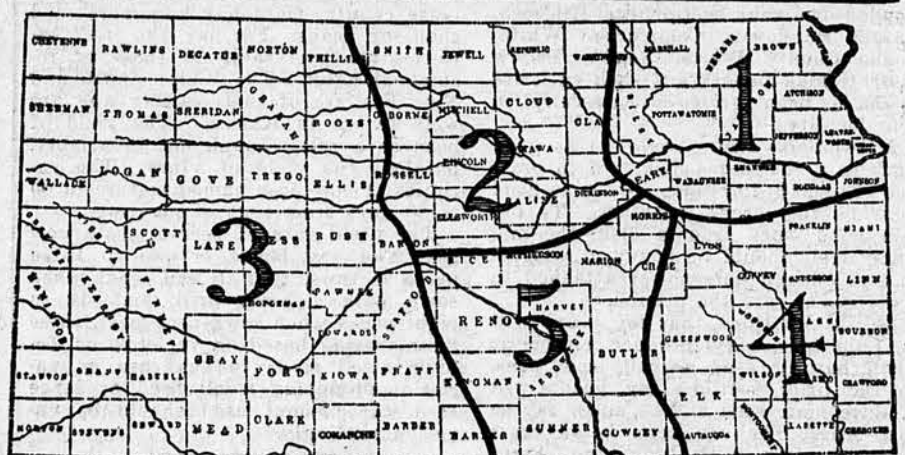
Section 1—Reid's Yellow Dent, Boone County White, Hiawatha Yellow Dent, Kansas Sunflower, local varieties.

Section 2—Kansas Sunflower, Iowa Silver Mine, Boone County White, Reid's Yellow Dent, Hogue's Yellow Dent, Nebraska White Prize, local varieties.

Section 3—Pride of Saline, Iowa Silver Mine, Albright, Calico, local varieties.

Section 4—Hildreth, Kansas Sunflower, Commercial White, Boone County White, Reid's Yellow Dent, Golden Beauty, local varieties.

Section 5—Kansas Sunflower, Hildreth, Boone County White, Iowa Silver Mine, Reid's Yellow Dent, McAuley, local varieties.



KANSAS MAP SHOWING DIVISIONS TO WHICH SEVERAL VARIETIES OF CORN ARE ADAPTED

NEED OF CROP ROTATION

Succession of Crops Adapted to Western and Eastern Kansas

By W. M. JARDINE, K. S. A. C.

IN OUR advice to farmers we always recommend that they adopt a cropping system that will admit of the conservation of as much moisture in the soil as possible, the liberating of plant food, and the maintaining of a permanent system of agriculture. To do this the farmers of Kansas must grow crops in rotation with each other that feed differently in the soil—that is, to different depths, and that take up different elements of plant food in different quantities, and that effect the soil—physically and otherwise—differently. We always advise the growing of a legume such as alfalfa, cowpeas or soy beans—or any adapted legume—occasionally, upon the land, in rotation with such crops as corn and wheat.

GREEN MANURING FOLLOWING WHEAT.

We strongly advocate the growing of cowpeas after wheat, that same year, and plowing them under for green manure. Our Kansas soils need humus. Possibly the quickest and cheapest way of adding humus to the soil is by plowing under a green manuring crop such as cowpeas. Humus is the substance in the soil that enables it to hold water. Kansas farmers have exhausted a large percentage of the native humus or organic matter of the soil through continuous cropping to one crop—wheat or corn. Some of the counties of the state plant as much as seventy per cent. of their tillable area to corn every year. These same counties have less than thirteen or fourteen per cent. of their land down to legumes, when they should have at least thirty.

LONG USED SOILS LOW IN HUMUS.

The primary reason for the low yields, and the constantly increasing low yields

grown, the fourth crop, or cowpeas, being plowed under for green manuring.

If the farmer does not wish to grow oats it will be necessary for him to harvest his corn as early as possible, thoroughly double disk and work his land and plant it to wheat instead of oats. Otherwise the rotation would be the same. If he wished to grow still more corn than this rotation would permit, the farmer might grow corn for two years in succession, then oats, then wheat. Or he might grow wheat two years in succession, but he should always plow under a crop of cow peas every three or four years.

USE ALFALFA IN ROTATION.

Where alfalfa grows well it should be grown in rotation with other crops. It would not be profitable, however, for the farmer to plow up his alfalfa oftener than every five or six years. Kafir or corn should follow the alfalfa for the first year or two, then it would be all right to plant wheat or oats. In plowing up alfalfa it is always well and highly beneficial to plow under five or six inches of green alfalfa before frost takes it in the fall. It is also a good practice to plow the alfalfa shallow in the fall and then list in the sorghum or corn the following spring.

Barnyard manure should be scattered over the alfalfa field in the fall or winter whenever practicable. Alfalfa responds readily to the application of barnyard manure.

WESTERN KANSAS CROP ROTATION.

In western Kansas we strongly advocate the following rotation: First year, sorghums, probably Blackhull White, or milo for grain, or one of the sweet sorghums for forage; second year, summer

Simple Fundamentals in Crop Production

A ONE-CROP system without fertilizing will deplete the soil both of fertility and humus, and put it in bad physical condition. In order to prevent these conditions a system of crop rotation is necessary.

The system that is to be used in any one district must be determined by local conditions of soil, moisture and location.

Where alfalfa can be grown it should be used in the rotation scheme. To maintain fertility every farm should maintain a certain amount of live stock, so that all roughage produced may be fed and the fertility returned to the land through barnyard manure.

Where live stock is not kept on the farm green manure crops, such as cow peas or rye, soon become an absolute necessity if the necessary humus and fertility are to be maintained.

In western Kansas a rotation system including summer fallow is necessary in order to conserve moisture and keep the soil in good physical condition.—E. C. JOHNSON, Superintendent Farmers' Institutes for Kansas.

of corn and wheat in this state, are due to the exhaustion of humus in the soil—which lack of humus leaves the soil in poor physical condition to retain water and to give up plant food. It also leaves it in the best possible condition to erode and wash away.

We also advocate in the rotation the application of as much barnyard manure as can be obtained, and to the end of securing more manure than we can now secure, we strongly advocate the handling of more live stock on every Kansas farm. To handle more live stock means that the farmers must put more of their land down to legumes, grasses or hay crops of some kind. The rotation must include the crops best adapted to the given area. It must include the crops that will make the most money for the farmer. The rotation should also make possible the proper distribution and economic utilization of labor, machinery, etc.

ROTATION FOR CORN AND WHEAT BELT.

In the corn and wheat belt of Kansas we recommend the following rotation, because it is the rotation that is doing best for us in this district: Corn, oats—either on fall plowing or on the corn stubble thoroughly disked in early spring—then wheat. The ground for the wheat to be plowed deeply early in July and worked into a thoroughly firm seed bed at once and kept free from weeds until planting time. After the wheat is removed—which will be the last of June—we plant cowpeas in rows or drills, preferably rows, because it costs less for seed—one-third as much for seed, in fact. Cowpeas, if planted in rows, are cultivated twice then plowed under, deeply, before frost. This leaves the ground in splendid condition to plant corn the following spring. This is a three-year rotation with four crops

fallow. Sorghums leave the ground in a depleted condition so far as moisture and available plant food are concerned. The fallow brings the soil back to normal condition, ready for wheat. Wheat is planted after the fallow.

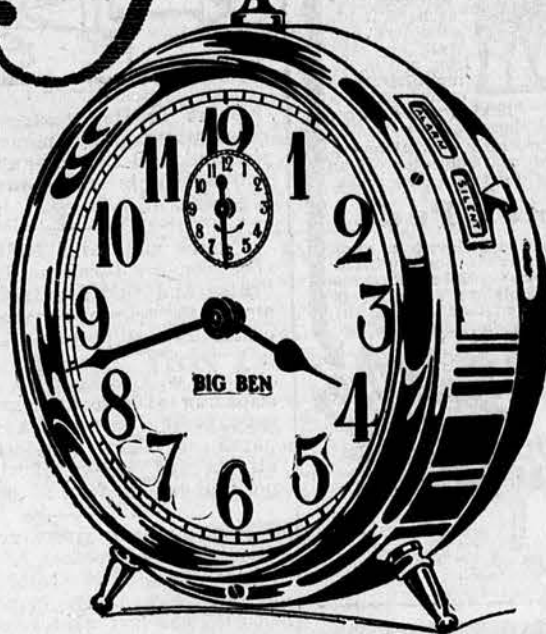
Thus we have two crops in three years from the same ground in western Kansas—one of sorghum and one of wheat—two money crops for that district. If it is properly carried out this rotation will practically insure two good crops in three years. Whenever practicable, with this rotation we advocate the planting of fall rye after removing the sorghums, or at any time after the last cultivation is given. If the fall happens to be damp the rye will grow and make splendid pasturage. It undoubtedly will make good spring pasturage and can be plowed under any time in May, or even to the middle of June. The land should then lie cultivated—not in a dusty condition, for in this condition the soil would blow—until wheat planting time in the fall.

It would be impossible to enumerate here all the cropping combinations that could be used to advantage in different parts of this state. The farmer should understand why a proper succession of crops is necessary and then go about to perfect a system of cropping for his particular farm.

Kansas Represented.

In KANSAS FARMER report of the meeting of the Standard Poland China Record Association it was stated that Kansas was not represented among the state vice-presidents. This was according to the information sent us, but Secretary George F. Woodworth informs us that the omission was due to a printer's error, and that John B. Potter of Harper, Kan., is vice-president for this state.

Big Ben



Big Ben—Two Good Alarms in One

Take your choice in Big Ben. He rings either way you wish—five straight minutes or every other half minute for all of ten minutes unless you switch him off. He's two alarms in one.

If you're a light sleeper, turn on the half minute taps before you go to bed. If you sleep heavily, set the five minute call. You can slumber then without the get-up worry on your mind.

When morning comes, and it's announced by Big Ben's jolly bell, you can't help getting up at once, for Big Ben never fails to get you wide awake.

Big Ben is really three good clocks in one, two excellent alarms and a fine time-keeper to keep in any room and tell time all day by.

If you have got to get up bright and early, if you have to get your help in the field on time, ask for Big Ben at your jeweler's and try him for a week. You'll never want to be without him afterwards.

Big Ben stands seven inches tall. He is triple nickel-plated and wears an inner vest of steel that insures him for life. His big, bold figures and hands are easy to read in the dim morning light. His large, comfortable keys almost wind themselves. He rings five minutes steadily or ten intermittently. If he is oiled every other year, there is no telling how long he will last.

He's sold by 18,000 watchmakers. His price is \$2.50 anywhere in the States, \$3 anywhere in Canada. If you can't find him at your jeweler's, a money order mailed to Westclox, La Salle, Illinois, will send him anywhere you say express prepaid.

ONE MAN OUTFIT For 160 Acre Farms.

Do you farm 160 to 320 acres? Then look at this dandy little 25 brake horse power

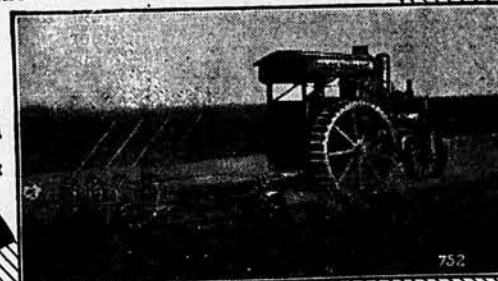
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IF NOT, DO NOT CARRY YOUR OWN RISK. NO MAN IS RICH ENOUGH TO DO THAT. LET US SEND YOU INFORMATION AND TESTIMONIALS.

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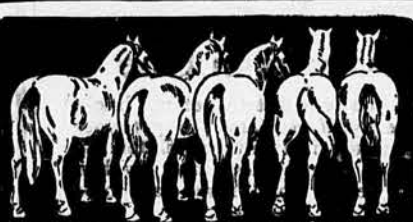
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No horse will pull near as hard if his shoulders and neck are sore from a poor fitting collar. He'd rather take a "licking" than throw his weight against those sores and galls. Give him ideal working conditions—a good fitting collar and Ventiplex Collar Pads. See what a difference they make.

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Keep the neck and shoulders in good healthy condition. Prevent sores, galls or rubbing. The porous Ventiplex fabric absorbs all sweat and moisture. The air freely circulates through the fabric keeping the neck and shoulders dry and clean. When the pads get soiled, you can wash them as you would clothes. They hold their shape.

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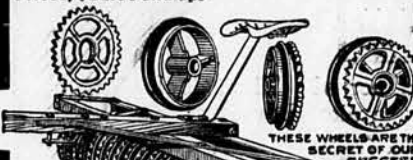
KEEP THEM WORKING

Kendall's Spavin Cure is the old reliable, safe remedy for all cases of spavin, splint, curb, ringbone, bony growth and lameness from other causes. It keeps the horses working—not loafing. What it has done for others it will do for you. Keep a bottle of

Kendall's Spavin Cure handy so you can use it quickly when the need arises. A one dollar bottle may save a horse for you. It's worth while to be ready. Ask your druggist the next time you are in town. Tear this advertisement out to remind you. Sold by druggists everywhere, \$1.00 a bottle; 6 for \$5.00. Keep it in the house for family use, as well as in the stable. Get a copy of "A Treatise on the Horse" at your druggist or write to
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A perfect seed bed is as important as to sow or plant. The Western Pulverizer, Packer and Mulcher makes a perfect seed bed and leaves a loose mulch on top to retain the moisture in one operation. It will double profits on crops. Made in 8 sizes. Land 3 sections. Sold direct to you on one year's trial. Prices, \$22.00 and up.



We want every farmer and land owner to have our illustrated circular. It describes the machine, its principle and advantages over all others. It gives testimonials from many farmers proving what it will do on wheat, alfalfa and other crops. It contains valuable information on how to prepare the soil for better results. Send for this circular today, whether you want to buy or not.

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Ground feed will make your hogs, sheep, all animals bring bigger profits. Bowser Mills do the job quick, because they are light running, with perfect conical shape grinders, different from all others. Sold with or without elevators. Crush ear corn (with or without shucks.) Grind Kaffir in the head and all kinds of small grains. Handy to operate. 10 sizes—2 to 25 H.P. Also sweep grinders.

FREE Send for folder on values of feeds and manures.
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That's what hundreds of farmers' sons now earn by selling
THE ECLIPSE PUMP EQUALIZER

Many make good money during spare time only, showing it to neighbors. It makes the hardest working pump run easy—saves jerking and does the lifting. Write us today. Equalizer Family Co., 2434 Burling St., Chicago

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LIVE STOCK



Short feeding young steers is the quick way to make money. Increase in size and in flesh comes at the same time and weight is what counts in the selling pens.

France maintains 15 times as many sheep on her farms as does the United States and this fact may be included among the reasons for the general thrift of the French people.

Kafir will make pork but it is constipating if fed alone. It is always safe, in any part of Kansas, to have a patch of Kafir and, when fed with alfalfa and plenty of slops, it makes pork about as fast as corn.

Feeding beef steers for the market this winter when corn is relatively low in price and market stock worth \$7 or better, is a much better proposition than it was last winter when sky-scraping prices prevailed for both cattle and corn.

W. H. Coulitis, of Shawnee county, Kansas, says that he aims to keep about 30 head of breeding cows on his farm and from these he is easily able to ship out a car load of fat cattle each year. Home raised cattle make the farmer much more independent of market conditions and Mr. Coulitis finds that his cattle have made a profit every year.

Thus far the present winter has been almost ideal for stock feeding and good results are reported all along the line. The critical time for the stock man, however, is yet to come. The cold, rainy spells of spring are severe on both feeding and breeding animals and must be protected against.

I know a farmer who always has good hired men and plenty of them when many of his neighbors have difficulty in securing help that will "stick." There are two reasons. The principal one is the man himself. He knows how to treat a man, get good work out of him and retain his respect. The other reason is that he keeps good work horses and nothing appeals so strongly to the farm hand as a good team. Now, when you think of it, both these reasons are the same. If it wasn't for the man there wouldn't be good teams.

There is another side to this question. The farmer who has good teams cannot afford to have men about him who will abuse his teams or who will fail to take good care of them. And it is also true that the farmer with good teams is a close observer of men as well as horses. The powers of observation which enable a man to buy or breed good horses will enable him to judge other things and men also.

Many of the big pastures down in Chase county have already been leased for the season and the prevailing prices seem to be from \$7 to \$8 per head. There are some open pastures not yet taken. It was in this locality that the plan of weighing cattle into the pastures in the spring and weighing them out in the fall and charging 4½ cents per pound for increased weight originated.

A reader inquires if there has been formed an association for recording the old fashioned spotted Poland China hogs. There is no such association but the spotted Polands are recorded in one of the regular Poland China record associations. If they cannot be recorded with the Standard at Maryville, Mo., the American at Stock Yards station, Chicago, or the National at Winchester, Ind., they are either not Poland Chinas or they are not pure bred. The color of the hair does not matter if the breeding is right.

When breeding to a grade sire of any breed, one never knows what will be the result. Even the best pure breeds do not always produce perfect young of their kind and a scrub never can. Nothing will tear down a good herd of purebred animals so quickly as an inferior sire and the man who pat-

ronizes a grade because the service fee is small is making it absolutely positive that he will have inferior colts. It's a cinch.

Look at the pedigree of the stallion you patronize and if it was not issued by one of the recognized Registry Associations, don't use that horse.

Many farmers will contend that a grade horse, that is a good looker, is just as good for a sire as a purebred and the expense is much lighter. Some of the handsomest, soundest and most perfect horses I have ever seen were grades and, while they are splendid animals for use they are unsuitable to breed to. Every grade has a yellow streak in him and this is just as likely to show as are his good qualities.

Mount St. Marys Academy at Leavenworth, Kans., is laying plans to dispose of all of the grade dairy cows now owned by that institution and establish a herd of pure bred Guernseys. Great difficulty has been experienced thus far, in finding the animals as breeders in this section of the corn belt are pretty well sold out of young stuff and will not part with the mature cows which are wanted by this school.

The great cattle country included in the states of Montana and the Dakotas has become so depleted of its herds as to cause alarm and the bankers association have taken the matter up. The president of the Northwestern Bankers Association, who called the meeting, declares that the farmers' interest in live stock must be aroused and, in case the farmers require help in financing the proposition, the bankers should assist them.

Dehorning Cows.

"I wish you would give me some advice in KANSAS FARMER about the latest time in the spring when I can dehorn my milk cows. Will they go dry after dehorning? They were fresh last fall and some are heavy with calf. I have good grass to put them on in the spring but would like to cut their horns off as late as I can on account of the cold weather."—J. W. KEYSER, St. George, Kan.

Do not dehorn any cows until after calving. The pain of the operation is very slight but the flow of milk may show a decrease for a few days. The cattle may be dehorned on grass pasture and at any time before fly time. Do not let the cows have access to a straw stack after dehorning as they will get chaff in the wounds. It is a good plan to cover the wounds with pine tar and absorbent cotton to stop the bleeding though many do not do this. Milk cows should have this done though it might not be necessary with beef cattle. Cut the horns off any time before fly time and after the cows near calving have dropped their calves.

Guernsey Records.

The American Guernsey Cattle Club, the first breed organization to establish an advanced registry system, upon the basis of a year's production of butter fat, has now come forward with a very complete "List of Advanced Register Sires and Great Producing Dams." The list is published in the Guernsey Breeders' Journal for February, and we believe it is the first one attempted by any cattle breeders' organization. To the breeder or purchaser, it will prove of incalculable value by giving not only the number of progeny but the record in pounds of milk and butter fat each cow has produced; every bull that has two or more progeny and each cow that has one, in the advanced register, being listed. The bulls and cows with their progeny are alphabetically arranged in separate lists. A condensed history from birth to date is concisely given. The list is corrected to Nov. 1, 1912, but we understand it is the purpose of the club to keep it up to date, for the benefit of all breeders. Copies can be obtained by writing to the office at Peterboro, N. H., and should be in the hands of every breeder.

Can your horse use his full strength?

Horses with sore shoulders or galls can not do their best work unless they have a comfortable, non-irritating collar. Besides being comfortable, the Lankford Horse Collar will cure galls and sore shoulders.



It is made with the idea of enabling a horse that has sore shoulders to put his full strength into his work without hurting him. It does this because it can be adjusted to fit any shape neck. It is stuffed with pure medicated cotton, which absorbs sweat and impurities thrown off by the horse and effects a speedy cure. Lasts three or more seasons. Acts as collar and pad combined.

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SAVE-THE-HORSE



EVERYONE ASKS HIM, "HOW DID YOU DO IT?"
WILBUR HOLMES of Somers, Conn., Aug. 5, 1912, writes: "The very day I ordered Save-the-Horse our horse got so bad we telephoned for a doctor. He ordered poultices on several days. It finally broke and ran, and the foot looked to be coming off. We were frightened. Did not know what to do about using Save-the-Horse. The crack kept growing wider and we expected to lose him. Finally I said we might as well try it; we had spent the money and had the medicine; it can't surely make him worse. We began with Save-the-Horse and SURE AS THE WORLD the crack began to close and finally healed and he now steps SQUARE on that foot. Every one says, 'How did you do it?' and 'What did you use?' People are surprised. I have been sick or you would have heard from me before, we are so pleased. It surely did save my horse." Save-the-Horse has stood alone and unique among veterinary remedies for over seventeen years.

Every bottle of Save-the-Horse is sold with an iron-clad contract that has \$60,000 paid-up capital back of it, guaranteeing to permanently cure or refund the money; no matter whether it be Bone or Bog Spavin, Tendons Disease or Pulls—nor how aged, serious or complicated the lameness or blemish may be. But write, describing your case, and we will send our BOOK—sample contract, letters from breeders and business men the world over on every kind of case, and advice—all free (to horse owners and managers). Write! AND STOP THE LOSS.

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It is good business to watch the health of your cows. Healthy cows give more and better milk, make richer butter and require less care. If you have a "poor milker" or a cow that is apparently barren, **Kow-Kure** will help her resume all her functions and make her thrive on nature's food.

Kow-Kure is not a stock food; it is a medicine prepared for cows only. It has wonderful medical properties that aid digestion and remove disease germs from the system. Cow owners everywhere use this remedy as a preventive and cure for **Lost Appetite, Milk Fever, Bunches, Red Water, Scouring, and for Abortion, Barrenness and Retained Afterbirth.**

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FREE BOOK ON ALFALFA

How you can grow it on your land
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How to select and prepare the soil
How to get more than average crops

These and hundreds of other questions that you want answered are clearly and distinctly covered in our new book just issued entitled "Alfalfa-Wonder Crop". This remarkable book contains a priceless fund of information about alfalfa growing, secured from many sources; United States Government, State Experiment Stations, the best posted authorities and successful growers. In simple language, easy to understand, it tells just the things that you want to know before you start to raise this greatest of all cash money crops. This book will convince you that you have some land on your farm where you can profitably grow alfalfa. This information was secured at a great cost of time, money and research. It tells how to grow alfalfa, how to get results from first planting, how to select the field and prepare the soil. It tells all about fertilization, plowing, liming, preparing the seed, when to plant and how to plant. Tells what to do during the growing period, how to get bigger than average crops, and how to cut and cure. The contents of this book are worth many dollars to the farmer interested in growing alfalfa. This book is ordinarily sold for 25 cents but we will gladly send it without cost or obligation of any kind if you answer at once. Don't put it off—write for free book today.

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Reduces Feeding Cost \$10 per Head in 90 Days

That's the record made by H. B. Johnson, Chickasha, Okla., who started feeding ensilage to 900 head of one and two-year-olds Oct 4th. Sold entire lot short time ago and made or saved \$10.00 per head on feeding expense alone, a clear gain of \$9.00 on entire lot.

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The quality of your silo partly regulates your profit. That's why it pays to get the best, namely, the Champion with solid steel interlocking door frame, malleable lugs, steel anchors and inside hoops and other modern improvements that make it the best in the world.

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Tonnage Carloads of Manure.

Answering our subscriber, F. J. H. Paola, Kan.: The cars into which manure is loaded at the Kansas City stockyards have a capacity of sixty to eighty thousand pounds. The number of tons of manure placed on such cars will, of course, vary with the kind of manure, whether wet or dry, also with the amount of bedding contained therein. It is our judgment that the purchaser can obtain from the stockyards manure containing little straw, which would of course be lighter than manure in which there was straw. We would think that the manure shipped by the stockyards would in fertilizing value be equal to that of the average farm barnyard manure. Write the General Freight Office of the railroad entering your town for specific answer to the questions regarding which you seek information.

The Central Shorthorn Breeders.

At its recent meeting at Kansas City the Central Shorthorn Breeders Association took on a new lease of life. For some time past this association has seemed to languish and fears were expressed that interest in it might die out altogether but through the efforts of President A. C. Shellabarger and his co-workers it has been revived and its members filled with hope and enthusiasm.

The comparatively large number of breeders in attendance expressed confidence in a better demand for their stock. The confidence of these men, who are in touch with producers and prospective producers of beef cattle, verifies what has been predicted for some time by students of live stock market conditions. Perhaps the most important step taken by the Central was the appointment of a committee to plan for annual spring bull sales in Kansas City. Too few groups of breeders now hold combination sales. Perhaps the condition of the market in the last few years has discouraged breeders from doing this, but the outlook is such as to warrant the assertion that the Central will meet with success in its new venture. Kansas City is an excellent point for holding public sales. The great increase in feed production in its territory and the need of more cattle should strengthen this market's position in the purebred cattle business and give the Central Shorthorn Breeders' Association a long and successful career.

Hogs on Kafir.

An Oklahoma man, Daniel Walker of Dill, is credited with having achieved some excellent results from feeding hogs on Kafir.

He weighed 24 head into the pen and then weighed the Kafir to them. They ate 25 bushels of Kafir in one week and gained 420 pounds or 2 1/2 pounds per hog per day. The Kafir was ground and fed in a self feeder. These hogs were fed a ration consisting of 1/5 cottonseed meal, 2/5 shorts and the other 2/5 Kafir meal.

The most remarkable feature of the experiment is that there was a gain of 16 4/5 pounds for each bushel of Kafir fed but, while this does not mean that Kafir alone would make any such gains, it does mean that it is a good hog feed and a quick fattener.

These hogs were exceptional in that they were "cut backs" from the sale herd and had been "roughed" through till they were nearly a year old and thin. Such gains could not be expected on growing hogs.

The point is that Kafir is practically as good as corn as a hog feed and the sooner our farmers recognize this fact and quit planting corn where it was never intended that corn should grow and plant Kafir instead, just that soon will they begin to get adequate returns for their work.

Station Experience With Silage.

W. W. Smith of the Department of Animal Husbandry, Purdue University, Lafayette, Ind., writes complimenting Kansas Farmer upon the most excellent information it has contained the past few years regarding the value of the silo and silage. He says: "The value of good silage for fattening steers, lambs, for feeding pregnant breeding ewes and cows, is well advanced beyond the experimental stage. It has been fed experimentally at the station here for six years with the most gratifying results. In the last six years about 240 head of steers have received corn silage as a liberal part of their daily fattening ration. It is especially economical and productive of large and fast gains."



Rid Your Hogs of WORMS and You'll Have HEALTHY Hogs

An enormous part of the swine plague known as "cholera" that sweeps over the country killing hogs and causing a loss of millions of dollars every year, is not cholera at all. It is stomach, intestinal or lung worms. The symptoms of hog worms are easy to detect. When you see a hog slinking around with his nose to the ground, halting, coughing, off his feed and losing flesh, don't jump to the conclusion that he's getting "cholera". He has worms, and if you don't act quickly your whole herd will have them, too. Feed all your hogs twice daily according to directions on every can on a ration mixed with

Merry War Powdered Lye

It destroys hog worms quicker than anything else in the world. And even though there should be an epidemic of real hog cholera in your neighborhood, your hogs will be healthy and strong to resist it. **MERRY WAR POWDERED LYE** is the proven preventive of hog cholera.

The Folly of Vaccination

Vaccination may be all right for putting a hog's system in a condition to resist the cholera germ. But no amount of vaccination will cure a single hog of worms, nor will it make him well if he's sick. Vaccination will not keep him on his feed, make him fat, sleek, skin free from scurf, and condition him so that he will be a prime hog at market time. That's what **MERRY WAR POWDERED LYE** does. Feed it to your hogs from weaning time on and you'll have healthy hogs. Cholera won't alarm you and your hogs will weigh in heavy.

Read This Convincing Evidence

C. F. NEWMAN, Lebo, Kan. "Have best results with my hogs and no sickness since I've used Merry War Powdered Lye while our neighbors have lost heavily."

Refuse Substitutes

Don't experiment with ordinary, old-fashioned lye. It might prove dangerous. **MERRY WAR POWDERED LYE** is the specially prepared lye that is safe to feed hogs. Experience has proved its worth. Insist on getting it. There are no substitutes.

E. MYERS LYE COMPANY, Dept. 12 ST. LOUIS, MO.

10c
A Can-
120
Feeds

MERRY WAR POWDERED LYE is for sale at most grocers, druggists and feed dealers. It is convenient to buy in case lots, 4 doz. \$3.00, 10 doz. \$5.00, 20 doz. \$9.00. Order direct from us in case lots (4 doz. cans \$4.00) if dealers won't supply you.

"I am a
Merry War Lye Hog"



FREE
If your
dealer
can't supply
you write us
stating their
names. We
will see that
you are supplied
and also send you,
free, a valuable book-
let "How To Get The
Biggest Profits From
Hog Raising."

Factory Prices for the Asking—on Genuine Witte Engines

FREE
Engine
Book

THE genuine Witte—conceded the best farm engine in America—now offered at actual wholesale prices. Yes, this is the engine that has led the gasoline engine field for 25 years. Dealers have been getting the highest prices for the Witte. Now you can get one at actual factory price—what the dealer paid—and have the finest engine in your county.

Our Gas Well Saves You Many Dollars More

We do more than give you ordinary factory prices. We are the only manufacturers who have our own gas well. Power, testing, forge, foundry and heating fuels cost us nothing. You get the benefits. But you couldn't afford to own any other engine even if the Witte cost twice as much—because an average of 1 cent for every horse-power per hour cuts gasoline bills in half—pays for your engine in no time.

Every part guaranteed 5 years—full rated horse power on minimum gasoline guaranteed too. Built in all sizes from 1 1/2 to 40 h. p., every one tested to 10% over load.

WRITE FOR 60 DAYS FREE TRIAL OFFER

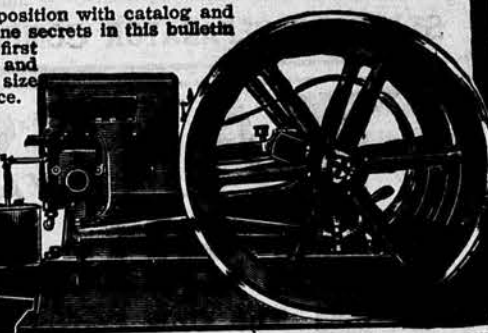
and complete, direct, factory price proposition with catalog and special offer bulletin. We expose engine secrets in this bulletin that will startle you. Remember, it's your first chance at an engine of quality, standing and reputation at a small price. Mention size needed or work to be done. Write at once.

WITTE IRON WORKS CO.

1602 Oakland Ave.

Kansas
City,
Mo.

Every Part
Guaranteed
5 Years



MAKE THE HORSE GLAD AND EAGER FOR WORK

The way to do it is to clip him before you put him at the spring work. Take off his winter coat that holds the wet sweat and dirt. He'll get more good from his feed, look better, rest better and give you better service. The best and most generally used clipper is the

Stewart Ball Bearing Clipping Machine

It turns easy, clips fast and stays sharp. Gears are all file hard and cut from solid steel bar. They are enclosed, PRICE protected and run in oil. Little friction, little wear. Has six feet of new style easy running flexible shaft and the celebrated Stewart single tension clipping head, highest grade. Write for big new catalog showing complete line of Horse Clipping and Sheep Shearing Machines.



Chicago Flexible Shaft Co.
206 Ontario Chicago Ill.
Write for big new catalog showing complete line of Horse Clipping and Sheep Shearing Machines.



CLIP ALL THE WOOL

YOU LOSE \$1200 ON 6 SHEEP BY THE OLD METHOD

You know the size of your flock—figure how much more money you'll get if you use a Stewart No. 9 Ball Bearing Shearing Machine

It's the most perfect hand operated shearing machine ever devised. Has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Price complete, including 4 combs and 4 cutters of the celebrated Stewart quality is only \$11.50. Get one from your dealer, or send \$2.00 and we will ship C. O. D. for balance. Money and transport charges back if not satisfied.

Here's My New DAN PATCH

Sulky Plow!



It is built to stand the roughest kind of usage. Every part has been carefully tested out and there is no possibility of breakage on this outfit. Plow beam is of heavy steel and moldboard and share on this plow are the "Dan Patch" quality in every respect. Operation of the plow is very simple. Levers are easy to operate and within reach of operator at all times. A boy can handle this plow.

\$24.50—30 Days Free Trial on Your Own Farm—Guaranteed to Please or Your Money Back.

Write Me NOW! Wheels substantially constructed; boxes dust-proof—large axles. Plow furnished with best grade steel roller, coupler, adjustable to any position. Coupler has dust-proof bearings. Hitch can be adjusted to any position. The Dan Patch Frameless Sulky Plow is a perfect plow at a low price—furnished with 3-horse eveners, coupler, wrench, and weed hook. Write today for Special Implement Catalog. I guarantee to save you money. M. W. Savage, Pres.

M. W. Savage Factories, Inc., Dept. 63, Minneapolis, Minn.

SAVE MONEY

Buy Direct From Savage!



"STANDARD" Cream Separators

700 lb. Capacity \$56.50 Spot Cash



Think of it! The dairyman with spot cash in his pocket can now go to his dealer and buy as high grade a cream separator as is made for little more than half the usual retail price. The "STANDARD" needs no introduction. It is a *high-quality machine* of well-known manufacture. There are over 30,000 now in actual use. Made for years in our own factory. Guaranteed to last as long and skim as close as any hand machine made.

Mail Order Price But Not a Mail Order Product

500-550 lb. Cap., \$47.50. Reg. Price \$ 75
700-750 lb. Cap., \$56.50. Reg. Price \$ 90
900-950 lb. Cap., \$63.50. Reg. Price \$100

These prices are unheard of for any high grade separator sold through reliable dealers.

Sold Only Through Dealers

We enable our dealer to meet mail order competition by making and selling a large output of machines at *cash with order prices*. Our manufacturing cost is low; we get our money promptly and save the expense of having salesmen. The dealer in turn sells for spot cash at a low margin of profit. For these reasons he can meet mail order prices (capacity and quality considered), and still give his customer dealer service, a chance to see the machine before he buys it, and in addition

A Liberal Free Trial

If the "STANDARD" does not hold its own with *any high priced machine* on the market, you can return it to the dealer and get your money back without a quibble. You won't have to argue. We see to it that he refunds your full purchase price.

Write us for catalogue fully describing the "STANDARD", and for *money-back Guarantee*, and give us the name of your dealer. We'll do the rest—without in the least obligating you to buy, unless you want to

NOTE: For herds of more than ten cows we recommend using the self-powered "AUTOMATIC." It requires no cranking; is driven by a self-contained gasoline engine of remarkable efficiency. Bowl spins at high, even speed, without a trace of vibration. A great labor saver. Used by thousands of up-to-date dairymen in this country. Write for our "AUTOMATIC" catalogue and testimonial letters. They will surprise you. If you are milking but six or eight cows, buy the hand-driven "STANDARD" at mail order price now, then trade it in later for an "AUTOMATIC" when your herd becomes larger. We will make you a liberal allowance through your dealer.

STANDARD SEPARATOR COMPANY, 329 Pereles Building Milwaukee, Wisconsin

JANESVILLE Shaft Drive ENSILAGE Planter

Manufacturers of Farm Implements

The Only Perfect ENSILAGE Planter and Check Rower

Press down foot lever, release wire and this Janesville Corn Planter *drills close for ensilage*. Press down foot lever, attach wire and away she goes, planting 2, 3 or 4 kernels to the hill, as you desire. Change from one to other *instantly*, without getting off seat, without stopping team. It's the greatest ensilage planter *ever built*—and the greatest corn planter. Look here, at these additional advantages. Shaft drive, no chains to break or get out of order. Runs in oil, greased at factory for a whole season with axle grease—no kerosene needed—dust-tight gearing. Flat and edge drop plates free. Change of plates made in a second. Shoe, stub or disk runners on same machine. Automatic wire release. Perfect fertilizer attachment if desired.

Send in Your Name Now

Let us tell you all about the Janesville Corn Planter features—why it drills so close for silage, how easy it is to make changes for checking or drilling, for planting 2, 3 or 4 kernels in spots you know best—why its construction saves wear, saves time, saves work, *saves money*. Address postal to us now for book.

The Janesville Machine Co.
47 Center Street, Janesville, Wis.

GOING TO BUILD A SILO?

Send your name today for our silo book. Your choice of two famous silos. Get most authoritative figures on silage feeding profits and startling facts about

The Hinge Door and Lansing Silos

Hinge-Door Silo has the only practical door construction. Book Free—write quick.

CONTINENTAL CREAMERY COMPANY

Address Department 21

Topeka, Kansas

GENERAL FARM ITEMS

Business Dairy Talk.

George S. Hine, dairy commissioner for Kansas, said in his address at the Valley Falls, Kan., institute that the reason a great many men did not like dairying was because they could not milk cows with a four-horse team. But it is a profitable and desirable business, he contended, and with charts and figures from actual experiments he proceeded to prove it. In the past year the cream stations at Valley Falls had paid over \$22,000 for cream, and the patrons were well satisfied. The average dairy cow produced only 135 pounds of butter a year. It should be more than twice that figure. By selection and breeding for best butter cows they had produced more than three times the average. His advice was to get all there is in the milk and butter business.

Western Dairy Experience.

I have two pure-bred Shorthorn cows, Allie, record No. 104577, and Village Pride, No. 104579. Both of these cows are good milkers. Village Pride is an extra good milker. I have used Shorthorn bulls in my herd for years because I like them better than white faces.

I see my mistake now. I should have used a bull of dairy breeding. I have about 15 cows. These are all I have pasture for. I am a renter. I have been keeping most of my heifer calves.

What we farmers ought to do is to get busy with the scales and tester and know what kind of cows we have.

I have bred seven cows so they will be fresh next September and October. It does not pay to milk cows through the summer. Help is hard to get at that time and cream sells at a lower price than at any other time of the year. I have a cream separator and feed the milk to calves and pigs.

My father, S. S. Wilson, one of the early settlers of Jefferson County, Kansas, first sent KANSAS FARMER to me nine or ten years ago, and I have been glad he introduced me to it.—CHARLES B. WILSON, Red Wing, Kan.

Delay in Testing Association.

The organization of a cow testing association in the Tonganoxie neighborhood of Leavenworth County has not yet been completed. P. H. Ross, farm adviser of that county, and O. E. Reed, professor of dairying at the Kansas Agricultural College, have spent a good deal of time endeavoring to organize this association and it is altogether probable that the organization will be completed. These gentlemen have about 350 cows signed up. The methods of organization and the plans for such organization have numerous times been discussed in KANSAS FARMER.

It is difficult to understand why a community in which as many cows are milked as is the case about Tonganoxie, should be so slow in taking hold of as good a thing as the cow testing association. It is certain that in the Tonganoxie neighborhood, as in every other neighborhood, hundreds of unprofitable cows are milked. The organization of such association is well worth while if for no purpose other than to detect the unprofitable cows in the present herds. The work of the association, however, does not end with this. It will result in the improvement of the herds for the years to come. This for the reason that it will demonstrate to herd owners the difference in the milking value of cows and this difference known, they cannot help but continue the work and so increase dairy production and make the profits from dairying still larger.

Oleo's Real Attitude.

Oleomargarine and butterine manufacturers have expended much time and energy in an attempt to throw dust in the eyes of the agricultural committee in congress, which committee has the consideration of the Lever and Haugen oleomargarine bills, the former being the oleomargarine manufacturers' bill and the latter the dairymen's bill. While the oleo manufacturers have been before the committee insisting that they desire to sell their product for what it really is, their advertising managers have been using the newspapers liberally in exploiting the merits of oleomargarine. In the Chicago Tribune, Tuesday, January 7, 1913, appeared this oleo ad: "Butterine and butter—both from the cow. Rich, thick, nutritious cream is the basis of both butterine and butter. When packed ready for shipment to your dealer they look alike, taste alike, and are alike. The only difference is in the process of churning and the price. Butterine is scientific butter and costs about one-half

as much." Now what do you KANSAS FARMER readers think of that? Do you believe that the oleo manufacturers are honest in their contention? Do you believe that they seek to let the butter of the cow sell on its merits in competition with the concoction they make? The advertisements such as above quoted indicate the real intent and purpose of substitute butter manufacturers. They desire to deceive the consumer by in every way possible imitating the cow's product and even using some of the cow's product to impart to their concoction of cheaper materials the appearance and flavor of butter.

About Testing Cows.

In speaking of the comparative value of long and short tests for dairy cows, M. H. Gardner, superintendent of the Holstein Advanced Registry, says this:

"It takes all kinds and conditions of men to make up this world; and on any given matter the judgment of any man is apt to be affected by his point of view. In one day's correspondence I received three letters from breeders, each looking at the subject of testing from a different angle. The theme of the first letter was that the short time test was worthless and the yearly test the only reliable one; of the second, that as long as there was prompt sale for cows with seven day records, there was no need to test longer; and of the third that both tests were good, but that it needed a combination of the two to really show the productive capacity of a cow. While I agreed fully with the last writer, I could not agree at all with the other two, and told them so.

"It is quite customary for men who have climbed to eminence to kick aside the ladder which has aided them, and the short time test is the ladder that has made the long time test possible. The short time tests has its imperfections, as its advocates fully admit; but its good points much more than counterbalance all that can be said against it. No doubt breeders do test cows in order to make them salable; but the perspective of any man who regards salability as the only reason for testing is, to say the least, very narrow. Any man who loses sight of the fact that testing for advanced registration has for its main object the improvement of the breed will never attain any great success. Such a man is sure to be lacking in the enthusiasm that must be present to differentiate the man who keeps cows from the man whose cows keep him."

Cost of Rearing Calves.

There is no difference between the cost of rearing a heifer calf for dairy breeding and that of rearing a calf of beef breeding, assuming, of course, that the animals are kept on the farm the same length of time. The calf of beef breeding, if kept thrifty and growing, will eat just as much feed as the calf of dairy breeding which has been kept thrifty and growing. It costs money to rear calves, and there is not as much net profit in the growth and sale of common calves at a year of age as is generally believed, if the feed consumed by the calf is charged to it at market prices. This, however, is not a fair way of arriving at the cost of producing a calf under the usual existing farm conditions; principally so because the calf consumes roughage which does not have a cash or market value. The experiment station of Utah has arrived at \$36.97 as the cost of rearing calves until two years of age. The cost the first year was \$19, and the second year \$17.97. The average weight of the calves at birth was 76.4 pounds; at two years old they weighed 1,037 pounds. If these calves were sold on a basis of their value as stockers or feeders there would not be a great deal of profit in them. However, if the calves possessed either superior beef breeding or dairy breeding there would be an increased profit. It is in this respect that blood has a cash value. If the heifer at two years old is from a good dam and sire and is bred to a sire of good blood, of good producing family, that heifer is easily worth 30 to 50 per cent more than she would be if bred and sold for stock cattle purposes. The same condition prevails—except not to such a large extent—if she be of superior beef breeding. One of the two ways to increase our profit from cattle is by rearing better bred animals—animals which possess superior beef or milk-producing qualities and which, on account of those qualities, enable the owner to convert into cash the superior blood he has been using. The other way to increase the profit is to feed more

cheaply. In the case of the Utah figures, we do not know what the feeding methods were. We will gamble, however, that the average Kansas farm can decrease this feeding cost close to 25 per cent and produce an animal equally as good as those produced at the above cost at the Utah station.

To Cattle Again.

Sometimes the misfortunes of one class prove the benefits of another. This is shown by the abandonment of dry farms in certain sections, notably in the Texas plains country, and their re-occupation by the cattle men.

The great plains region has always proved profitable as the nursery of cheap beef production and there are many people who believe that the sod should never have been broken. They think that the buffalo and gamma grasses were worth more than anything that could be raised on the land after these had been plowed under.

On the other hand, these cattle men who are again taking the country are raising forage to insure them against winter famine and summer drouth and are using irrigation methods in many cases to do this.

Kafir is the basis of the new methods in the range country and the wells and windmills left by the deserting settlers are utilized to the full for stock water instead of stock ponds and irregularly flowing streams.

Special Forage for Hogs.

An Indiana farmer reports some interesting results from sowing special forage crops for his hogs, and his experience may be valuable in Kansas. He says:

"Last spring and summer was a splendid season in which to try out special forage crops for hogs. The previous fall we sowed two acres to rye and it came through the winter, making a good extra early pasture. An adjoining lot of two acres was put in Canada field peas and oats as early as we could work the ground. We used a bushel and a half of each peas and oats. The ground was in corn the previous season and we used the cultivator one way and then broadcasted the peas.

"By going the other way with the cultivator we covered the peas to a depth of three inches. Then we broadcasted the oats and harrowed them in. The next time we will drill the oats. As soon as the peas were in blossom we turned the hogs from the rye into this lot. At about the same time we broke the rye ground and seeded to rape, and while we were in the business put in an acre lot of soy beans. The rape and beans were ready at about the same time to pasture, and by this time the field peas and oats were gone, so we let the hogs run on the rape with access to the soys. They rather slighted the rape till the soys were gone.

"The same day the hogs were turned from the pea ground we broke it and seeded to rape. These two two-acre lots were cropped alternately and gave splendid account of themselves until the coldest weather. Likewise the shoats gave a good account of themselves, as they made a healthy growth all through the summer on no grain until after new corn was ready to feed. There are 46 of them, farrowed last May and averaging now 160 pounds. We are finishing them off on soy beans and corn. They are the finest bunch we ever fed and the gains were made cheaper than ever before, thanks to the forage crops."

Age of Brood Sows.

Will you answer, through KANSAS FARMER, the following questions:

Which is the more profitable, a young boar or one that is more than a year old?

Is it possible to sell sows after raising two litters of pigs, thus always having gilts on hand?

Would you keep good sows longer? How old does a sow get before she becomes too old to breed?—GEORGE MORGAN, Soldier, Kan.

If ability to do greater service is meant, the older boar is much the more profitable. The young boar should be used very lightly until maturity. Beginning with a very few sows when he is eight or nine months old and using him on a few more when he is a year old, he should not be put to hard service until he is two years old. If he proves to be a good boar he should be kept in service just as long as he gets litters of strong healthy pigs. A good boar, fully matured, will stand much harder service and get better litters than will a young boar, and is therefore much more profitable.

In regard to the sows, the same rule applies. If the gilt proves to be a good producer she will grow in value as she gets older, and should be kept in the

herd just as long as she produces profitable litters. The idea that the sow can be put on the market after her second litter with a profitable gain in weight is true, but the greater increase in value which she possesses as a breeder is lost sight of and the breeder loses the opportunities to select out the best breeding sows if they are marketed after the first or second litters.

No gilt should be bred to farrow more than one litter a year until after she is two years old. After maturing at two years she may be depended upon to farrow two litters a year without harm to herself or the size and quality of the litters.

The increase in value of the sows for breeding purposes is much greater than that which could come in any increase of weight after the first or second litter, and keeping the sows longer enables the breeder to select and prove the best.

Lively Live Stock Chief.

It is very evident that a wise choice was made in the selection of Mr. D. O. Lively as chief of the Division of Live Stock of the Panama-Pacific Exposition. Mr. Lively has his plans well in hand for the biggest and best live stock show that has ever been held, and in their execution he will have some innovations. Among these will be a cavalry contest for the development of the qualities needed in the cavalry service. In this the contest will be between thoroughbreds, standard-breds, Morgans, Arabians, Hackneys, American saddlers and hunters. The plan includes a campaign of several days similar to that which the horses would undergo in the regular service, and is intended to determine the best type for a cavalry horse and which breed produces it.

In the cattle department the beef breeds will be protected by government officials and those sold to South America



D. O. LIVELY, CHIEF OF LIVE STOCK DIVISION, PANAMA-PACIFIC EXPOSITION, SAN FRANCISCO, CAL.

will be immunized. There promises to be a very strong demand for breeding cattle from South America.

The dairy cattle associations are planning a breed milking contest, similar to that held at St. Louis but more extensive. No feature of the Louisiana Purchase Exposition created a greater interest or has been remembered longer than the milk production contest, and none would be more valuable at San Francisco.

A race track will be provided for the exhibition of horses, and there will probably be held two race meets, one early in the season and one quite late.

As Oriental countries are now taking a great interest in the breeds of hogs best known in America, this part of the show is expected to exceed anything of the kind ever before attempted. Of course all other kinds of domestic animals will be represented, but the greatest opportunity ever afforded to the breeders of meat and milk producing animals will come because of the Oriental and South American demand, which is already beginning. Kansas must be well represented.

The Kansas Senate has decided that no Inheritance Tax Law shall be passed at this session. There were two amendments proposed to re-establish the Inheritance Tax, one exempting the widows \$30,000 and children \$10,000. The other exempting the widow entirely and \$25,000 for children before a tax could be levied. Senator Staveland introduced a resolution to return the Inheritance Tax paid in and relinquishing that not collected.



Tell Me How Many Head of Stock You Have

and I'll feed them 60 days before you pay. I'll show you how to make your farm animals grow faster—thrive better—put on more flesh on no more feed—make you more money.

I'll Rid Them of Worms or No Pay

I'll drive out the blood-sucking, life-sapping, disease-breeding parasites, which multiply in the stomach and intestines, killing off your hogs and sheep, starving your horses and cattle, and stealing your feed and profit. I'll send you enough Sal-Vet to last all your stock 60 days. Simply put it where all your farm animals can run to it freely. They will doctor themselves. Don't send any money—just the coupon. Fill it out and mail today!

Sidney R. Feil, Pres.



What SAL-VET is and Does

Sal-Vet is a wonder-working medicated salt which completely rids farm animals of their greatest enemies—the stomach and intestinal worms. These deadly pests are the cause of 90% of all live-stock diseases. They keep farm stock in a poor, weakened, money-losing condition—they are the first step to hog cholera, swine plague, horse plague and other contagious diseases.

How SAL-VET Prevents Diseases

Sal-Vet prevents heavy losses when disease breaks out in your neighborhood because it kills and expels these deadly, life-sapping pests and puts every animal on your farm in a healthy, vigorous, worm-free condition—enabling them to better resist these deadly plagues. It sharpens the appetite, improves digestion and makes all stock grow into profit fast because it helps them get the good of all their food. Being a salt, animals like it and run to it freely—and

They Doctor Themselves

It requires no mixing—no drenching—no dosing—no trouble at all. Leading agricultural colleges and all prominent live-stock authorities endorse it.

Let me send you a 60-day supply without a penny of pay in advance.

Send No Money—Just the Coupon

Fill out the coupon, tell me how many head of stock you have, and mail it to me today. I'll ship you enough Sal-Vet to last all your stock 60 days. You simply pay the freight charges when it arrives and at the end of 60 days report results. If Sal-Vet does not do what I claim you won't owe me a penny. Send the coupon NOW. Address

SIDNEY R. FEIL, Pres. [110]
THE S. R. FEIL CO. Mfg. Chem.
Dept. KF Cleveland, O.

Proof That Proves from Actual Users

"Sal-Vet has been of great service to us; it has kept our hogs and pigs free from worms and, in addition, proved to be a splendid tonic."—J. B. BEFF, Agriculturalist, Southeast Alabama Experiment Station, Abbeville, Ala.

"For their own good, I would recommend Sal-Vet to all sheep men. It will destroy every stomach worm in the flock and keep your sheep and lambs free from them and at the same time keep the flock in the pink of condition and health."—ROBERT S. BLASTON, Mgr. Sheep Dept., Walnut Hall Stock Farm, Dorset, Ky.

"I cannot find words to express how much I think of Sal-Vet. Hogs all around my place had cholera, but I did not lose a single one of mine, and all winter they continued to look just fine."—WM. CAMPBELL, Route No. 10, Decatur, Ind.

"Before getting your Sal-Vet I had lost thirteen of my best hogs, but since feeding Sal-Vet I did not lose a single one, and every animal is in fine condition."—(Signed) GEO. MOREN, Route No. 1, Pittsburgh, Kansas.

"I have given Sal-Vet a thorough trial with most gratifying results. My herd of pure bred Berkshires contracted a bad cough and continually got worse, until I gave your Sal-Vet to them. After two weeks of this treatment, not a hog was coughing, and all are as sleek as moles."—J. E. ANA SUTOLIFF, Shickahinny, Pa.

PRICES: 40 lbs., \$2.25; 200 lbs., \$5.00; 500 lbs., \$10.00; 1000 lbs., \$18.00. No orders filled for less than 40 lbs. Never sold in bulk; only in Trade-Marked Sal-Vet packages. 60-day trial shipments are based on 1 lb. of Sal-Vet for each hog or sheep and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular packages.

SIDNEY R. FEIL, Pres.
THE S. R. FEIL CO.
Dept. KF-1-13 Cleveland, O.

Ship me enough Sal-Vet to last my stock 60 days. I will pay the freight charges when it arrives, report results in 60 days and will then pay for it if it does what you claim. If it does not you are to cancel the charge.

Name _____
P. O. _____
Shipping Sta. _____ State _____
No. of Sheep _____ Hogs _____ Cattle _____ Horses _____

Beware of Air-Spaces When You Plow



AIR SPACE—ordinary

Remember, those innocent-looking air spaces left between topsoil and subsoil when plowing have been costing the American farmer MORE THAN ALL OBNOXIOUS WEEDS, BUGS, PESTS, SCALDS AND PARASITES COMBINED. Air spaces completely cut off the water supply from below and cause crops to start withering and drying up the minute a hot, dry spell comes.

Get a plow that doesn't LEAVE any air spaces—the Rock Island "C.T.X." Universal. Note the peculiar, corkscrew shape of this plow bottom. (Picture A.) The arrow shows how dirt travels—backward and DOWNWARD, not backward and UPWARD as in the ordinary plow. (Picture B.) The Rock Island Universal doesn't spill any dirt into the furrow; turns the slice clear over, without crimping. Lays it flat and smooth, at the same time pulverizing it thoroughly and burying all trash. Topsoil lies right against subsoil—without fatal air spaces. Water comes up from below just like herosene comes up your lamp wick. This feeds the crop in dry weather.



NO AIR SPACE—"C.T.X."

A Real UNIVERSAL Plow

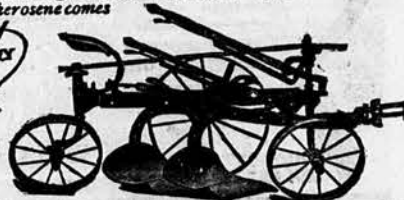
And don't forget, this plow is a UNIVERSAL plow—does perfect work in any soil on any land that's plowable. It walks right through Tame Sod, Heavy Clay, Sandy Loam, Mixed Soil, Stubble Fields, Old Cornfields, etc. No wonder the Rock Island "C.T.X." Universal has become the sensation of the farming world. Yet it costs practically no more than the average plow!

WRITE! Send your name on a postal today and get, by next mail, the complete story of the Rock Island "C.T.X." Universal. All about how it's made; pictures of its construction. We will also tell you the nearest place you can see a Rock Island "C.T.X." You can go see this plow and judge it for yourself. Just write these words on your postal, Am interested in plows. Then sign your name, address and send the card to

ROCK ISLAND PLOW CO., 217 Second Avenue, Rock Island, Ill.

(114)

Rock Island (C.T.X.)
Universal Plow



Save Your Hogs—

Anything that helps you keep disease from hogs is certain to increase profits at market time; and in helping you do this Lewis' Lye is therefore worth many times its cost. In safeguarding your money investment in hogs—don't overlook the importance and value of lye. Lewis' Lye, because of its guaranteed purity, full strength—its simplicity of feeding—has long been recognized as the surest hog conditioner.

Lewis' Lye

The Standard for Half a Century

Saves its cost hundreds of times a year for others. When fed to your hogs consistently, according to our specific directions, it will do the same for you—and produce big, fat, healthy animals at market time.

On The Farm—

Lewis' Lye, as the pure lye it is, is especially recommended as a hog conditioner and preventive of disease. It is also valuable as a disinfectant and for spraying trees, vines, etc., etc.

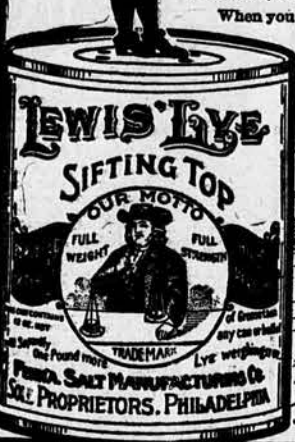
In The Home—

For soap making, softening water, destroying vermin, cleaning pots, pans, dairy utensils, cream separators, woodwork, windows, etc. Lewis' Lye is supreme because it cleans without scouring.

When you order lye see that the purest and best is delivered to you. Get Lewis' Lye—the only lye made and sold by manufacturing chemists, 98% purity and full strength guaranteed.

Our booklet suggests many uses for Lewis' Lye on the farm and in the home that you should know about. Mailed free on request. Address:

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Manufacturing Chemists
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Whether you work out your road tax or whether you pay it in cash, you are entitled to value received. See that you get it. Your road officials want to spend your money to the best advantage. Help them to do so by calling their attention to

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The up-to-the-minute monthly magazine devoted to good roads movement. It gives the latest news of the progress of good road building and maintenance in every state in the Union and is invaluable to everybody who is interested in improving the condition of the public highways. Read by more than fifty thousand tax payers, officials, engineers and road-masters. Five cents a copy—or fifty cents a year.

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Century Manufacturing Co., Dept. 107 East St. Louis, Illinois, or Dept. 107 6 E. 11th St., Kansas City, Mo.

THE FARM



One Bolt Plow Share.

F. A., Fontana, Kan., asks what we know about the plow share which is removed by loosening one bolt. We know nothing from experience about this plow share. It is being advertised in the Kansas Farmer by a reliable firm, and one which we know would not advertise any implement unless it would do and was what they claimed for it. Write the company for descriptive printed matter and specific information.

Seed Analysts Know.

The Barteldes Seed Co., Lawrence, Kan., writes: "We note in KANSAS FARMER, February 15, your statement that the seeds of the three varieties of sweet clover—melilotus alba, melilotus officinalis, and melilotus indica—cannot be distinguished.

"The article further states that seedmen must depend on the word of the farmers from whom they buy sweet clover seed, and really do not know whether or not they are furnishing the desired variety.

"This is entirely wrong. We, as well as other houses that have seed analysts, can tell to a certainty what variety it is by examining the seed."

Removing Stumps.

Answering A. L. B., Coldwater, Kan., the few cottonwood and mulberry stumps can be deadened by keeping the sprouts cut off. This will be some little trouble, but it will ultimately kill the stumps. The tree cannot live unless it is permitted to grow. Leaves are necessary to the growth of a tree and to the life of its roots. The stumps of course can be grubbed out if they are in the way, and it will not be a big job to so grub them that they can be plowed over. The quickest way to remove these stumps is to dynamite them. You can obtain dynamite suitable for this work from your hardware store or through Kansas Farmer advertisers. You would not be justified in the purchase of a stump puller if you do not have more stumps than indicated by your letter.

Well Pleased With Silage.

"This is my first winter in feeding silage, but I am well pleased with the results. I filled my silo about three-fourths full of corn and one-fourth kafir. The kafir made fine feed. I like the corn better, however. Am feeding 25 head of calves and never had a bunch of calves do so well. I am feeding a little fodder and hay with the silage. These calves are almost good enough for beef. I also have 24 head of yearling steers that I am just starting on full feed. I cannot at present put a cash value on silage, but I weighed these steers before starting to feed silage and I hope to be able to know later just what gains they have made and so to place an estimate on the value of silage. It costs me about \$2 per ton to produce the corn and kafir and to fill the silo.—O. M. EARLY, Harveyville, Kan."

Cow Peas, Soy Beans and Pumpkins.

"I was much interested in your reply to C. P., Haddam, Kan., concerning cow peas with corn or kafir on page 18, issue of February 11," says G. S. L., Holton, Kan. "I have planted cow peas, soy beans and cow pumpkins in the corn field, but not as you outlined, nor with the corn. I did one time plant cow peas and corn together in same drill, but the corn all went out together and the peas together—each by themselves and not mixed.

"For three seasons I have sent a boy with a bucket of seeds—peas, beans or pumpkins—ahead of the cultivator, and wherever a hill of corn was missing drop a couple of seeds—the cultivator covered them. In this way I did not decrease the stand of corn, but made the land produce peas, beans or pumpkins where for any reason the corn missed. The peas and beans grew up on the corn stalks and were cut and bound with the corn and put in the silo—the stubs and roots furnishing enrichment for the soil."

Soil Inoculation for Alfalfa.

Inquiries received by Kansas Farmer indicate that there is unusual activity among farmers in their efforts to establish alfalfa in sections where alfalfa has not heretofore grown successfully.

Practically all inquiries are directed along the line of how to inoculate the soil with nitrogen-gathering bacteria, which bacteria are essential to the successful growth of alfalfa. These inquiries show that farmers are beginning to realize the necessity of inoculation. Such inoculation can be secured by the planting of cow peas and the growing of at least one crop on the field to be seeded to alfalfa. Inoculation may also be secured by seeding the intended alfalfa field to sweet clover and growing this plant thereon for at least two years. Inoculation may also be secured by obtaining dirt from an old-established alfalfa field and spreading on the field to be sown. This method, unless fully understood and carefully pursued, is not certain in its results. The other method, and so far as we are able to learn, a satisfactory and certain method, is that of inoculating by the use of commercial cultures which supply the necessary nitrogen-gathering bacteria, and instructions for the use of which culture are supplied by those firms selling it.

Feterita Viewed by Oklahoma Station.

Replying to KANSAS FARMER's inquiry, O. O. Churchill, agronomist, Oklahoma Experiment Station, writes:

"The first seed received by this station came from the United States Department of Agriculture and was labeled feterita or Sudan Durra. This seed was sent to Goodwell, Okla., where it was grown in 1911. The first time this crop was grown on the station grounds was in 1912.

"Judging from the results secured and from data secured from many farmers who have grown the crop for one or more seasons we feel safe in saying that feterita yields well in comparison with other grain sorghums, but it does not appear to be superior in yield to good Kafir or milo. It has several objectionable features, among which it shatters easily, suckers too much and blows down badly if allowed to stand after becoming ripe. Chemical analysis shows that in composition feterita grain has practically the same feeding value as Kafir and milo. Judging from the appearance of the stalk the forage will be inferior to Kafir and about equal to that of milo.

"Before making positive and final statements we wish to conduct the work three or four years more so that we will be in a position to know exactly what the crop will do. We have no seed of this kind for sale."

Farmers Buy Agricultural Books.

Our subscriber, C. C., Jasper, Mo., places with KANSAS FARMER the following order for agricultural books: How Crops Grow, \$1.50; How Crops Feed, \$1.50; The Physical Properties of Soil, 50c; The Study of Corn, 50c; Soiling Crops and the Silo, \$1.50; Alfalfa, 50c; Feeding Animals, \$2; total, \$8.

Mention is made of the above to show other readers how an occasional subscriber is providing himself with those books which present the so-called scientific side of farming. The farm books of today are very different as compared with those of years ago. The present day book is written in the light of a more thorough understanding of all phases of agriculture than was possible ten years ago. The study of agriculture has developed greatly during the last decade. The development has been along practical lines. The same development above mentioned, has taken place also in the farm press. The leading farm papers of today are worth to the farmer two or three hundred times what those of ten years ago were worth. The editors of real farm publications of today are able to segregate the practical from the theoretical and it is because of their ability to do this that publications pertaining to agriculture are of greater value to the farmer than formerly.

Scarcely a week passes but that some KANSAS FARMER subscriber places an

order similar to the above, for farm books. The orders vary in the selection of books in accordance with the different phases of agriculture in which the subscriber is interested. Lists pertaining to orcharding, live stock, dairying, and general farming, are those most frequently ordered.

Tepary Bean—New Dry Farm Crop.

Subscriber H. E. T., Hooker, Kan., asks what we know about the Tepary bean.

This is from a bulletin written by R. W. Clothier, of University of Arizona, and who is the only man known to us who has done any work with this bean:

"After three years of experimenting with it I am prepared to say that it is one of the most wonderful plants ever presented to the dry farming public. If it has a growing season of 75 days, it will make a fair crop, and if it has 90 days, it will make a good crop. If it is struck by a drouth it will ripen the pods already set, and when the drouth breaks it will set and ripen a new crop if it has five weeks in which to do it. In 1911, beans planted June 14 were struck with drouth July 20, after but 3.34 inches of water had penetrated the soil. The drouth continued until August 25 and was accompanied by extremely hot weather, the Fahrenheit thermometer frequently reaching a maximum of 105 to 108 degrees and averaging 99 degrees as a maximum for the entire period.

"Notwithstanding these adverse conditions, these beans ripened an average of 319 pounds of seed per acre during this drouth. Then, when the rains recurred, the beans again began setting pods and matured an additional 456 pounds of seeds between September 1 and October 15, on 4.97 inches more of penetrating rainfall, making a total yield of 775 pounds per acre for the season. Moisture determinations in the soil made before planting showed that there was not over five inches of water available for plant production in the first four feet of soil, and none in the subsoil below that depth, when the beans were planted. When we consider the extremely dry character of the atmosphere in the arid southwest with its consequent great power to absorb water from soils and plants these yields under such conditions are remarkable. The pink bean, which has a reputation itself as a drouth resister made nothing whatever during the drouth and only 100 pounds per acre for the entire season under exactly the same conditions."

Brome Grass for Pasture.

Our subscriber, M. J., Eskridge, Kan., writes: "I would like to hear from Kansas Farmer readers who have had experience with brome grass or bromus inermis. I would like to know how to prepare the ground, when to sow, how best to sow, how much to the acre, and when to commence pasturing."

The editor will be pleased to have Kansas Farmer readers contribute their experiences. It is important to Kansas that we obtain a grass or combination of grasses for pasture which will come as near as possible being the equal of our native grass pastures. We know that hundreds of farmers in Kansas have experimented with such combinations with a greater or lesser degree of success. Hundreds of farmers in Kansas are depending wholly upon grasses other than our native grasses for their pastures. The experience of farmers along these lines is what our readers would like to have. It is our observation that very rarely in this state is bromus inermis alone depended upon for pasture, except in the western third of the state. The following combinations are generally found. The figures in these combinations indicate the pounds of each kind of seed used.

For central Kansas: Bromus inermis 10 pounds, orchard grass 12, western rye grass 8, common red clover or alfalfa 6, bromus inermis 16, alfalfa 6, bromus inermis alone 20 pounds.

Bromus inermis cannot be recommended for general planting in southern Kansas.

For western Kansas: Bromus inermis 20, alone bromus inermis 14 pounds, western rye grass 8, and alfalfa 6 pounds.

Almost without exception, combinations of grasses and legumes are to be preferred to any single grass for both pasture and hay. For pasture they are especially desirable, giving more continuous grazing, greater yield, greater variety and a better balanced feed. Another object of the combination is to afford a longer period of growth by the different dates of maturity, permitting continuous grazing and best all around results. The combinations also may be made to produce a more perfect sod and a more permanent pasture than is possible for any one of the grasses which do well under Kansas conditions.

The permanency of pastures sown to bromus inermis alone, or to any of the combinations above mentioned, will, of course, depend upon how severe the pasturing has been and also upon the success of the seeding and conditions in general. The idea of a permanent pasture; that is, a pasture for ten to fifteen years, is not in good keeping with the best farming methods. Ground growing these combinations and pastured for four or five years will yield its greatest return when the pasture is broken up and the ground given over to grain crops for a few years.

Brome grass will stand close grazing when sown on good lands and when not pastured very late and close in the fall. Late and close pasturing will result in the next season's crop being reduced. It does not grow rapidly the first season. The ground should be well prepared and made free from weed seeds before planting. It is desirable to sow after a cultivated crop or on land that has been summer fallowed a part of the season. The good preparation necessary for the seeding of any grass will answer.

The grass may be sown in the fall or the spring, although under average conditions the most favorable is the early spring seeding. However, the seeding of bromus inermis, like the seeding of alfalfa, cannot be governed by anything other than the condition of the field. If the ground does not contain sufficient moisture for spring seeding, it is manifestly better to delay seeding until fall in the hope that the right moisture condition will prevail.

Seeing Is Believing

Don't Trust Wholly to Printed Descriptions

Don't trust to a printed description in buying a range, because a very glowing description can be given of a very ordinary range. If you are considering a new range, it will pay you, before investing your money in any range, to go to some dealer who handles them and carefully compare, point for point, with any other—the

Great Majestic

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A Perfect Baker

ONLY range made of malleable iron and charcoal iron. Charcoal iron won't rust like steel—malleable iron can't break. Outwears three ordinary ranges. The Majestic is put together with rivets—joints and seams remain absolutely air-tight always. Body lined with guaranteed pure asbestos board, covered with an iron grate—you can see it—insuring an even, dependable baking heat, year in, year out, with half the fuel required in ordinary ranges.

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It is a mistaken idea of economy to attempt to get results with an old worn out range where bolts are loose and stove putty has crumbled away make you burn twice the fuel necessary. You can save price of a Great Majestic in saving of fuel alone. Its 16-gallon reservoir is all copper and heats through copper pocket, pressed from one piece, setting against fire box. Turn lever and it is instantly moved away from the fire. Greatest improvement ever put in a range—increasing strength and wear of a Great Majestic more than 800% at a point where other ranges are weakest—many other exclusive features. Ask to see it. For sale by dealers in nearly every county in 40 states. Any Majestic dealer can furnish any size or style Majestic Range with or without legs. Write today for booklet, "Range Comparison."

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WATER SUPPLY—Unlimited. Water delivered to boundary of every 40 acre tract. Canal and drainage system perfect.

TRANSPORTATION—Both by rail and river to the great metropolitan centers.

LAND PRICES—Low, and terms of payment easy.

If you want to secure a home in California, where climate, soil and water combine to work for you overtime, fill in this advertisement, and mail to us for full particulars.

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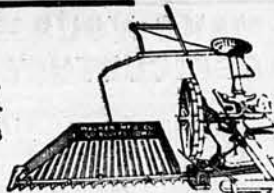
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This System is Revolutionizing the Method of Cleaning Separator Bowls



The United States Cream Separator is best adapted for mechanical washing, owing to the scientific arrangement of the skimming sections which drive the washing water with great force through the skimming device, actually scrubbing all parts of the metal.

The mechanical washing is made still more effective by the U. S. non-rusting skimming sections of nickel silver and by the absence of obstructions in which or behind which milk and dirt can lodge.

By the use of the U. S. Mechanical Washer a United States Separator is cleaned in practically half the time of other separators, besides saving strength and making the work far more pleasant. The turning of a crank washes the skimmer.

In addition to its easy cleaning feature the 1913 model "United States" is one of the lightest running separators on the market, due to a reduction of the bowl diameter nearly one-half that of older models and to improved gear construction, and is admitted the closest skimmer, a fact backed by the World's Record won in an open contest in which all separators were allowed to enter, embracing fifty consecutive runs, lasting over thirty days and covering milk from ten different breeds.

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The Beatrice established a new order of things. The price of the very largest size Beatrice, capacity 950 to 1000 pounds, is only \$75.

I bought that size—my saving was \$35. Smaller sizes cost \$55 and \$65. Why should I or any other dairyman pay more than the Beatrice price? We would get no more for our money.



The Beatrice has everything that goes to make a cream separator

valuable. Easy running, durable, a close skimmer, remarkably easy to clean, gets thick, heavy cream. I'll have something to say on each of these points in later talks. Watch for them. Price is only my starter. In the meantime, remember how I saved \$35.

Save \$25 to \$40

Farmer Onswon is right. Ask the Beatrice dealer. If none near you, write us for catalog and particulars. Address nearest office.

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DAIRY



Unquestionably the most profitable organization is that which brings maximum returns from the farm as a whole. In the case of a small farm, if we assume the statement first made to be true, then under such organization there should be a highly specialized dairy. The better the cows, the larger the income. If the dairy is organized as it should be the income from the dairy will be larger each year. If the grading up process of establishing the dairy is followed, the expense of establishing a highly specialized dairy will be small and the growth and increased profit will be so gradual and so certain that almost before it is realized the dairy will become the main issue between harvesting time in the fall and planting time in the spring. In a general way this is the sum total of our view of the necessity and the advantages of making the dairy an essential part of the operations of every quarter section and smaller Kansas farm. There will, of course, be farmers here and there who are unalterably opposed to dairying and who would rather do anything else you might name than feed and milk and care for cows. Those who so feel can find other specialized lines of live stock industry which will serve their purpose fully as well as the dairy, although the advantages of the dairy cash income will not be obtained. The farmer who can bring himself to the painstaking care of a bunch of eight to ten cows cannot do better than to so direct his energies during the fall and winter months.

There is not another industry of the farm which is susceptible to the continued improvement and increased profit as is the dairy. In establishing the dairy herd it should be determined at the outset that the herd will be so handled that the yield and profits will each year be increased. It is easier to accomplish these results in the case of the dairy herd properly handled than in any other line of farm activity. A dairyman in Illinois who keeps a herd of 36 cows claims to show a profit of \$3 for every \$1 expended. This statement was made in an address before the Illinois State Dairyman's Association recently. We have no doubt, either, as to the truthfulness of the statement. This, however, must be a highly specialized herd. The same speaker stated that a record was kept of 317 farms in Illinois, which record showed that 225 farmers made dairying pay as high as \$5,000 per year, while 92 lost as much as \$1,500 a year. This shows the difference in the cows and in the handling of the same on the various farms.

It must be kept in mind in connection with KANSAS FARMER's suggestion that every quarter section and smaller farm in Kansas can well afford to maintain a dairy herd of such size as can be furnished pasture and for which there is help to milk, that the income from the sale of butter fat is not the only source of revenue, and in fact is not more than one-half of the revenue which may be traced directly to the dairy. On every farm on which there is a herd of cows milked, there is one calf per cow per year, which calf will have a beef value equal to the value of the calves at the present time grown in the state. Because on many farms the cows are not milked, we must not fool ourselves into the belief that we are producing beef—beef of high quality which sells at the top notch price. Our common calves are not sold at such figures and the rearing of the same kind of a calf on skim milk, while its mother is being milked, need not depreciate the value of such calf. With the dairy herd there should be pigs in sufficient number to consume the surplus of skim milk. A cow which is producing 3,500 to 4,000 pounds of milk per year will supply the needed skim milk for her calf and for a litter of pigs. If the cow is fresh in the fall of the year, as she should be to return the largest income from the sale of her butter fat, this will necessitate fall litters of pigs to consume this skim milk. Two crops of pigs per year on the average farm is the exception, but why should there not be two pig crops annually? The milking of cows, the growing of the calves from these cows, and the pigs necessary to consume the skim milk, are three lines of

industry absolutely inseparable if the largest income from the milking cows is to be realized. With a herd of fall fresh cows and with calves and pigs to feed, how can the time of the winter be better converted into cash?

A writer on the subject of beef deplores the fact that dairying is being pushed so hard in all sections of the country. He says that the decrease in numbers of beef cattle has been very pronounced and that he sees no immediate chance for recuperating the beef supply to normal. He believes that the tendency to dairying has diminished the supply of beef animals and will delay the increase of such animals to the point demanded by the beef-consuming public. The enthusiastic pushing of dairying and the increasing number of cows milked has in our judgment not been responsible for any materially decreased supply of beef animals. This, because at least 90 per cent of the cows milked are the same cows which heretofore have been kept for the rearing of a calf. This condition will prevail for many years to come. The number of farmers milking dairy-bred cows is increasing every day, but the development of the specialized dairyman has been very slow and will continue so to be. The farmer of the corn belt and western states will not for many years to come overlook the growing of a calf which will make a feeder fully as good as the average feeder of past years, but he will milk \$35 to \$50 worth of butter fat per year from the calf's mother and the calf will be grown on a cheaper ration than he has heretofore had.

Not an issue of KANSAS FARMER is printed but that in these columns we have something to say about preparing for next year's dairy operations. This is the time of the year to plan the feed crops for feeding next fall and winter. If you have not already done this, you can afford right now to give it the attention needed. You cannot afford to wait until spring is on before you plan this year's fields and what will be planted in them. You cannot wait until the last minute, either, to get the seed. If you do this you may not get the seed you want at all, and you may not be able to get as good seed later as you can now. If you have a silo and a patch of alfalfa, the feeding situation is simplified and easy of solution. The field that grows the silage will supply the corn or the Kafir for the cows as well as for all other farm animals. The alfalfa field will supply the hay and balance the ration. Herein lies one of the advantages of the silo. It reduces the terms than feeding can be reduced without it. If you have no silo and the present acreage of alfalfa hay is not sufficiently large to supply the dairy cows with all the alfalfa they will eat and a liberal ration for the remaining part of the live stock, then the alfalfa acreage should be increased. With alfalfa as the basis of the ration, corn or Kafir of course becomes necessary, and cow peas or soy beans will be required to supply the nitrogenous constituents of the feed for the largest production of milk in the case of the cows, or for the growth in calves and pigs. If alfalfa is not grown on the farm at all, or even in limited quantities, then the proper feeding is more complicated and difficult. If the roughage is to be composed of sorghum, Kafir, or prairie hay, then cow peas or soy beans afford for Kansas the only home-grown source of protein in feeding, and a sufficient quantity of these should be grown that 2½ to 4 pounds per day of soy bean or cow pea meal may be fed with corn or Kafir to make a ration which will supply the milking cows and the growing young animals with a feed so balanced as will enable them to yield the greatest profit in milk and growth. In a general way and briefly stated, this is the feeding situation for Kansas when we have determined that the cows milked and the animals kept on the farm are to grow and thrive as they are capable of doing during the fall, winter and spring.

Care of the Bull.

Do not give the cows all your attention. The bull at the head of the herd should have some care given to him. He



Easy Pumping

Have you had to depend on the wind for pumping water? The wind is uncertain—the right way is with a **1½ h.p. Rumely-Olds Engine**

You'll get your water at low cost, you save a lot of time and work—you'll have an engine that will do your pumping in a short time and be ready for general service the rest of the day. To make pumping no job at all, hitch this engine to a

Rumely Pump Jack

Then all your pumping troubles go. You have a real outfit at a very slight cost. Rumely-Olds Engines are strong and simple—Rumely Pump Jacks are right, too.

Think the combination over—see if it wouldn't pay you to have it.

The Rumely-Olds 3 h.p. Engine will handle a bigger job—we have them in all sizes, stationary, skid mounted or portable—so we're sure to meet your requirements, and we have the proper pumping outfit for each size.

Write for the Olds Engine Data-Book No. 344, and the special folder on Rumely Pump Jacks—ask name of our nearest dealer.

RUMELY PRODUCTS CO.

(Incorporated)
Power-Farming Machinery

Kansas City, Mo.; Wichita, 55;
Kan.; Dallas, Texas.

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THIS OFFER IS NO CATCH.

It is a solid proposition to send, on trial, fully guaranteed, a new, well made, easy running separator for \$15.95. Skims hot or cold milk; making heavy or light cream. Designed especially for small dairies, hotels and private families. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Gears thoroughly protected. Western orders filled from Western points. Whether your dairy is large or small, write us and obtain our handsome free catalog. Address:

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The GUERNSEY COW

Can we tell you about it
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Write for list of silos we have built.
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Kansas Farmer
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is half of the herd. Be sure he is the biggest and best half, and then care for him in such a way that he will stamp his good breeding on his calves. A bull should not be stood in a stall, only watered and fed, and allowed to suffer on account of filth on his flanks, lack of exercise and grooming. He is more than half the herd. He is the best part of the herd of young things he will produce for you.

He should have a roomy box stall in which he can walk about. It must be kept clean and dry and bedded deep with straw at all times. It should be a well lighted stall where you can watch his growth, if he is a young fellow, and where the sun and air can get to him. If a good lot cannot be given him to exercise in, he had better be left to run on a wire after being ringed through the nose. Fasten a heavy wire from one tree to another or from post to post. Have the wire at least eight feet high. A stout chain with a strong snap in the end of it should hang from the wire, not being so long that it will get under the bull's feet and permit him to get tangled up.

The bull that stamps his breed characteristics on his get is not the one on whose flanks manure is accumulated, whose hoofs are rotting in filth, who is never brushed or exercised. If you expect a bull to do his best, treat him the best. Handle him daily. Do not torment him. Ugliness is always the fault of the owner. If a bull is worried with taunts, if he is forced to fight flies during warm weather and given no chance to stretch himself, he never will amount to much as a sire. To bring his breeding quality to its highest value, give him every attention, make him comfortable, feed him well with a variety of grains and some succulent foods as well, and if you have some light chores to be done which he can handle in a treadmill for a quarter of an hour twice daily, give him the chance to do the work for you. He will be the better for it.

He is the greatest part of the herd, remember, and must be treated as such. If he becomes hidebound, his muscles will be sore and hard and it will not help his disposition. This condition only indicates poor care, lack of exercise and a variety of feeds. Brush him daily. In summer keep him lightly blanketed and in winter provide a heavier one. Be proud of him and show him off at every opportunity. If you are not proud of him, get one that you will be proud of and care for him right. He is the big half of the herd.—WILLIAM GALLOWAY, Waterloo, Iowa.

Write and Find Out.

Will the new members of congress be more susceptible to the influence and interest of the oleomargarine manufacturers than the present members? That is an important question to dairy farmers. The oleo people indicate a desire to take their chances with the new members in the next session which convenes following the inauguration of President-elect Wilson.

After the committee on agriculture, by a tie vote December 17, 1912, failed to report out an oleomargarine bill, the friends of oleomargarine on the committee expressed a desire to get the matter before Congress for its decision, and some of them agreed to help report out the Haugen Bill however, after the the Holiday recess, they seemed to have lost their desire for an immediate vote on the measure. The most ardent friends of the oleo makers seem to think that their chances for passing a bill such as the oleo interests want, will be better at the next session. Of course, it yet remains to be seen whether the new members who will help to make up the Sixty-third Congress will be more amenable to the influences exerted by the oleomargarine makers than are the present members.

If the packers can get the Lever Bill enacted into law, it will mean millions of dollars profit to them. That they will eagerly clamor for the passage of this bill at the opening of the special session, there seems to be no question. But the dairymen and farmers of the country, as well as the friends of honest products and square dealing are becoming more aroused, and when the matter gets before Congress, we think the packers will find that not a majority of the congressmen of this great country will be willing to fall down and worship at their shrine.

J. M., Clay Center, Kan., a farmer's son, writes: "The reason the day and month laborer dislikes farming, and especially dairying, is because he has to do chores on Sunday and work during all kinds of weather."

DE LAVAL CREAM SEPARATORS

TIME TESTED

If a member of your family were dangerously ill you wouldn't think of calling in an inexperienced doctor?

Certainly not! You would call a physician, who had built up a reputation, a man with experience and a successful practice.

Why not use the same care and common sense in your selection of a cream separator?

Every little while you hear of some new cream separator, claiming to be a "world beater" and just as good as the De Laval but a little cheaper.



These "mushroom" machines stay in the limelight only until they are "found wanting" by the users and in a short time drop out of sight.

It takes years of experience to build a "good" cream separator. More than 30 years of experiments and experience have made the De Laval pre-eminently the best machine on the market for the separation of cream from milk.

Even were other concerns not prevented by the De Laval patents from making a machine exactly like the De Laval, they could not build as good a machine as the De Laval, because they all lack the De Laval manufacturing experience and organization.

If you buy a De Laval you run no risk of dissatisfaction or loss. It's time tested and time proven. Why experiment? Why take chances with an inferior machine when you KNOW that the De Laval is the BEST MACHINE FOR YOU TO BUY?

The new 72-page De Laval Dairy Hand Book, in which important dairy questions are ably discussed by the best authorities, is a book that every cow owner should have. Mailed free upon request if you mention this paper. New 1913 De Laval catalog also mailed upon request. Write to nearest office.

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Old Dutch Cleanser saves work and time on the farm in dozens of ways.

Aside from its many good uses in the home where it takes half the work from housekeeping, it is invaluable in quickly and hygienically cleaning the dairy pans and pails. In the barn, harness and carriage sides and tops clean easier and better. Everything that requires cleaning calls for Old Dutch Cleanser. Nothing else will do the work half so well.

Many uses and full directions
on large Sifter Can — 10c.

Old Dutch Cleanser

HIGH GRADE SEED CORN and SEEDS
ASK FOR QUOTATIONS
GEO. T. FIELDING & SONS, MANHATTAN, KAN.

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Remember the roof on your house, barn or other buildings that leaked a few drops last fall—a little investigation now may mean a big saving when you put on a new roof or replace an old one.

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(Quality Certified—Durability Guaranteed)

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The World's largest
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\$10.00 Sweep Feed Grinder. We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.

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FEATHER BED BARGAINS
\$8.40 buys from us one new 36-lb. Feather Bed and one pair 5-lb. new Feather Pillows. Satisfaction guaranteed. Agents wanted. Address SOUTHERN FEATHER & PILLOW CO., Dept. 207, Greensboro, N. C.

FARM AUTO

For the Farm Auto Owner

Inquiries and Suggestions Solicited

To Stop Gears Growling.

A contributor to Motor Car says that when your gears "growl" and "howl," take flake graphite 16 ounces, heavy transmission grease 48 ounces; thoroughly mix and then 4 ounces of beef tallow to be added to the mixed grease and graphite by melting and stirring—the whole mass until fully incorporated. When cool, apply in small quantity to the gears.

Dry Batteries Weak and Irregular.

Much of the trouble experienced in starting both during the winter and summer is due to the condition of the cells. Weak batteries with a slight defect in the battery wiring will cause a great deal of unnecessary cranking. Be sure that the battery wiring is in perfect condition and that there are no poor or frayed contacts anywhere. Then be sure that the batteries are strong, and much of the starting trouble will be overcome.

Make Gasoline Rig Work.

A gas engine, the same as any other piece of machinery, requires good care to get the best results. Keep it under cover as much as possible. Wipe off any surplus oil or grease; dirt working into the bearings will cause them to run hot and perhaps burn out.

By getting a piece of shafting, a couple of hangers and bearings, three or four pulleys, a cheap rig can be made so that you can run the churn, cream separator, washing machine, grindstone, etc., with that engine.

Solving the Starting Problem.

William Kirtenbaugh, Herington, Kan., writes Motor Car that the best way he has found to start an engine on cold mornings is to saturate a cloth in gasoline and lay over the air inlet before attempting to crank the car. It is his statement that gasoline vapor will be drawn in and the mixture will be richer. Recommendations for making cold weather starting easier are numerous. Some of these recommendations work better on some motors than on others. If you have difficulty in starting, try the different methods suggested and you will finally find one which will help materially.

Oil or Water Cooled Engines.

Which is better for general farm use, oil or water cooling gasoline machines? This answer is by E. S. Keene, Dean Engineering Department, North Dakota Agricultural College: If general usage betokens excellence the water cooled engine is the better. It answers the purpose in most particulars but is liable to freeze. It can be regulated to keep the cylinder at a constant temperature but the water must be kept in circulation by a pump and cooling apparatus to give good results. In the case of air cooled cylinders where variation alone is relied upon, the temperature is variable and if run for any length of time continuously the engine will overheat.

Removing the Fan Belt.

During four or five months of the year it is possible to dispense with the fan belt. This is during the winter time when the cooling of the radiator by the use of the fan is not necessary. The fact is that many engines will run much better during the winter months if allowed to become well heated. To promote heating of the engine in winter, the use of the fan may be dispensed with. On some makes of machines it is somewhat difficult to remove the fan belt. In such instances the belt can be made slack so that the fan will run slowly and will have little tendency to cool. Should you not feel safe in removing the fan belt, slacken the belt slightly, notice the results, and if the engine does not become too hot, loosen the belt some more. Finally you will have reached the point at which the engine will run manifestly better and the wear and tear on fan and bearings can be dispensed with entirely or reduced to a minimum.

Demand for Medium-Priced Car.

More than 300,000 people, according to figures recently prepared by one of the leading motor car journals of the world, have demanded medium-priced automobiles for the season of 1913. Not only does this astounding total give to the layman an idea of the phenomenal

growth of the industry in the short span of its life, but more especially does it impress on everyone the conviction that the medium-priced high-grade motor car has at last come into its own. It only proves what many manufacturers have long contended, that the words "automobile" and "fad" or "luxury" are no longer synonymous; that they are as far separated as the two poles of the earth.

Today there are fully as many medium-priced cars being sold to people of wealth as to those who, because of their financial resources, have to consider carefully and insist upon getting their money's worth before buying. No longer is the low-priced car the distinctive vehicle of the small business man and the salaried clerk who feels that, at last, he can afford an automobile. In the garages of hundreds of wealthy citizens of the United States and other countries are to be found the medium-powered, medium-priced American cars, beside the most expensive "palace" creations of foreign and domestic manufacture. The car selling for \$1,000 or thereabouts is no longer the scorn of the rich and the joy of the moderately situated; it is the answer to the great economic question, "What will give me the best return for the price invested?"

Warming the Steering Wheel.

Gloves and mittens often fail to keep the driver's hands warm. This is because the steering wheel and spokes are constructed of material which becomes quite cold, and second, because the driver maintains a tight grip on the wheel resulting in poor blood circulation in the hand. Covers of both cloth and leather are sold by accessory supply houses and which coverings are designed to assist in keeping the hands warm. The wheel may be wrapped with a strip of felt, as

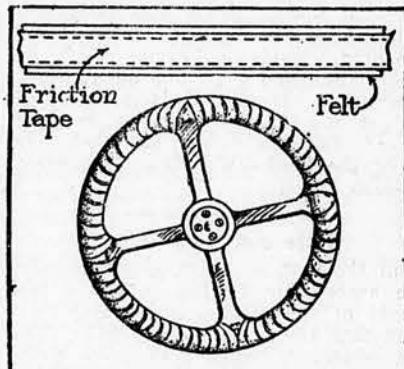


Fig. 7—Method of Covering Hand Wheel with Felt and Tape to Make it Warm in Winter

shown in the illustration from Motor Car. The felt alone, on an absolutely smooth surface, will slip and not be satisfactory. On such surfaces the ordinary friction or bicycle tape may be stitched to the strip of felt and the tape placed next to the wheel. On wheels which are notched or which have finger holds in such way as to prevent slipping. Wheels provided as above will make driving much more comfortable on account of the wheel not becoming so cold.

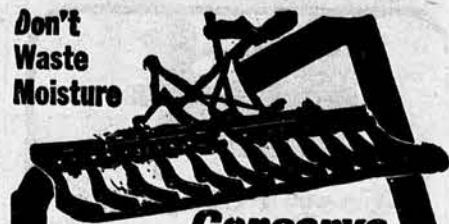
Auto Tire Service.

"The service men obtain from tires is directly proportional to the degree of care and attention they give to their tires," says G. M. Stadelman, of the Goodyear Tire Company.

"Some men write that they have obtained as high as 17,000 miles from a single casing. Upon investigating it is invariably found that the men who get most out of their tires are the ones who are most careful about keeping their tires inflated to the proper pressure. They are the ones who do not overload their tires, who do not allow them to stand in grease and oil, who do not run in car tracks or over rough roads—in short, the men who take care of their tires are the ones who profit.

It is impossible to estimate what the mileage of a tire should be simply because you can not reduce human care to a common denominator. Every man drives a car with a different degree of care. And road conditions play a large part in determining tire life. A tire that would last long on smooth city asphalt would deteriorate much more rapidly if driven upon rocky country roads. However, if given the right degree of care, tires under all conditions everywhere would last much longer."

Don't Waste Moisture



Conserve The Moisture

THE "Acme" cuts through to the under soil, thoroughly compacting it and leaving no lumps or voids between the furrows. The top soil is mulched. These conditions attract and conserve all the moisture, insuring a successful crop.

ACME

Pulverizing Harrow, Clog Crusher and Leveler

on Plowed-Down Corn Stubble, the "Acme" Leaves All Trash Barred where it does the greatest amount of good as a fertilizer. The "Acme" Harrow is made in all sizes.

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Special Heavy Duty Tractor Motor Long stroke type. Large crank shaft, connecting rods and bearings. One-piece cam shaft. The Heider is the pioneer light-weight tractor and no experiment. Will do any kind of farm work more cheaply than horses.

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Horticulture

February Garden Work.

February is a good time to start the early tomato, cabbage, celery and even lettuce plants. A few lettuce plants started now will give the good housewife some early "grass" to tempt the appetites of those human animals in her charge. The human animal in early spring has the same feeling as the old family cow that gets her first sniff of green wheat. The lettuce plants are easily transplanted and are much more hardy than some of those plants we think have to be transplanted a time or two before they go into the garden.

Those plants which we like to have pretty well started when we set them out in the garden may be started in the basement, if you have a furnace; in the living room if you possess a hard coal heater; or, better yet, in the incubator, if you are not ready to start increasing your poultry yard.

A practical and economic method of starting young plants in a small space is by the use of small flats in which to germinate the seed. A cigar box is large enough to germinate all the plants needed for two or three families.

Take an ordinary cigar box and cover the bottom with some pebbles or broken crockery for drainage. Fill it with sand to within a half inch of level. Press this down well and smoothly. With a square stick of the proper length press out V-shaped furrows about a half inch deep and two inches apart. Sow the seed in these furrows so thickly that one almost touches the other. Sift sand over the top until the furrows are level, then sprinkle with water, using the ordinary watering pot. With a flat board press firmly and set the flat in a warm place, about 70 to 80 degrees, keeping the sand well watered so it will not dry out.

In five or six days the plants will show their first true leaves and a few short lateral roots will be formed. They are now ready to "prick off" in light wood flats 10 x 14 x 2 1/2 inches. Cover the bottom of this flat with pebbles or broken pottery as before, then fill with good rich earth, pressing it down smoothly on top. Dig the plantlets out of the germination flats with a knife or knock one corner sharply against a bench or post and with a slight toss that flat may be jerked from under the sand with the plants on top and the sand beneath. With a lead pencil make holes in the earth of the larger flat 3 inches by 3 inches, and insert the young seedlings in the holes. Press the dirt firmly around each one. After watering, set them in the shade until the roots are established. A couple of days is sufficient time. After the roots are established bring the flats to a sunny window and allow them to grow until the ground is warm enough to transplant in the field or cold frame.

One cigar box flat will furnish enough seedlings to fill several large flats when transplanted. Two or more kinds of vegetables may be started in one flat and furnish more than enough for the ordinary farm garden.—GEO. O. GREENE, Horticulturist, K. S. A. C. Extension Division.

Apple Tree Cankers.

There are several diseases producing cankers in the family orchard. These cankers are erroneously labeled "sunscald." While there may be now and then some sunscald in the orchard, the most of it is caused by certain plant diseases, such as apple blotch, black rot, "Illinois canker," etc. Sunscald is apt to appear as light brown in color and looks as if the bark had simply dried out. Cankers are usually easily recognized by the blackened surfaces extending down the trunk or branches in V-shaped or diamond-shaped areas. These areas often extend down from a wound made by pruning or by some other wound in the bark.

These cankers often tell a tale of the energy of the orchardist rather than a knowledge of how orchard disease infection may be carried from one place to another. The spores of canker-producing diseases may be on the surface of the bark and can easily be carried to the living portion of the plant by the pruning saw, which has made an ideal roughened seed bed for their future growth and damage to the tree.

Where no paint or other dressing is applied to wounds made by pruning, the spores may be carried on the feet of birds, by insects, by the wind, or they may be washed down from above by rains. Sometimes, through our carelessness in pruning, we allow the limb we are removing to break down in such manner as to peel the bark from the under side. This makes a good medium

for catching these spores and water for their quick germination.

The presence of these cankers is indicated as pointed out by the blackened area on the bark, the cracking away of the bark from the wood, and the failure of wounds to heal instead of the production of the normal callous on the upper and lateral sides of the wound. These darkened areas grow downward farther and farther each year, growing in this direction more rapidly than in the opposite direction, as the sap current is in this direction. Black granular bodies form on the outer surface of the bark and are often ascribed to "bleeding" and dirt. They are in fact masses of spores, dirt, and hyphae or branches of the parasitic plant.

About the only treatment for these cankers consists in the cutting back to healthy bark with a draw knife. The wood should be well sterilized with hog dip, formalin, or a weak solution of carbolic acid. The scarifying tool should also be well sterilized after each opera-

tion. After the wound has been sterilized it should be painted over to prevent cracking and further infection.

Unless we get to work on our home orchards and treat these cankers and follow up by spraying, the family supply of fruit will soon have to be purchased from those who do care for their orchards properly.—GEORGE O. GREENE, Horticulturist, K. S. A. C. Extension Division.

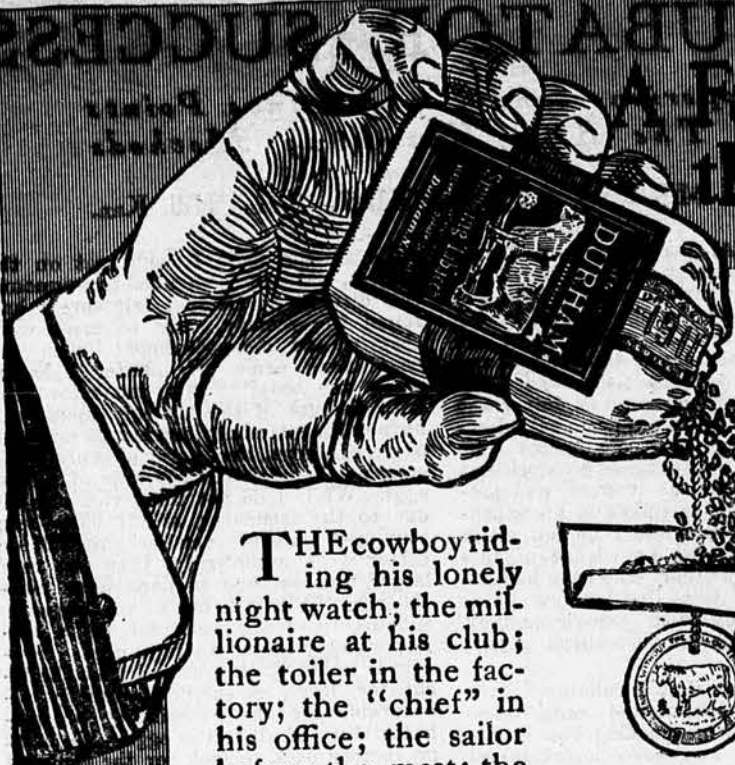
Demonstration Farms By Railroads.

The Missouri Pacific-Iron Mountain System under the direction of its agricultural department is establishing the most extensive system of demonstration farms to co-operate with the farmers along its lines yet undertaken by an American railroad. The company has already established five large demonstration farms and expects to soon have a sixth in operation. These farms range in size from 25 to 40 acres, which makes the undertaking the most pretentious yet inaugurated. Work will be conducted

along the same lines as the government demonstration farm work, but will be on a much larger scale, which will make it relatively more valuable. Each farm is to have a resident manager and each is to be located along the tracks of the company's lines in close proximity to a town.

The railroad will continue to experiment for at least three years regardless of results, and if at the expiration of that time the work has proved as successful as anticipated, it will be continued indefinitely and both the size and the number of the demonstration farms will be increased.

The experimental farms will be strictly modern in all respects, be supplied with modern implements, be well stocked and liberally furnished with the best seed procurable. All staple crops, together with forage grasses and, where practicable, fruits and vegetables will be grown. Accurate crop records and statistics will be kept showing the cost to produce a bushel of corn or oats, or a pound of cotton, hay or other products.



Enough "Bull" Durham sold last year to roll approximately **22,000** cigarettes every minute of every day.

THE cowboy riding his lonely night watch; the millionaire at his club; the toiler in the factory; the "chief" in his office; the sailor before the mast; the admiral in his cabin; the soldier in the barracks; the general in his "quarters"; men of every nation, occupation and class—all find *unequaled enjoyment and satisfaction* in the good old "Bull" Durham Tobacco in the homely 5-cent muslin sack!

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INCUBATOR SUCCESS

Experience and Perseverance Points
to The Best Hatching Methods

By MRS. J. T. BATES, Spring Hill, Kan.

ARTIFICIAL incubation is no longer an experiment and it is exceptional at the present time to find any one hatching and raising chickens by the old fashioned method. The use of the incubator having become so universal and wide spread it is difficult to advance any new ideas or methods in this important work. Most of us have in our varied experiences reached a place at some time or other when we have had to work out our own salvation, as it were, and perhaps pay for our mistakes in an expensive way; and so while I do not claim to have any clearer knowledge of this work than many others who have had experience along this line, a few facts drawn from my own experience may throw a little light on the subject to new beginners.

I operated the first incubator I ever saw—one we constructed ourselves—consisted of a large packing box in the middle of which was placed a galvanized hot water tank that was carefully packed with sawdust. Beneath this tank was a large drawer, containing the egg trays which altogether held 240 eggs. The heat was maintained by drawing out a quantity of water from the tank through a faucet just above the drawer and replacing it with the same quantity of boiling water, which was poured into a spout coming from the top of the tank, out of the top of the box or incubator. After experimenting with this for a time I found I could maintain a moderately even temperature and filled the trays with eggs—240 in all. Never was an incubator watched more carefully or with more interest than this one, not only by us, but the entire community were interested in the outcome of our venture. Most amusing were many of the queries made, showing how little thought they had given the subject, and nearly every one being incredulous—predicted failure, and the real consensus of opinion seemed to be that we were short of something to do. But we were all interested, and being a subscriber to at least two poultry papers at that time, carefully read every scrap of information pertaining to artificial incubation, and found the question of "supplied moisture" one of the greatest of bug-bears—so many different opinions—and having had no experience of our own, found ourselves very much at sea. But when on the evening of the nineteenth day we heard an unmistakable "peep" from the interior of that "wooden hen," there was surely some excitement in that old farm house. We were most anxious to open the drawer and see how many were hatched, and if they were smothering, but managed to let it alone till the regular time was up, when on opening the drawer, took out eighty strong, well-developed chicks, quite a number of deformed ones, and such an array of eggs, with chicks dead in the shell—some pipped, some nearly out and many that had died at various stages of incubation; but we only shut our eyes while throwing out this large number of eggs, thinking "better luck next time," and bravely set it again. Of the eighty chicks thus hatched, I raised 76 to maturity, brooding them in a home constructed brooder, somewhat similar to the incubator—a packing box with hot water tank packed in sawdust, under which the chicks huddled in comfort even in zero weather. And one cold night, while pouring the hot water into the tank, for some unforeseen and unaccountable reason the water was poured by the side of the spout into the sawdust packing, which of course soaked through giving the chicks a thorough drenching. However, it was discovered before bed time and by getting to work drying them around the stove till late into the night saved every one. The brooder had to be unpacked, sawdust dried and made up again, but nothing mattered so long as we saved the chicks.

Although this incubator was a very crude affair and wasted a good many eggs, I was convinced I could hatch and raise more chickens with it than without it, so persuaded the "gude mon" to make another just like it, and operated both of these with very fair success. However they were lots of work and as different makes of machines came upon the market we selected a 240-egg capacity, Successful hot air incubator, finding it a very good machine in many ways, but with this as with the home-made ones, I met with much the same trouble, too many chicks dead in the shell. And

with all the light I could get on the subject, did not seem able to surmount this difficulty. Often I felt sure I had found the remedy, only to meet with chagrin and disappointment when the next hatch came off. Later I began using the smaller size incubator and with the use of the 100-egg capacity, I have quite commonly hatched 95 per cent of fertile eggs, and on one (only one) occasion, hatched 100 per cent of fertile eggs. While I do not think this was all due to the incubator, still I have been convinced that the smaller size will do better work accordingly, than the very larger number, and perhaps raise more chickens. With the use of the large incubator there has been for me a correspondingly larger waste in eggs. However it is not to be conceded that the incubator, large or small, is directly accountable for the hatchability or non-hatchability of all fertile eggs. We must go further back to look for the cause of this drawback. 1st. The condition of the fowls, their comfort and food, which should be of a bulky nature, such as alfalfa leaves, cut clover, cowpeas, sprouted oats, plenty of grit and pure water, wheat bran fed dry in a hopper and a little small grain; wheat scattered in several inches of straw to keep them busy. Any of these things will be found good to help constitute a suitable ration for laying hens. On the average farm it is almost impossible to keep hens from eating too much corn. This will keep them fat but will not produce so many or as hatchable eggs as the more bulky food. We have read much against the use of commercial beef scraps and green cut bone for breeding fowls, but our own experience was that green cut bone was a valuable addition to their ration. The greatest objection being the turning of the bone mill.

The best possible condition for eggs for hatching is to set them when perfectly fresh—all the better if you can set them the day they are laid before any of the moisture of the egg evaporates. This cannot always be done, however, but it is advisable to set eggs as fresh as possible and if perfectly fresh, require little or no supplied moisture. This will come as near solving the moisture question as anything of which I have learned. Where eggs for hatching must be kept for a week or two they should be placed in a cold cellar, or where a low temperature is maintained.

Just a few items on care of incubator. I have noticed that improper care during the first week will just about insure a poor hatch. Before setting machine, soak the wicks in vinegar and dry thoroughly—they will not char so much—cooling and airing just long enough to turn the eggs and change their relative position. Turn eggs always twice a day and three times most of the time. A thorough turning and moving eggs from one position is very important, rolling from center to outside rows and visa versa.

The second week the thermometer should register 103 degrees, with turning same as during first week, with a five-minutes cooling temperature, some dry, hot cloths laid on them will soon restore the heat and if temperature is found too high—say 105 or 106 degrees—a cooling of ten to fifteen minutes, or a sprinkling with cool water will reduce the heat to the desired point.

The third week we run machine at 103½ degrees with a ten-minutes cooling instead of five, and on the seventh and fourteenth days cool the eggs 20 to 30 minutes each time the eggs are turned. This idea is that a good supply of oxygen may be drawn through the pores of the shell for the better development of the chick. Keep bulb of thermometer lower so mercury can push up or down.

Testing should be done as soon as the germ can be detected. The real importance of this is that bulb of thermometer should always rest on a fertile egg. This may be done in five or six days—when eggs have clear white shells—but when shells are brown or not clear a week is required before they can be tested. And if at this time we find the blood veins completely encircle the egg near the air cell, we can be sure the heat has been carried sufficiently high during the first week. At this first testing discard all perfectly clear eggs and those having a dark ring around the embryo. The second testing may be done about

(Continued on page twenty-seven)

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The GRANGE

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NATIONAL GRANGE OFFICERS.
Master.....Oliver Wilson, Peoria, Ill.
Lecturer.....N. P. Hull, Diamonddale, Mich.
Secretary.....C. M. Freeman, Tippecanoe City,
Sec'y.....C. M. Freeman, Tippecanoe City, O.

On February 10, Chairman W. T. Dickson called a meeting of the Executive Committee to adopt some plan of co-operation; while no definite measures were taken the committee is still working on that line.

State Master Reardon has just organized a new Grange at Morrill in Brown County, Kansas, with 44 charter members.

A Market House.

"Manhattan Grange is taking up the matter of establishing a market for farm products. They are considering the location now as there is no opposition to its advisability. I have been talking weekly market for the past three months but had no idea the grange would start this spring, but they undoubtedly will. A co-operative market house is included in the plan but they say that a curb-stone market, where wagons can be backed up on the square selected, can be put into operation at once."—ALGER DOCKING, Manhattan, Kan.

National Grange Is a Live Organization.

The National Grange certainly is a virile and aggressive organization.

Its growth in 472 local Granges during the year that ended on October 1, 1912, shows that its 46 years of age have not impaired its vigor. Its advocacy of such progressive measures as direct election of federal senators, which it advocated 25 years ago, shows that its 750,000 members form a working political force of embattled farmers.

The National Grange is an illuminating and suggestive instance of the great power for good in the social, public and economic life that an organization can be, when it has clear vision of needs, high standards for business and politics and firm and persistent urging toward its goal ahead.

Naming the Order.

Kelley tells of many names being suggested for the order to be instituted, among them being "The Independent Order of Progressive Farmers," "Knights of the Plow," "Lords of the Soil," and in place of calling it a "lodge" to name it a "garden," "arbor," or simply "home." In 1867 Mr. Kelley wrote "How would it do to call the lodges 'Granges'?" He says that he took the name "Grange" from an order advertised at that time. In reply came the query as to how "Patrons of Husbandry" would do. This name was endorsed at a meeting held in the office of William Saunders in Washington, D. C., on November 15, 1867. It was also decided at this meeting that the branches of the order should be known as Granges instead of lodges. William M. Ireland presided at this meeting and O. H. Kelley acted as secretary.—L. S. F.

At Highland Park.

The Highland Park Grange staged a successful play entitled "The Heart of a Hero" at their hall on Friday evening, February 14, 1913, to a crowded house. This was their first venture along this line and that it was appreciated by the audience was made apparent by the shower of congratulations extended to the members of the Dramatic Club after the performance. The Highland Park Grange was instituted a little over a year ago with a membership near the 100 mark. That it is a progressive body is shown by the improvements made in and around the school building where their meetings are held. The members have worked and helped to install one of the best lighting systems inside and outside the building. They have worked in co-operation with the school directors and built a concrete approach to the school grounds that is worthy of mention. Just watch Highland Park Grange a few more years and see if co-operation cannot be made effective.—E. LENENBERGER.

A Programme.

I am the lecturer of Equity Grange No. 1411 and as I sometimes find it difficult to acceptably fill the hour, I am going to forward one of our programmes for publication and I wish that other lecturers would do the same. In that way we can help one another:

Song by choir.
Roll Call: Quotations from Ritual Recitation, by Mrs. —
Recitation by Mrs. —
Question: What are the essentials of co-operation in business, by Mr. —.
Discussion led by Mrs. —

The following is what one group of people decided were essentials and may help:

Resolved; that in the sense of this meeting the term co-operation or co-operative should rightly be applied only to such organizations as comply with the following regulations:

1. The limiting of votes to individuals, irrespective of holdings, abolishing the proxy.
2. The limiting of interest to the prevailing rate of interest.
3. The return of surplus profits according to patronage.

Resolved, that it is practicable for this Grange to co-operate in buying and selling.

Affirmative—2 women and 1 man.
Negative—1 man and 2 women.

Prayer by chaplain for the true spirit of co-operation.—A. B. HESTER.

Coffey County Pomona.

Passing over the usual opening exercises and business of local interest, the troublesome question of dealing fairly by those members who take the fifth degree at the State Grange was taken up. As the state officers had failed to send these members anything that could be used as a dimit or certificate of membership on which we could admit them to membership in our Pomona, and we thought it would not be fair to make them pay another fee for membership here, and we could get no help from our own state in the way of a solution of this bothersome problem, we turned to old members in other states who soon helped us with this trouble.

There has been no quarrel or "fuss" here over this matter. That mistaken idea existed only outside this county. We shall continue our campaign for justice to all who pay dues in the Pomona Grange and do most of its work. We want the right to vote in the Pomona for all these. Other strong grange states permit all fifth degree members who pay dues in the Pomona to vote therein. Our Kansas Pomona members deserve as square a deal as other states give theirs.

A brief paper on "Leaks in the Grange" and a humorous one on "Dressing Pa for Church," by the two sisters Cellar put the members in a happy frame of mind for a good dinner. The whole afternoon was given over to the discussion of important questions and the report of the member sent to Topeka from this county to co-operate with the State Grange Legislative Committee. The first question taken up was the sample lines of co-operative work that has already been done in different parts of the country. If perpetual motion could be produced as easily as this topic can be continued in our granges that motion problem would soon be solved. However, each bit of experience in this line gives promise that better work can be done in the future.

Then the Insurance Assessment was taken up and a spirited discussion was on at once. Resolutions favoring a protest against such a heavy assessment now favoring raising the premium enough to cover all losses; cost of conducting the business; and prevent any future assessment, gave the brothers a chance to talk all they wanted to and they wasted no time in using it. This scribe felt proud of the "boys" as that debate went on. They were so earnest and yet so courteous and so careful not to say hurtful things.

First vote all policy holders gave a good majority for the resolution. Second vote only delegates to Pomona Grange voted and the resolutions carried again. Another resolution asking the State Insurance officers to send the minutes of the last annual meeting of the Insurance Company to all policy holders passed. The legislative delegate to Topeka reported the work he had done while he was there and made some good recommendations. This was an important meeting and was well attended.—EVE GASCHE.



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It's the salt that brings out the flavor—and it's the flavor that regulates the price.

To get the best flavor, use Worcester Salt.

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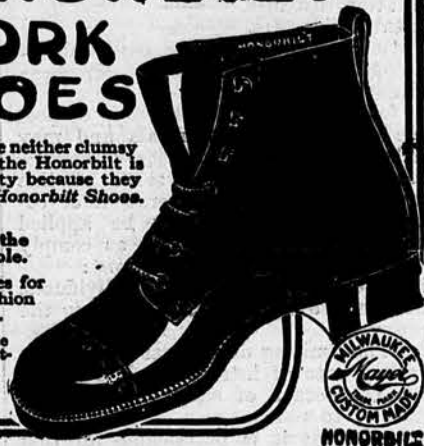
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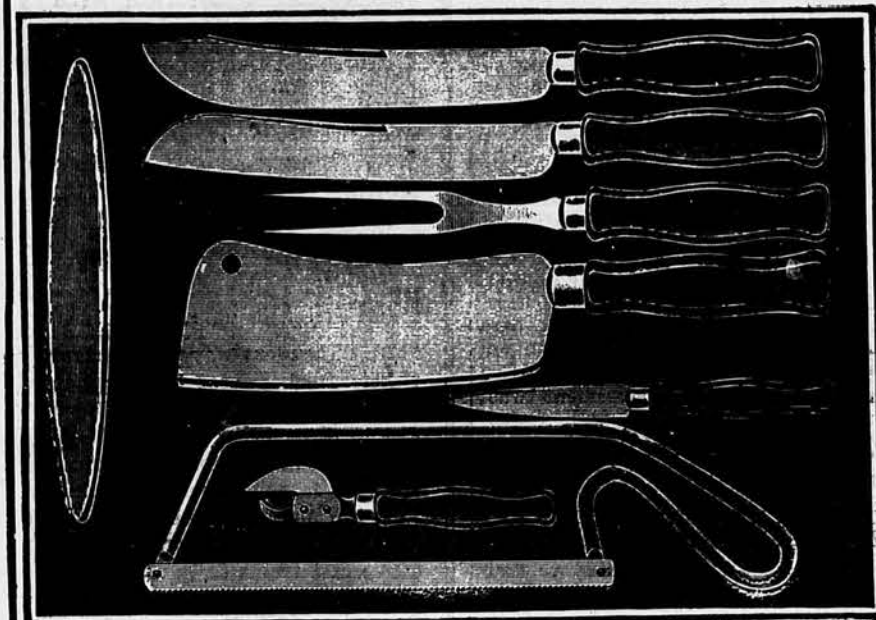
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High, roomy nursery, Automatic heat regulator, Hot water heating system, Double Glass Doors, Brooder has safety lamp. Is roomy and easy to clean. Order direct from this advertisement. We guarantee satisfaction or you get all your money back quick. Brand new Poultry Book free. Order Now.

NATIONAL INCUBATOR COMPANY, 1340 19th St., Racine, Wis.

WHAT THE PARCEL POST WILL DO FOR YOU

THE PARCEL POST, which went into effect January 1, 1913, enables us to give our subscribers the benefit of some larger and better premiums than we have heretofore been able to use. We have just purchased from the manufacturers a large order of the Excelsior Kitchen Sets, illustrated herewith. The set consists of eight pieces, as follows:



- | | |
|-----------------------------------|-----------------------------|
| 1 Eight-inch Carving Knife. | 1 Meat Saw. |
| 1 Eight-inch Bread and Cake Knife | 1 Paring Knife |
| 1 Meat Fork | 1 Can Opener |
| 1 Kitchen Cleaver | 1 Aluminum Sharpening Stone |

Every article in this set is fully guaranteed to us by the manufacturers and we will make good any defective piece. They are made of the finest quality crucible steel, carefully tempered, ground and polished. The handles are hard wood, rubberoid finish, with nickel plated ferrules. Each set packed in a neat pasteboard box.

HERE IS OUR OFFER: We will send this complete outfit by parcel post, prepaid, to any reader of KANSAS FARMER sending us three new yearly subscriptions to KANSAS FARMER at the regular subscription price of \$1.00 each; or we will send it to any present subscriber sending \$1.00 for another year's subscription and 75 cents to partly cover cost of set and shipment.

ADDRESS ALL ORDERS TO

Subscription Department, Kansas Farmer, Topeka, Kan.

HOME CIRCLE



BRAD'S BIT O' VERSE.

Goldenrod.

The goldenrod, the goldenrod, the bravest flower that decks the sod. When fade the jasmine and the rose, when bleak and cold the north wind blows, when all the leaves are brown and sere and clouds are dark and skies are drear, when other plants are bowed in gloom and other flowers have lost their bloom, oh then across the barren miles the goldenrod still smiles, and smiles, its happy mission to fulfill, the glory of each vale and hill. 'Tis easy in the summer days, when light and gladness bless our ways, when soft winds soothingly beguile, to greet the world with cheerful smile, to laugh at thoughts of stress and storm, to meet the clouds with welcome warm. But when the summer days are gone, when gloomy hours come sweeping on, oh then it takes a heart of cheer to smile, and smile, at prospects drear. I love the bloom of summer flowers, the rose and jasmine of the bowers; but when life's autumn time draws nigh, when others droop and fade and sigh, oh then's the time to bravely plod, still smiling, like the goldenrod.

A total of 142,294 packages were handled in the New York postal district during the first three days of the parcel post service.

To remove stains from mirrors and window glass moisten a piece of flannel with spirits of camphor and rub the spots.

If your oven is inclined to burn on the bottom, try placing a piece of wire door screen cut to fit in it. This, it is said, will overcome the trouble.

Oil of peppermint is said to be good for exterminating roaches. Saturate a piece of cotton with it and place it at night where the roaches are troublesome. It will kill them.

When washing sweaters, if you hang them on a wooden coat hanger to put on the line to dry instead of pinning them directly to the line itself, they will retain their shape much better.

If it is necessary to keep food warm for late comers, instead of placing it in the oven cover it closely and place over a pan of hot water. The steam will retain the heat and at the same time will prevent it from drying.

To remove ink and fruit stains from the floor wash the stained part with cold water and then cover with baking soda, rubbing it in gently with the hand. When dry wash off the soda and you will find the stains have disappeared.

If your glassware has become dull looking, as it sometimes does after frequent washings, add a few drops of blue washing fluid to the water the glasses are rinsed in, and they will look bright and sparkling again.

One housekeeper has found a convenient receptacle for overshoes under the lowest step of her back stairs. The top board lifts on hinges, and rubbers not in use are dropped in the box of the step.

A Missouri boy has made the state's corn growing record by raising 97 bushels to the acre. Wherever boys have gone heartily into competitive corn planting contests they have done well. And girls are not far behind them.

Always use cotton thread instead of silk in mending gloves. It is less likely to pull the kid. Go around the edges of the tear with a buttonhole stitch and then catch together. This will make a neat looking darn and one that is not likely to tear out quickly.

If you wish your lamps to give good light, occasionally pour out all of the old oil, wash the lamp and refill it with fresh oil. Once a month boil the burners for a few minutes in soda and water, and also put in new wicks. This requires only a little time, and will well repay you in the additionally bright light secured.

When powdered sugar gets hard run it through the food chopper. This is an easier way of breaking up the lumps than using a rolling pin.

Always remove the cake of fat that settles on the top of cold soups. If allowed to remain the soup will turn sour more quickly than it otherwise would.

If, when reading or sewing by lamp light a sheet of white paper is placed under the lamp it will be found that a far stronger light is shed all over the room.

Soap shavings, which may be bought by the quantity, are preferred to other kinds of soap by many housekeepers. They dissolve quickly and so expedite the making of suds.

Eggless, Butterless, Milkless Cake.

Mix together two cupfuls of white sugar, two cupfuls of water (cold), two tablespoonfuls of shortening, and one package of seeded raisins, and boil for five minutes. When the mixture is cold, add three cupfuls of flour with one teaspoonful of soda and one teaspoonful each of different spices. Bake one hour in a fairly hot oven. This makes two good loaves of cake; they are improved by keeping. For shortening, use chicken fat or beef drippings.

Cheese Pudding.

Take eight ounces of flour and mix with a teaspoonful of baking powder, two ounces of butter, and an ounce of grated cheese. Wet and make into a stiff paste and line a pudding basin with it. Fill with butter beans, previously boiled and removed from their skins, add a small onion chopped, the pulp of a tomato, one ounce of butter, cut into pieces, and seasoning to taste. Moisten with the water in which the beans were boiled. Cover and steam for two hours. —Chicago Inter Ocean.



6043



No. 6043—Ladies' Dress. In this model we show a pretty frock for general wear and one very easy to make. It has the fashionable and convenient front closing and the three-gored skirt may have the empire or regulation waist line. Serge, cheviot, mohair or taffeta may be employed, with the trimming of contrasting material. The pattern, No. 6043, is cut in sizes 34 to 42 inches bust measure. Medium size requires 5 1/2 yards of 36-inch material and 3/4 yard of 27-inch contrasting goods. Price of pattern, 10 cents.

Ground glass globes, whether plain or figured, will be brighter and whiter if, after being washed in soap and water, they are rinsed and then allowed to drain instead of being wiped.

Hidden States.

Mrs. Ippi wouldn't let Ida hoe in the garden nor Della wear Carolina's new Jersey, because, she said, "I want you to go riding with the other girls. Miss Ouri rode Island." Virginia said, "I'll mount Tana," but Georgia said, "I can't go till I can sash my new gown to suit me." They had a race up the main road, but wouldn't let Mary land a winner.



No. 6038—Boy's Suit. Navy blue serge was selected for the development of this stylish boy's suit. The blouse is made to be slipped on over head, has applied yokes, and may be made with or without tucks. A patent leather belt holds it in place. The trousers are the usual bloomers finished with leg bands or elastics. The pattern, No. 6038, is cut in sizes 2, 4 and 6 years. Medium size will require 3 1/4 yards of 36-inch material or 2 1/2 yards of goods 54 inches wide. Price of pattern, 10 cents.



No. 6045—Infant's Wrapper. This pattern provides for both wrapper and sack and each is easy to make, being similar. Both have turn-down collar and sleeves finished with turn-back cuffs. Cashmere, whipcord, mohair and silk are available materials. The pattern, No. 6045, is cut in one size and requires two yards of 26-inch goods for wrapper and one yard of 36-inch material for sack. Price of pattern, 10 cents.



No. 6039—Boy's Blouse. This blouse is a very nice design for the schoolboy. It is simple to make and very good looking. The pattern provides for choice of two styles of collar, the sailor or turn-down style. The sleeves are nicely plaited at the bottom. Linen, pique, percale, chambray and similar fabrics are employed. The pattern, No. 6039, is cut in sizes 4 to 12 years. Medium size will require 2 1/4 yards of 36-inch material and 1/4 of a yard of 27-inch contrasting goods. Price of pattern, 10 cents.

Blanket From a Tree.

Nature is kind in Ecuador. When a native wants a blanket he goes to a demajagua tree and cuts from it a strip of peculiarly soft, thick bark, five or six feet long. This is dampened and beaten until the flexibility of the sheet is increased. The rough, gray exterior is next peeled off and the sheet dried in the sun. The result is a blanket soft, light, and fairly warm, of an attractive cream color. It may be rolled into a compact bundle without hurt, and with ordinary usage will last for several years.—Argonaut.

Laundering Linen.

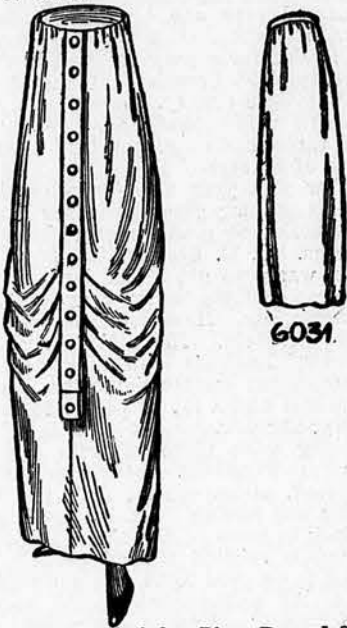
Do not starch any linen. If you wish to have it look its best iron it damp, says Harper's Bazar. Starch ruins linen. Hang all sheets, table cloths, and towels on the drying line with the ends down so that the weight, when wet, will come on the lengthwise threads, which are the stronger. Otherwise the linen will show an inclination to split along the folds. Linen yellowed by long laying may be whitened by adding kerosene to the water when boiling. About a table-spoonful to a gallon of water is the correct proportion.

Tardy Penalty.

Every one knows that punctuality at meal times is a help to good housekeeping. This was difficult to accomplish with six children, especially at breakfast. The following plan helped greatly, according to a writer in Good Housekeeping: If a child was late to breakfast, he had to go to bed that night as many minutes earlier as he was late in the morning. I claimed that his being late showed that he needed more sleep. If punctual he had extra time to stay up on Saturday night. I think this plan helped me to keep the same kitchen help 11 years.



No. 6021—Ladies' Shirtwaist. Every woman requires a number of shirtwaists, and we give in this model a pretty waist with several new style features. There is the popular turn-down collar and chic turned-back cuffs. Any of the wanted wash fabrics may be used, and challie, mohair and silk are also serviceable and pretty. The collar and cuffs are of contrasting material. The pattern, No. 6021, is cut in sizes 34 to 42 inches bust measure. Medium size will require 3 1/4 yards of 27-inch goods or 2 1/4 yards of fabric 36 inches wide, with 1/4 yard of 24-inch contrasting goods. Price of pattern, 10 cents.



No. 6031—Ladies' One-Piece Draped Skirt. This model is designed for dressy wear and will make a handsome costume when combined with a becoming waist of the same material. The garment is draped in the charming style now so fashionable and may be finished in empire or regulation waist-line. Any of the soft well-draping fabrics may be employed. The pattern, No. 6031, is cut in sizes 22 to 30 inches waist measure. Medium size will require 2 1/4 yards of 36-inch material or 2 1/4 yards of goods 44 inches wide. The pattern can be obtained by sending 10 cents to the office of this paper.



A Better Shoe for Men

The "Patriot"

In the "Patriot" you get the maximum of style, comfort and service—three qualities not often combined in a shoe.

The "Patriot" is the special pride of our 23 big factories. The most skilled shoemakers among our 10,000 experts are making it.

We make over 750 styles of "Star Brand" Shoes. The leather in each hide is utilized according to grade. Only the finest cuts are used in the "Patriot". Each pair is as good as every other pair.

The style shown is one of our newest models for Spring—made of finest gun metal leather, hand welt, oak leather soles—New Rex last. Better than many other shoes costing a dollar more.

Beware of Adulterated Shoes

More than 90% of all shoes sold at \$4.00 and less contain paperboard, leatherboard and other cheap substitutes for leather. You pay leather prices for them.

Pure Shoe bills now pending in Congress and fourteen different states are designed to protect you. We heartily endorse this legislation. The rights of 100 million consumers are greater than a few hundred manufacturers.

There is one way to be sure you are getting an honest leather shoe—simply ask for "Star Brand" shoes with our name on the sole and our Star on the heel. No substitutes for leather are ever used.

The "Patriot" and other "Star Brand" shoes are sold by nearly 20,000 good merchants. Look up the dealer in your town or write us for name of nearest dealer.

"Star Brand Shoes Are Better"



ROBERTS, JOHNSON & RAND
MANUFACTURERS Branch of International Shoe Co. ST. LOUIS

SEEDS

AT WHOLESALE PRICES SOLD DIRECT TO FARMERS

TODAY'S PRICES (MARCH 1)

Farmers today want the best seeds that can be grown. The State and National Agricultural Departments and the Agricultural Press, all combined, have helped to educate the farmer to the importance of planting only the best varieties and quality of seeds that are or can be grown.

EXTRA QUALITY STOCKS

We have provided this year an immense stock of the most choice new crop grown seeds we have ever before had to offer. Owing to abnormal conditions during the season of 1911 there were much of the seeds sold and planted that were of low grade and germination. In view of this, we have this year spent months and months carefully choosing, selecting and testing our seed offerings and can fully recommend and guarantee every package or bushel of seeds offered or sent out by us. Remember they are all new crop grown, 1912, Seeds.

Clover and Grass Seeds

These are sold on a very close margin of profit and the price fluctuates with the market just as grain and live stock do. The following are our prices for immediate orders and are subject to important market changes and stock unsold:

	Per Bu.
Medium Red, Iowa Chief Brand.....	\$13.00
Mammoth, Iowa Chief Brand.....	13.50
Alsike, Iowa Chief Brand.....	15.00
Alfalfa, Iowa Chief Brand.....	10.00
Turkestan Alfalfa, Iowa Chief Brand.....	10.50
White or Dutch, Iowa Chief Brand.....	26.00
Crimson.....	8.00
Sweet, White or Yellow Blossom.....	5.75
Timothy.....	2.65
Millet (Golden German).....	1.50
Millet, Siberian.....	1.40
Millet, Japanese.....	2.25
Kentucky Bluegrass, pure.....	1.90
Red Top, best grade.....	2.00
Perennial Rye Grass.....	1.60
Orchard Grass.....	2.40
Italian Rye Grass.....	1.60
Meadow Fescue.....	2.00
Pasture Mixture.....	2.75
Lawn Grass.....	2.75

Postage, 10c per pound extra if by mail.

Forage and Fodder Crops

	Per 100 Lbs.
Early Ambler Cane (1,000 lbs. \$25.00).....	\$ 2.75
Kenney's Ambler Cane, for sorghum.....	12.00
Milo Maize (red seed).....	2.50
Kafir Corn (white seed).....	2.50
Pencilaria (5 lbs. \$1.00, 25 lbs. \$2.75).....	13.50
Dwarf Essex Rape (10 lbs. \$1.25).....	8.00
Giant Spurry (10 lbs. \$1.25).....	9.75
Teosinte, per lb., \$1.00; 3 lbs., \$2.75).....	
Thousand Headed Kale, per lb., 40c; 5 lbs., \$1.75.....	

	Per Bu.
Sand Vetch.....	\$10.00
Cow Peas—New Era.....	3.25
Whippoorwill.....	3.25
Field Peas, White.....	2.90
Soja Beans.....	3.25

BAGS FREE.—In comparing prices, remember that we make no extra charge for bags.

TERMS.—Cash with order. No extra charge for bags. The express or freight charges on all farm seeds are to be paid by purchaser.

Our big illustrated Catalog free. A postal card will bring it to your door.

RATEKIN'S SEED HOUSE, SHENANDOAH, IOWA.

(Largest Growers, Wholesale and Retail, of Seed Corn in the United States.)

MENTION KANSAS FARMER WHEN YOU WRITE.

Seed Grain

	Per Bu.
New Alberta Oats.....	\$1.50
Ratekin's Big Banner 100-bu. Oats.....	1.00
New Sensation Oats.....	.90
Ratekin's New Kershon.....	.80
Lincoln Oats.....	.75
Regenerated, Swedish Select.....	1.00
Northern Grown Rust Proof.....	.80
White Russian.....	.90
Hayne's Pedigree Spring Wheat.....	1.50
Velvet Chaff.....	1.50
Macaroni.....	1.60
Rye—Mammoth Spring.....	1.50
Barley—Mandscheuri.....	1.30
Oderbucker.....	1.50
Success Beardless.....	1.50
Ideal White Hullless.....	3.00
Speltz or Emmer.....	1.10
Seed Flax.....	2.75
Buckwheat—Japanese.....	1.35
Silver Hull.....	1.35
Broom Corn—Evergreen.....	2.75
Dwarf.....	3.25

Seed Corn

CORN: Corn is King; the chief American crop, and there is no crop planted or grown that so much is dependent upon the seed and varieties, and no crop planted that the cost of seed is so cheap per acre as corn seed. Especially is this so when one bushel of seed corn plants seven to eight acres. We have been told by a thousand farmers that by planting cheap quality and poor varieties of seed corn that it cost them from \$40 to \$60 per bushel in the results of their crops.

Ratekin's Iowa Mammoth Yellow Dent.....	\$3.00
Ratekin's Big Banner White.....	2.50
Diamond Joe's Big White.....	2.00
Ratekin's Iowa Silver Mine.....	1.60
Ratekin's Pride of Nishna Yellow Dent.....	1.60
Ratekin's Imperial (red cob).....	1.60
Boone County White.....	1.60
Gold Standard Leaming.....	1.60
Reid's Yellow Dent.....	1.60
Iowa Gold Mine.....	1.60
Ratekin's Gold Standard Yellow Dent (90-day).....	2.50
Alaskan Northwest (80-day).....	2.50
Queen of Nishna Yellow Dent (80 to 90).....	1.90
Dakota Bloody Butcher (90-day).....	1.90
Pride of the North (90-day).....	1.75

Seed Potatoes

Red River Special.....	\$2.50
Ratekin's New Majestic.....	1.75
Early Six Weeks.....	1.60
Extra Early Ohio.....	1.50
Eureka Extra Early.....	1.50
Carman No. 3.....	1.40
Burbank.....	1.50
Early Rose.....	1.50
Sir Walter Raleigh.....	1.40

For Sweet Potatoes, write for prices.

Put Your Grain in the Sack and Not in the Stack

YOU know that many times there is grain enough wasted in your straw stack to pay your thresh bill. Why? Because you have not insisted upon the best machine to do your threshing. The

Red River Special

saves it and puts the money into your pocket. Why? Because it employs the only true and certain method of beating the grain out of the straw. All other machines expect the grain to drop out.

The Red River Special beats it out just as you do by hand with a pitchfork.

The Big Cylinder, the "Man Behind the Gun" and the uplifter shakers beat all the grain out before the straw leaves the machine.

Thousands of farmers are saving their thresh bills by using the Red River Special. You can, too, if you insist upon a Red River Special doing your work.

Calvin Brown and seven other farmers of Higginsville, Mo., say, "It really does save the farmers' thresh bill by not wasting his grain."

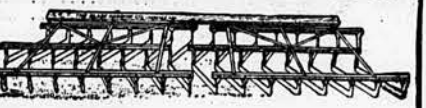
R. F. Lumm, farmer of Percival, Iowa, says "The Red River Special saved all the grain." You can save yours. Hire a Red River Special. Write for proof.

Nichols & Shepard Co.
Builders of Threshers, Engines
and Oil-Gas Tractors
BATTLE CREEK, MICHIGAN

Only 10¢

"Modern Silage Methods"
1913 copyrighted edition
Send for this 264-page book of profit-producing information—the most complete work on this subject published. Tells facts you ought to know about silos and silage—used and endorsed by many agricultural colleges—over 45 illustrations—indexed—a wealth of useful information for the practical farmer. Chapters on: "How to Build Silos," "How to Make Silage," "How to Feed Silage," "Silage System and Soil Fertility," "Silage Crops in Semi-Arid Regions," "All about Summer Silos, use of Silage in Beef Production and many other points. Ninth edition now ready. Send for your copy before too late. Inclose 10c in coin or stamps and mention this paper."
Silver Mfg. Co., Salem, Ohio

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Are You Satisfied With Your Harrow?
Our new harrow levels, packs, pulverizes, slips the trash, cultivates listed corn, saves the moisture, leaves the surface in ridges so soil cannot blow. Just the tool for cultivating and harrowing out potatoes. Saves time and work and better results follow the use of the Blade Harrow. Write for illustrated catalog.
The Blade Harrow Co., Lawrence, Kan.

Eggs, 63c a dozen! You get premium prices in any market if you'll read "Poultryology" and learn how Yesterday Egg Farms produce and market their eggs. 144 pages—70 pictures. Get one now! Edition limited. Yesterday Egg Farms, Dept. 43, Pacific, Mo.

White Plymouth Rocks

Again prove their superiority as egg layers in the National Egg-Laying Contest, one White Rock hen laying 281 eggs; 645 hens competing. I have bred White Rocks exclusively for 20 years and have them as good as anybody. Eggs from three high-scoring pens, \$2.00 per 15; \$5.00 per 45, delivered free by parcel post or express. Safe delivery guaranteed. A limited number of eggs from a specially time mated pen, \$5.00 per 15. You will get what you order, or money refunded.
THOMAS OWEN,
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STANDARD BOOKS

For the farmer and breeder for sale at this office. Send for catalog.
Address

KANSAS FARMER, TOPEKA, KAN.

When writing advertisers, please mention KANSAS FARMER.

POULTRY



The hatching of chicks seems now to absorb the attention of everybody—in the poultry world.

While the hatching of chicks is quite an important matter, it must be remembered that the raising of them is quite as important. In fact both acts are necessary in successful poultry culture and one is of no use without the other.

We are led to these remarks by the fact that every year there are hundreds of people who are abnormally enthusiastic over hatching chickens, but allow their enthusiasm to die down before completing the raising of them.

The Wichita Buff Orpington yards have a very neat catalogue and mating list just issued. A colored drawing of a pair of Buff Orpingtons by the celebrated artist F. L. Sewell makes an elaborate frontispiece. Breeders of Buff Orpingtons desiring new blood in their flocks, would do well to send for this catalogue.

A subscriber asks for the names of several reliable firms who buy "baby chicks." There are no firms who buy baby chicks. Such must be sold to individual customers. Some want one breed and some another. The best way to sell your chicks is to advertise them in KANSAS FARMER.

A man can dig a good ditch, by keeping steadily at work, even if the work is distasteful, and so with many other occupations. But in managing a poultry farm a man must find the work congenial, if he is to have marked success. One must keep planning for the betterment of his flock and the greater his love for his fowls the easier it will be for him to give them the attention needed.

While mating up your pens it is well to cull out everything undesirable. This is sometimes a very hard matter to do when a man wants all the eggs he can get for hatching purposes. But the effect of close culling will be seen later in the betterment of the progeny and will then be appreciated at its true value.

Chickens are creatures of habit, and they soon get to expecting things to be done in the way and at the time they have become accustomed to. This fact has its bearing on the matter of regular feeding. It is always worth while to have a time for the various feedings, and to vary as little as possible from the scheduled time. Such regularity will give the best results.

Eggs kept for hatching purposes should be placed in a clean box or basket and kept in an even temperature of about 55 degrees. A cool, dry cellar is a good place. If the cellar is damp and has an unpleasant odor, it is better to place them somewhere else. Sometimes the top shelf in a cool pantry may be used. Here the eggs may be placed with good results. It pays to take good care of such eggs. If kept for any length of time, they should be turned once or twice a day. There are very handy cabinets made for this purpose, where the eggs are placed in trays and by a single turn a whole trayful can be turned in a moment. Of course, the sooner eggs are put under a hen, after being laid, the better. But they can be kept in good condition for hatching for two or three weeks, if properly cared for, as directed above.

The possibilities of a setting of pure bred eggs is well illustrated by the facts in the following letter:

Lawton, Okla., Feb. 11, 1913.

"Dear Sir: In May, 1912, I ordered a setting of White Plymouth Rock eggs from you and out of the 15 eggs I hatched only 15 chicks. Of the 15 chicks we succeeded in maturing ten chickens, eight hens and two cockerels. Yesterday, February 10, at a poultry show in Comanche county a trio of these chickens won first prize on White Rocks, and also sweepstakes, being declared the best trio of any breed on exhibit. There were about two hundred coops on exhibit. Now I want to know if I shall keep all the money or had I better divide up. Also, and the serious information is: can we use one of these males

to coop with the hens for breeding purposes? There are no males here that we care to exchange for our own."

Indian Runner Ducks.

I would like to say, in reply to a recent inquiry published in the poultry department of KANSAS FARMER, that the pure white Indian Runner is a sport from the American Standard Fawn White variety. It originated, some twenty years ago, with a California breeder, Spencer by name, who was then one of the large breeders of the Fawn-white variety in the United States.

He was a man well versed in poultry lore, and knowing that the white varieties of every fowl is but a sport from some previously established variety; and that invariably these sports reproduced their kind, he spent much time and care in developing this new variety.

The White Runner is everywhere "making good." We find them identical with their parent in general characteristics and splendid egg laying habit.

They have two advantages, however. They breed absolutely true, and are invariably and always layers of white eggs only. No trouble with "tinted eggs" with breeders of the White Runners, for they are not only Albinos in color of plumage, but in egg color as well.—Mrs. CLYDE MYERS, Fredonia, Kan.

Why I Raise Anconas.

First—They are very hardy and easy to rear.

Second—They lay a larger per cent of fertile eggs.

Third—Cold weather does not affect their laying.

Fourth—At the age of four and a half or five months the pullets begin to lay.

Fifth—Lay as well the second and third years as in their pullet year.

Sixth—A ten weeks chick will weigh more than most any other breed at the same age.

Seventh—Heavy foragers, but light feeders.

Eighth—Lay large white eggs and lots of them.

Ninth—Stand confinement better than any other breed, making it possible to raise them on a back lot.

Tenth—Are among the most beautiful of the feathered family.

Eleventh—In disposition they are very much more gentle than others of the Mediterranean class.

Twelfth—Non-sitters.

Thirteenth—With good quarters and proper care they are heavy winter layers.—ERLE SMILEY, Beaver Crossing, Neb.

Kansas Boys' Corn Contests.

The boys of Kansas have been doing a lot of good farming in the last few years and have shown their elders some things. One boy from Doniphan county produced over one hundred bushels of corn from one acre, and another boy way up in Decatur county got a yield of over seventy-eight bushels. Another boy up in Cheyenne county, the extreme north-western corner county, grew one hundred and three bushels of potatoes from one-third of an acre.

Now this year the Agricultural College is making great plans for the biggest series of contests ever known in Kansas. C. D. Steiner, the Boys' Club man, wants to get 20,000 boys lined up in these contests for growing corn, kafir, potatoes, etc. He must have local men who will help. He must depend on Farmers' Institute officers, county superintendents, commercial clubs, bankers, preachers and a lot of people to help in this good work.

Along with these contests for boys there are suggested contests for the girls in bread, cakes, canned fruit and vegetables and sewing. Mr. Steiner is going to look to some of the above people and to public spirited women to help. He hopes these good folks will not wait too long. All preparations should be made in February and prizes announced. It is recommended that in each community one or more prizes be given in the form of a "trip to the State Institute" at Manhattan next winter with all expenses paid. Mr. Steiner wants to get a thousand letters from interested people. The little pamphlet describing these contests will be ready for mailing about the middle of February. Address Extension Division, Manhattan.

The Weakest Link

YOU CAN MAKE THE GATE THE STRONGEST SPOT IN YOUR FENCE BY USING THE

Cyclone Victor Gate

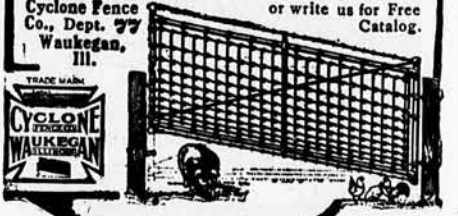
HEAVILY GALVANIZED

High-carbon, tubular steel, unbreakable frames. Large, heavily-galvanized, rust-proof wire fabric wrapped on the frames—no holes in the frame to weaken it—Double raise device; automatic stock-proof latch; adjustable stretcher bar; and other important exclusive features.

COSTS LESS THAN OTHERS not as good. Guaranteed for life.

CYCLONE ORNAMENTAL FENCE

is built in various designs for durability as well as beauty. Rust and Sag Proof; easy to put up and cheaper than wood. Your dealer has them—See him. Cyclone Fence Co., Dept. 77, Waukegan, Ill. or write us for Free Catalog.



ROUP

Be prepared for this dangerous disease, which is liable to break out in your flock without a moment's warning. Stop it immediately or it will attack every bird and the loss will be frightful.

KELLERSTRASS ROUP REMEDY

Positively cures. Prevents spreading of the disease, besides curing the sick birds. Also cures Canker quickly. Sold under a positive money-back guarantee. If your dealer can't supply you, send direct to us for 25c, 50c and \$1.00 sizes. FREE—"Kellerstrass Way of Treating Poultry Diseases." The most valuable book ever sent free to poultry raisers. Write for it today.

ROYAL MANUFACTURING & IMPORTING CO., 708 Royal Building, Kansas City, Mo.

\$8.50 - 63 EGGS

WE PAY FREIGHT



Greatest Bargain Ever Offered. Catalog FREE.

PETALUMA INCUBATOR CO., Box 311 Petaluma, Calif. Box 368 Indianapolis, Ind.

INCUBATORS

We now have incubators for less than \$4.00 delivered at your door.

Beats anything you ever heard of. I don't care how big an ad you may read in this paper about incubators. The Poultry Leader incubator will outmatch any other. Give me a chance to show you. Write for catalog and low prices.

EMIL OCHSNER, Box 15, Sutton, Neb.

Mandy Lee

New Principles in incubation. Every feature automatically regulated—heat, ventilation and moisture. The Mandy Lee is certain, simple, easy to operate. No chance for mistakes, simply follow plain rules. Chicks large and vigorous, the kind easily raised. Write for free book on incubator and Lee's famous Germozone, Lice Killer and Egg Maker.

GEO. H. LEE COMPANY, 1187 Harney Street, Omaha, Neb.

WE TEACH YOU

Learn to operate and repair automobiles. Training on vulcanizers, drill presses, lathes. Pattern making, moulding, brazing and driving. Free catalog. Lincoln Auto School, 2354 O St., Lincoln, Neb.

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Green Food For Poultry

DURING recent years an increased amount of attention has been paid by poultrymen everywhere to the furnishing of green food to their fowls during the winter months, when it is impossible in northern parts of the country, at least, for the birds to get fresh succulent pasturage out of doors. It has been the universal experience that an addition of green succulent food to the ration of laying hens tends to keep them in better physical condition and helps toward a better egg production, with consequently increased profits to the poultryman. On the poultry plant of the Maine Agricultural Experiment Station considerable attention has been given to this matter of supplying green and succulent food to poultry, and as a result of experience extending now over a number of years, a very satisfactory scheme of supplying this necessary part of the ration has been worked out.

It is, of course, obvious that if it is to be satisfactory, not only must the green food given to the poultry be of the proper kind to give good results in egg production, but also it must be something which can be produced and handled at small cost. Furthermore, a factor which is frequently lost sight of here is that fowls need something besides succulence in their so-called "green food." There is a distinction between a succulent fodder and a "green food" in the strict sense. One can supply succulence in the form of root crops like mangolds or other similar crops. A careful examination of the situation, however, indicates that probably the fundamental need of the fowls is not for succulence as such, but rather for the tonic effect which is produced by green plants. The green color of plants is due to the presence of chlorophyll, a chemical compound which is very rich in iron. In feeding fowls for high egg production, it is necessary that they be given a ration rich in protein. Only birds of very strong constitution and with thoroughly sound digestive systems can continuously handle for a long period the heavy laying rations carrying meat scrap and oil meal, which are now so widely used by poultrymen, with successful results for egg production. On these heavy rations there is always a tendency for the bird's liver first to become impaired in function and ultimately to become enlarged and diseased. As the matter has been studied at this station, it would appear that one of the chief, if not indeed the most important function of green food in the ration, is to counteract this tendency of the digestive system, and especially the liver; to break down under the strain of assimilating heavy laying rations over a long period of time. It would appear that the green food given to poultry acts primarily as a mild tonic rather than as a food in the proper sense. There is very little of this tonic effect produced from succulent non-green foods like mangolds. For this, dependence must be placed primarily upon chlorophyll bearing plants.

The practical problem, then, becomes to find a satisfactory and economical system whereby a supply of green food may be kept at hand for the birds at all seasons of the year when wanted. The following system of rotation in the green stuff supply has been in use for several years on the poultry plant of this station with entirely satisfactory results. It should be said that, owing to the small area of ground available for the poultry work at the station in relation to the number of birds it is necessary to carry, green food must be added to the ration practically throughout the year, not only for the adult fowls in the laying houses, but also for the chicks growing on the range. The number of birds reared is so great in proportion to the area which can be devoted to them that the natural pasturage is very quickly exhausted.

Beginning with the time in the fall of the year when the pullets are put into the laying house, they are given green corn fodder chopped fine in a feed cutter. This is fed stocks, leaves and ears (if there are any) all together. The pieces are cut from a quarter to a half inch in length by the feed cutter used. This green corn fodder is one of the most satisfactory sources of green food for poultry which this station has ever been able to discover. The birds eat it ravenously and in large quantities. It may be safely fed in larger amounts than any other green food yet tried. After the corn has been killed by frost so as no longer to be available, the birds are given cabbage and mangolds fed with the tops on. These plants serve until well into the winter (December or January). Then the oat sprouter is started and

green sprouted oats serve as the chief source of green food until well on into the spring (April or May). The green oats are supplemented with mangolds or with clover hay cut in short lengths with the feed cutter and steamed. In case clover hay is not available, cut alfalfa is sometimes substituted for this. As soon as possible in the spring, fresh green clover is cut from the range and fed to the birds in the houses. To the young chicks in the brooders, however, the best source of green food which has yet been found is green sprouted oats. To these little chicks only the tops are fed, and these are cut fine. In the regular crop rotation system carried out on the range, green corn, Dwarf Essex rape, mangolds and cabbages are planted each spring. The green corn, Dwarf Essex rape and the thinnings from the mangolds are used during the summer to feed both the adult birds in the houses and the growing chickens on the range after the natural pasturage has become exhausted. Dwarf Essex rape is an excellent source of green food for poultry, but it must be fed with great caution to birds which are laying, because if eaten in any considerable amounts it may color the yolk of the eggs green with disastrous results in the market.

Following such a system as is outlined above, it is possible to have throughout the year a continuance of green fodder well calculated to keep the birds in the best physical condition and at the maximum of productivity.—CHAS. D. WOODS, Director Maine Experiment Station.

INCUBATOR SUCCESS

(Continued from page twenty-two)

the beginning of the third week, or when you can tell the partially developed chick from the others. There will always be at least a few chicks that die at various stages of development, and it is better to have them removed before the hatch comes off.

If eggs were not set perfectly fresh, on the evening of the nineteenth day cut a woolen cloth the size of egg trays. Wring out of warm water so it will not drip, lay over eggs and quickly close the machine and sweat for fifteen minutes; then remove cloth and do not open machine till the following evening, when the hatch will be complete if the heat has been regular.

But when all is said and done it takes actual experience, a good deal of perseverance and finding out for ourselves before we may attain that degree of success to which we aspire. There is so much yet to learn, for incubation is still in its infancy and when we think we have just about "got there" we are liable to get a jolt and a set-back that will take all the conceit out of us. But the incubator—faulty as it is—has come to stay and has already proved a profitable investment to us in the raising of poultry and a saving of disposition in dealing with cranky old hens, and no doubt in the future will reach a greater degree of perfection and a correspondingly greater help.—MRS. J. T. BATES, Spring Hill, Kan.

Preservation of Soil Is Self-Preservation.

The greatest problem which confronts the American people today is the conservation of their soil fertility. This problem is more important than anything in politics, in commerce or in finance because it is fundamental to them all and no nation can continue prosperous whose agriculture is on the wane. Our population is growing at a rate which, if continued, will give us approximately 200,000,000 people in the next 50 years. The exigencies of business are such that an increasing number of these people will be engaged in transportation, manufacture, commerce and other non-producing vocations. These people, however, are all consumers, and must be fed. They offer the greatest market for the produce of the farm that any farmer in any land has ever had in all history.

American farmers have learned the art of agriculture in the hard school of experience, but have not learned the science. This thorough knowledge of the art has caused them to mine their soil instead of cultivating it in the belief that the elements of fertility were inexhaustible. Already this method of applying a full knowledge of the art without a corresponding knowledge of the science has resulted in depleted farm areas of large extent in the eastern portion of our land and of rapidly decreasing yields per acre in the great central basin which should be the granary of the world.

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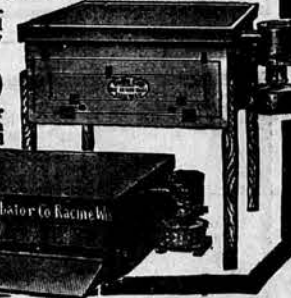
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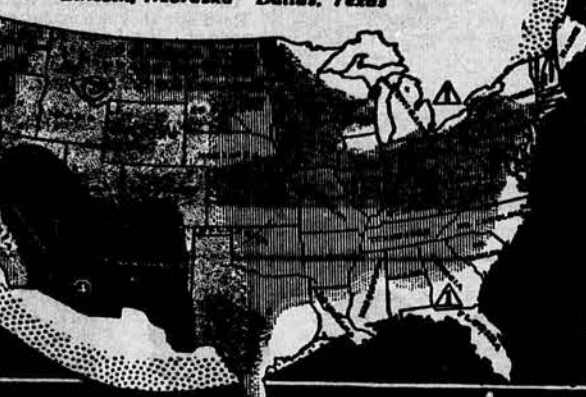
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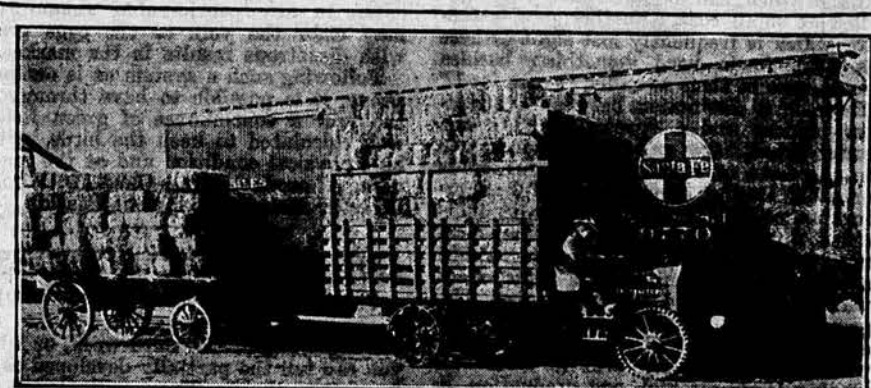
COUNTY FARM AGENTS

One Kansas County Organized—Two Have Money Raised—Five Busy Getting Funds

By J. H. MILLER, Director, K. S. A. C. Extension

THE United States Government and the State of Kansas have spent millions of dollars in educating young men in scientific agriculture. If scientific agriculture has no practical value on a Kansas farm, if nothing has been learned or taught that has a dollar value, then this tremendous tax should be stopped at once. A state senator told me the other day that he did not propose to have any scientific farmer come to his farm and tell him how to farm. If men like Ten Eyck, Jardine, Call, Reed, Cochel, Wheeler, Neale and others of the Agricultural College have nothing to offer to a clear-headed farmer who has not had an education in scientific agriculture, then the Agricultural College should be abandoned, the experimental station lands sold. This same

We are not going to spend any more time in arguing about the matter. Leavenworth County has a man at work; Harvey and Montgomery counties have the funds raised and waiting for us to find them men; Cowley, Allen, Miami, Lyon and Johnson counties have decided to have "county agents," and their committees are at work securing demonstration farmers and funds and we will not be able to supply men for any more counties until July or August. In fact we are not certain of finding enough men for all of the above counties. Therefore the friends who have been "viewing with alarm," scared for fear a college man might presume to step on their farms, may rest in peace. Our only difficulty from now on will be to find suitable men for the counties want-



GASOLINE ROUTE HANDLING ALFALFA HAY WITH A VENGEANCE.

Professor Call and not want him to come to his farm and study the soil on that farm; to listen to a lecture by Professor Wheeler on stock breeding and not want him to visit his herd and point out possible mistakes in breeding and feeding. At scores of institutes I have had men say to me, "That may be very well at Manhattan, but it won't work in this county." Then for heaven's sake why object when the college suggests a plan of sending one good man to a county to study actual soil and crop conditions week by week and month by month. One man says, "You ought to be in this county when we have weeks of rain," and then "roars" when we offer to send a man there to study wet and acid soils. Another says, "You ought to be here when it blows and tell us then how to stop it," and then "howls" about expense when the college offers to send a man to live in that county and help the farmers solve their many problems.

But the tax! Well, who should pay senator said he had no objection to going to an institute and hearing these men talk, but he did not want them to come on his farm. To be consistent, if a member of his family were sick he would go to town and hire the physician to give a medical lecture, but he would not allow him to come into his house.

I confess I can't understand the workings of a man's mind who will consent to listen to a lecture by such a man as the tax or the expense of helping to solve the problems of a particular county? Should the state pay it all? Would that be fair? The United States Government offers to a limited number of counties \$500 a year, and according to the plan proposed by the college 100 farmers must pay \$500 a year. It would seem to be but fair that the county as a whole might pay \$1,000 a year. The balance of salary and expense would be subscribed by public spirited citizens. These 100 farmers would represent every township and no two farms adjoining, and would thus serve as demonstration farms for all the neighborhood where farmers could meet at the monthly visit of the county agent. Each of these farmers will be requested to grow seed plots of the various farm crops and thus grow pure seed for everybody in the county. No experiments would be tried, nothing done that the county agent, representing the college, would not think likely to pay a profit. He would be able to discover the best farmers in the county and carry reports of their successes to all parts of the county. He could be a regular marketing agent of young breeding stock, from cattle to poultry.

ing them. We will organize no others now until after June 1.

American Royal to Stay.

By an arrangement recently completed, the American Royal will remain on its present site. There has been considerable discussion as to the future of this great show, and some little concern. The stock yards people need the room and buildings, the grounds are too small for such a big show, and a new location seemed necessary. As no satisfactory site could be found, the best solution of the question has been found.

The officers of the American Royal for the current year are: President, H. C. Duncan, Osborne, Mo.; vice-president, J. C. Ewing, Youngstown, Ohio; secretary, T. J. Wornall, Liberty, Mo.; treasurer, Robert H. Hazlett, El Dorado, Kan. These officers, together with R. J. Kinzer, Kansas City; W. H. Gentry, Sedalia, Mo.; G. E. Clark, Topeka, Kan.; C. E. Caldwell, Burlington Junction, Mo.; W. H. Weeks, Kansas City, and George R. Collett, Kansas City, constitute the board of directors.

Orchard Help for Kansans.

About March 1 G. O. Greene of the Extension division of the Agricultural College will begin the annual orchard visiting that has been carried on for several years. Hundreds of orchards need pruning and a general "dressing up," and if a farmer wants a visit and a "prescription" he makes his application and it is filed. Later E. C. Johnson, superintendent of institutes and demonstrations, makes out a convenient circuit for Mr. Greene and the traveling expense is pro rated among several. For example, a partial circuit is made up now for Marshall and Nemaha counties, another down in Neosho and Allen counties, and another about Wichita. Farmers who apply now will be put on their nearest circuit. It is understood also that the owner of the orchard will invite all orchardists in his neighborhood to be at his farm at the hour of Mr. Greene's visit. A practical lesson in fruit tree pruning will be given.

Then circuits are being formed now for spraying demonstrations that will continue through from March to June. Orchardists who have never sprayed or who are not certain of their methods should unite for a date. The college cannot afford to own a power sprayer and ship it over the state, but groups of men are urged to buy such a spraying outfit, or at least a good barrel outfit, costing from \$30 to \$40. Mr. Greene has such an outfit that he will ship if desired. Up in Doniphan County or-

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Advertising "bargain counter." Thousands of people have surplus items or 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 3 cents a word for one week; 8 cents a word for two weeks; 12 cents a word for three weeks; 14 cents a word for four weeks. Additional weeks after four weeks, the rate is 1 1/4 cents a word per week. No "ad" taken for less than 50 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 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

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WANTED—RAILWAY MAIL CLERKS. Many needed for parcels post. Entrance salary now \$75, rapid promotions. Write Ozment, 44 R., St. Louis.

RAILWAY MAIL CLERKS WANTED— \$900 first year, promotion to \$1,800. Examinations May 3 in every state. Common education sufficient with my coaching. Full information free. Write for booklet V809. Earl Hopkins, Washington, D. C.

WANTED—2,000 RAILWAY MAIL clerks and clerk-carriers for parcel post. Examinations soon. Splendid salaries. Trial examination free. Write Ozment, 44 R., St. Louis, Mo.

FREE ILLUSTRATED BOOKLET TELLS about 300,000 protected positions in U. S. service. Thousands of vacancies every year. There is a big chance here for you, sure and generous pay, lifetime employment. Just ask for booklet S-809. No obligation. Earl Hopkins, Washington, D. C.

MEN AND WOMEN WANTED FOR GOVERNMENT positions. \$90.00 month. Annual vacations. Short hours. Parcel post means thousands of railway mail clerks needed. "Full" unnecessary. Farmers eligible. Write immediately for free list of positions open. Franklin Institute, Dept. L 86, Rochester, N. Y.

SITUATION WANTED.

A GOOD A NO. 1 MAN 35 YEARS OLD wants a good place to work on farm. Don't use tobacco nor liquor and can do all kinds of farm work. Understand care of all kinds of stock and good machine man. Give full particulars and state wages. Edward Rieff, Route 1, St. Peter, Minn.

CATTLE.

HOLSTEIN MALE CALF, 11 MONTHS old, from Advanced Registry ancestry. G. W. Sutherland, Greenwood, Mo.

FIVE PURE-BRED AYRSHIRE BULL calves for sale. Herman Christensen, Milltown, Wis.

FOR SALE—3 DOUBLE STANDARD Polled Durham bulls of serviceable age, 4 that will be soon. Inspection invited. C. M. Albright, Overbrook, Kan.

FOR SALE—REGISTERED JERSEY bull calves of superior breeding at farmers' prices. George H. Combs, 508 Benton Blvd., Kansas City, Mo.

FOR SALE—AN ENTIRE DAIRY HERD of 40 cows, Jerseys, Guernseys and Holsteins; all young, with milk records. Will sell reasonable. Satisfaction guaranteed. Jack Hammel, 215 Adams St., Topeka, Kan.

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REGISTERED HOLSTEIN—FRIESIAN bull calves for sale. One ready for service. Price, \$65.00. T. M. Ewing, Independence, Kan.

EIGHT YOUNG HOLSTEIN BULLS from high class sires and A. R. O. dams. Choice individuals, well grown, all registered, attractive prices. Sunflower Herd, Oskaloosa, Kan. F. J. Searle, Prop.

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HOLSTEIN CALVES—SIX CHOICE HOL- stein heifers and one bull, fifteen-sixteenths pure, three to four weeks old. \$20 each, crated for shipment anywhere. All nicely marked and from heavy milkers. Edgewood Farm, White-water, Wis.

FOR SALE—TWENTY-FIVE No. 1 DAIRY cows, Jerseys, Holsteins and Guernseys; 34 to 6-gallon cows, 3 to 7 years old. Price, \$50 to \$80, or a special price for the herd. O. N. Himeburger, 405 Filmore St., Topeka, Kan.

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FOR SALE—BAY PERCHERON HIGH- grade stallion, coming 2 years old; 1,400 pounds. Will J. Stewart, Route 22, Wakarusa, Kan.

MULES FOR SALE—37 HEAD OF COM- ing 3-year-old mules, about half mares; all big-boned and from 14.2 to 16 hands high. A few of them broke to harness. C. W. Higginbotham & Sons, Rossville, Shawnee Co., Kan.

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ONLY \$275 BUYS SMALL FARM SHARE in profit paid until buyer takes possession. Write quickly for views and particulars. Geo. W. Deen, Box 543, Waycross, Ga.

TO TRADE—A GOOD QUARTER SEC- tion of western land for cattle, hogs, or would take good auto for part. A. G. Woelfel, Pawnee Rock, Kan.

260 ACRES VALUABLE HOMESTEAD land, eastern Colorado; some improvements. Will trade for live stock. John Anderson, Route 2, Topeka, Kan.

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IF WE WOULD GIVE YOU A 40-ACRE farm free along our line of railroad, would you be willing to tell your friends about our land opening? For particulars address Mr. J. B. Clark, Land Commissioner, Live Oak, Perry & Gulf Railroad Company, Box 137, Live Oak, Florida.

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MISCELLANEOUS.

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chards were being cut out because farmers would not spray. The college preached spraying and then actually went up there and sprayed the orchards for nothing. Now new orchards are being planted. Everybody who owns a dozen apple trees should spray them. The Kansas Agricultural College will help those who ask for help. Address Superintendent E. C. Johnson, Manhattan, Kan.

Time to Get Busy.

If the remark made by a speaker at the recent meeting of the State Board of Agriculture is true, then it is time for the farmers of Kansas to get busy. This statement was to the effect that at the present time 80 per cent of the farms in Kansas have only the necessary horses and mules needed to work them, and no other live stock. If this is true it indicates a great leakage, a waste of potentiality that can only be stopped by restocking the farm. The rough feed destroyed without any return and the consequent lack of nature's own fertilizer, barnyard manure, would assume colossal proportions if it were possible to compute it. Last summer when visiting the old country I found that only those communities were steadily prosperous in general farming where emphasis was laid on the breeding and feeding of good live stock. Since Christmas I have received letters from Cambridge-shire in England which answer questions as to present conditions of stock farming in that section of England. To quote: "Cattle are very dear now. Fat beasts are bringing 9 shillings per stone (or \$2.16 for 14 pounds, which means about 15 1/2 cents per pound), the buyer having the benefit of the hide and offal in the contract." And again, "I consider that farming under present conditions in England has never been better. In other years store cattle have been cheap, but this year we hope to make more of them owing to the fact that dealers are able to buy only in England and Scotland. This is because of the prevalence of the foot and mouth disease in Ireland. When there is no quarantine in force they furnish from Ireland a large number of store (stocker) cattle."—ALBERT DOCKING, Manhattan, Kan.

It would seem that the ordinary top market prices for good beef cattle in England are about as high as the top reached for our best show steers when sold for Christmas beef or under other extraordinary conditions, and still British farmers report farming in their island is in better condition than it has ever been. We are certainly paying high enough for our stockers and feeders in this country now, but we are recompensed for this by the prices which we receive for the finished animal. If American farmers could eliminate the uncertainties of the market it is doubtless true that there would be a great deal more beef raised, a great deal more money made, and a great deal of improvement in soil conditions accomplished. Prices of market cattle, or rather the uncertainty of these prices, is one of the great controlling factors in the present shortage and in the reluctance which farmers show to raising beef on high priced land.

Sixteen boys in a Nebraska corn growing contest averaged 84 bushels to the acre. Looks like the old men might increase their averages some.

Congress is preparing to spend money in anti-hog cholera serum demonstrations and in standardizing serum. Something of this kind is sorely needed.

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SINGLE COMB WHITE LEGHORNS—Trap nest bred 10 years for egg production. Silver cup winners in Kansas City shows. Utility hens, cockerels, \$1.25; pullets, \$1.50. Winners for any show. Catalog free. Ackerman Leghorn Farm, R. F. D. 5, Rosedale Station, Kansas City, Kan.

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FOR SALE—WHITE LANGSHAN COCK—erels, \$1.50 and \$2 each. Eggs, 15 for \$1; 100 for \$5. Henry Neldig, Madison, Neb.

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BLACK LANGSHAN COCK WON FIRST at three state shows and first at three county shows. Also two Partridge Rock cockerels at \$5.00. C. O. Crebbs, Stafford, Kan.

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INCUBATOR CHICKS DIE BY HUN—dreds with white diarrhea. We save them. Send address of ten people using incubators and get free details of how we hatched, raised and fed 1,400. Alva Remedy Co., Alva, Okla.

"Certainly Does Pay"

Here is what *Thol R. Wolfe*, a good poultry breeder of *Conway Springs, Kansas*, writes under date of February 8, 1913:

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BARRED ROCKS—DENVER WINNERS, first cockerel, 5 entries, 4 ribbons. Special matings hold 56 premiums; utility flock, 12. Eggs, 15, \$3; 30, \$5; 15, \$1.25; 60, \$4; 100, \$6. Mrs. D. M. Gillespie, Clay Center, Kan.

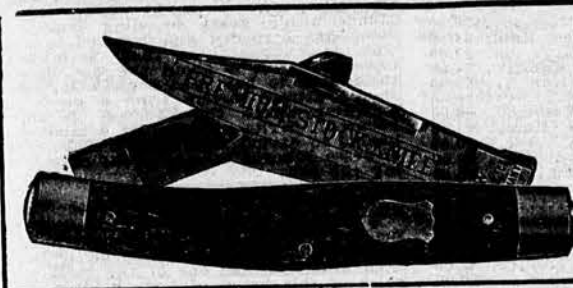
WHITE PLYMOUTH ROCKS—MY BIRDS win at the state shows. Stock and eggs for sale. Satisfaction guaranteed. Flowercrest, Holt, Mo. Mrs. J. W. Porter.

BUFF PLYMOUTH ROCKS—COCKERELS at \$3 and \$

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We illustrate here two of the best and handiest knives for a farmer or stock breeder that we have ever been able to secure.

The blades of both these knives are made of the finest tempered tool steel, finely ground and highly polished. They are brass lined, with German silver bolsters and Stag horn handles. Either would cost from \$1.00 to \$1.25 in any retail store.



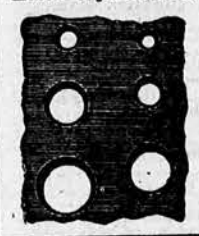
Premium Stock Knife.

Illustration about two-thirds actual size.

Three blades, fully warranted.

The Punch-blade Knife, (the illustration of which is less than one-half actual size), has one large blade, 2 1/2 inches long, and a special punch or reamer blade, 2 1/2 inches long. This blade may be used for making various sized holes in leather for buckles, rivets, belt lacings, etc.

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EVERY BOY WANTS A GUN.

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Best quality, high test, hardened blue steel barrel, full choke. Extra heavy reinforced breech with stock and fore end of genuine walnut. Hard rubber butt plate. Patent stop on fore end. Can be taken down same as double barrel gun. The frame is best grade forged steel, fully nickel plated. Has top stop and rebounding hammer, with shell ejector. The gun is fully warranted for the use of smokeless powder shells.

The real live, worth while boy does not live who would not like to own a good shotgun or rifle. We have one for you.

Read the description of these fine guns, and fill in your name and address for one at once.



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Take down, single shot. Has heavy breech designed especially for smokeless powder ammunition. Has a 20-inch new trip-up barrel. Blue frame, patent lever, positive shell extractor. Full oval stock. Shotgun butt with rubber butt plate. Bead front and open rear sights. Weight four pounds. Shoots 22 calibre, all length cartridges.

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Gentlemen—I want one of your Hunter's Pride Shotguns.

New Marksman Rifles.

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TOO LATE TO CLASSIFY

QUIVERA HERD OF DUROC JERSEYS

A few choice summer boars and gilts by Quivera 106611 and M. & M's Col. 111095, for sale.

E. G. MUNSELL, Route 4, Herington, Kan.

Buy Sows Bred to Model Top.

On March 10 Samuel Drybread at Elk City, Kan., will sell a number of Duroc sows bred to the great Duroc sire, Model Top. This hog was the sire of Beauty's Model, which was junior champion of Missouri State Fair, 1910; champion and grand champion, 1911 and 1912, and Missouri Model Top, a litter mate, was champion at

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INDIAN RUNNER DUCK EGGS, 20 FOR \$1.00. D. Flesher, Princeton, Kan.

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INDIAN RUNNER DUCK EGGS—English strain. Pure white eggs, \$1.50 per 15. Miss Pearl Grandfield, Maize, Kan.

EGGS FROM BLUE AND BUFF IMPORTED ORPINGTON DUCKS, \$3.00 per dozen. Selected matings, \$5.00. Orpington Ducks won two successive year egg laying contests. Emma Holtz, Wilbur, Neb.

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INDIAN RUNNERS, AMERICAN AND English. Greatest layers. Also Silver Wyandottes. Eggs, \$2 for 15, postpaid. Orders booked now. Mrs. Ed Bergmann, Route 9, Paola, Kansas.

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THOROUGHbred POULTRY—SIXTY varieties. Catalog free. Jordan Poultry Farm, Coffeyville, Kan.

43 VARIETIES, POULTRY, PIGEONS, ducks, geese, water fowl. Incubators. Feed and supplies. Catalogue 4 cents. Missouri Squab Co., Dept. C. V., Kirkwood, Mo.

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HARRY INMAN & SONS, ROUTE 1, KEOKUK, Iowa, can furnish you eggs for hatching from Black Javas, Reds, Hamburgs, White Polish Bantams and Indian Runner Ducks. Write for mating list.

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NICKERSON POULTRY YARDS—LIGHT Brahmata exclusively. Nickerson, Kan. 27 years a breeder. Winners wherever shown. Eggs, \$3 straight.

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SINGLE COMB BLACK MINORCAS—Stock and eggs for sale. Cockerels, \$1.25 to \$3.00 each. Dan Oberhelmann, Holstein, Mo.

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BANTAMS, SEBRIGHTS, JAPANESE, Cochins, Games, Rose Combs, Brahmata. Stock and eggs. Send 2c stamp for circular. A. A. Fenn, Box 105, Delavan, Wis.

Americans are the greatest meat consumers on earth, and for this reason the shortage of meat producing animals has a direct appeal to all consumers, while the question of soil fertility might appeal only to those who cultivate it. The people of the United States consume an average of 68 pounds of pork per capita per year as compared with 63 pounds for Germany, 33 pounds for Great Britain, and 14 pounds for France. Americans eat 80 pounds of beef each year per capita as compared with 56 pounds for Great Britain, 32 pounds for Germany, and 39 pounds for France. When it comes to mutton, England stands at the head as a consumer, with 26 pounds per capita to her credit. France follows with 20 pounds, the United States with only 6 1/2 pounds, and Germany with only three pounds.

Reading becomes a habit which may become good or pernicious. Get a boy or girl into the habit of reading good books and papers and he will care for no other kind, while they will influence his life. Get him started on bad literature and the habit grows with his evil ways of thinking.

Silage for horses is a splendid feed if properly used. As it takes the place of grass, it should be fed like grass. Work horses need a nitrogenous feed, but a little silage adds palatability and tones the digestive apparatus.

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QUALITY CHICKS—LEADING VARIETIES. Prices reasonable. Request folder. Capacity, 15,000. McCune Hatchery, Southeast, Ottawa, Kansas.

FOR QUICK SALE—EGGS—STOCK from Moore's Partridge Columbian Silver Pencilled Buff, Barred and White Plymouth Rocks; Cochins Bantams. Eggs prepaid. Favorite Poultry Farm, Stafford, Kan.

BOOK YOUR ORDERS FOR EGGS OF Barred, Buff, White Rocks, White and Brown Leghorns, Wyandottes, Langshans, Brahmata, Orpingtons, R. I. Reds, Geese, Ducks, Turkeys and Guineas with the Monroe Poultry Yards, Monroe, Iowa.

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SINGLE COMB REDS—100 EGGS, \$5.00; 15, \$1.50. Gertrude Haynes, Meriden, Kan.

GOOD SINGLE COMB REDS—STOCK for sale. Elmer Nixon, Prairie View, Kan.

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ROSE COMB RHODE ISLAND RED eggs. First pen, \$2 1/4, cockerels, \$2.50 per 15; second pen, first cock, Hutchinson, 1913, \$2.00 per 15. Lloyd Blaine, Nickerson, Kan.

BIG-BONED DEEP ROSE COMB REDS—Eggs, per setting of 15, \$1.00. Orders booked now. Mrs. William Zinn, Geneva, Neb.

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R. C. R. I. REDS—HIGH SCORING heavy laying strains, \$1.50 per 15; \$6.00 per 100. Mrs. O. Fitzsimmons, Yates Center, Kan.

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PRIZE WINNING MOTTLED ANCONAS. Eggs and baby chicks. Circular free. W. Hardman, Frankfort, Kan.

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FOR SALE—HAVE THREE WHITE Holland cockerels, weight 28 lbs. Address Miss Lillian Schaal, Lexington, Mo.

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PURE-BRED HEAVY BONE MAMMOTH Bronze Turkeys. Write for prices and turkey pointers. Mrs. Henry Bachelder, Fredonia, Kan.

BRONZE AND BOURBON TURKEYS, Runner Ducks, White Wyandottes, Light Brahmata. Stock and eggs. Mrs. Emma Ahlstedt, Roxbury, Kan.

MAMMOTH BRONZE TURKEYS, FIRST prize winners at Kansas State Show, 1913. Toms, \$5.00 and up. Eggs in season. Mrs. E. D. Ludwig, Waynoka, Okla.

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Three blocks from car line and paved streets of Atchison, Kan. About nine acres in fruit and garden. Beautiful 11-room house, city electric lights, steam heat, sewer, bath, hot and cold water, private waterworks with electric pump. About 8 blocks from school. Atchison's educational facilities unequalled. An ideal home with all the city advantages and none of its taxes. Take advantage of this before somebody gets ahead of you. Address

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KINGMAN 1,120 a. solid body, 350 cult., 500 COUNTY bot., fair bids., near market; price \$32.50, half cash, bal. at 5 per cent. **JOHN P. MOORE**
BANCH LAND CO., Kingman, Kansas.

183 ACRES.
Two miles from this town. Well improved, 40 acres pasture, rest farm land; 40 acres wheat goes with place. Possession March 1. Will carry back \$10,000. Price, \$16,000.
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FINE 160 A. FARM, lime stone soil, good house, barn, etc. Nicely located. Will produce wheat, corn, clover, alfalfa. Part cultivated, balance pasture, meadow. Close to Fredonia, Kan., in oil gas belt. Will take \$40 a. and is worth \$75. Address
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\$1.75 PER MONTH
For ten months buys level, well located lot in Plains, Kan. A gilt-edge proposition for those who act promptly. Only a few to be sold at this price. Send \$1.75 first payment, or write for complete list. A. C. T. **QUICK JOHN W. BAUGHMAN**, Drawer B, Plains, Kan.

MANITOBA Section 5-5-28, W. 1, no steam plow proposition. Close to half dozen elevators. \$15, terms. Discount for cash.
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97 1/2 Acres fine river bottom land, one mile from Abilene, on main road, well improved; 35 acres alfalfa, 40 acres wheat. Wheat all goes. Not a foot of waste land. For sale at a bargain. Write for particulars and list.
Briney, Pautz & Danford, Abilene, Kan.

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Eighty acres, 4 miles from Osage City, Kan.; 48 acres in cultivation, family orchard, native grass pasture and meadow; 4-room house, good condition; good cellar, stable for five horses, corn crib, hen house, buggy house, good water, close to school, R. F. D. Price for quick sale, \$3,200.
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100 EASTERN OKLAHOMA FARMS
For sale on terms like paying rent. Will take live stock or town property for first payment. Good corn, cotton, wheat, oats, alfalfa and fruit land, from 20 to 500-acre tracts. Price from \$10 to \$50 per acre. For particulars see or write
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READ THIS—160 acres all smooth limestone soil, no rocks, good improvements, close town, mail route, phone. Price, \$35 per acre. You will pay \$125 for the same kind of land in the north part of the state. This farm is clear of incumbrance. Can secure a loan of \$2,500 if desired. Possession at once. Party is old and says sell.
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640 ACRES, SASKATCHEWAN, CANADA.
2 1/2 miles from Liberty. Good house, two wells, fine water, level land, fine soil, 600 acres broke, 400 acres ready for crop. Good for 10,000 bushels wheat this year. This section was selected by one who had first choice in this now famous wheat district. Price, \$25,000, half cash, balance terms to suit.
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In good farms, 160 to 640 acres each, with fertile soil, pure water, ideal climate, in a highly developed community. An opportunity of a lifetime to get a good home on a rental basis. Write at once.
Texas Land & Development Company,
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ARKANSAS.

Model fruit and stock farm of 240 acres, for sale or exchange, situated in Ozark mountains, in heart of the famous fruit belt of Benton Co., Ark., on the Frisco R. R., near Hiwassee station. Benton Co. is located in the northwest part of the state, with elevation of 1,330 feet above sea level; plenty of rainfall, no irrigation necessary and the healthiest climate on earth. 135 acres of farm is in standard apples—Jonathan, Entress, Gano and Ben Davis, near an equal amount of each variety, 15 acres of Elberta peaches, all trees good bearing age; balance in cultivation, pasture and wood land with abundance of pure spring water, affording running water all the year, all well fenced with hog-tight wire fence. Land is gently rolling, good soil, three-room house, barn and outbuildings, loading station half mile of orchard, good roads, schools and churches; a very desirable place to live. Will sell on good terms or will exchange for good property well located, or will sell or exchange a portion to suit purchaser. Price, \$125 an acre. Address the owner, **S. C. Robinson**, Hiwassee, Ark.

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BARGAINS in Ness County land, large and small tracts. Write now for lists and literature. **C. H. BRASSFIELD**, Ness City, Kan.

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320 Acres in Russell County. Price right. Good for alfalfa, corn and stock. Owner, **E. W. VOORHIS**, Russell, Kan.

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80 acres, well improved, 2 1/2 miles from town and graded school; good alfalfa land. Price \$8,000. Write for list. **V. E. NIQUETTE**, Salina, Kan.

OUR RED LETTER SPECIAL.
Will trade your property. Get into touch with live wires. Guaranteed deal. List today. Write for particulars. **MID-WEST REALTY EXCHANGE**, Riverton, Nebr.

FOR SALE—24-section ranch in rain belt of the Panhandle of Texas. Well watered and fenced, close to high school and railroad. Plenty of farming land.
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320 ACRES of good farm land in Gray County, Texas, improved, rented this year on shares. Three miles of station. Other land for sale. Write
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CROPS WILL PAY FOR IT. 329 acres, all smooth, improved, only \$3,600, with \$400 cash, balance crop payments. Send for details and list of other snaps for cash or easy terms.
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100 acres near Olathe, well improved, fine, \$110.00 per acre.
Fifty-seven acres, improved, best of Kaw bottom land, greatest bargain in the county. AT KANSAS CITY'S DOOR. Write for lists.
T. H. MILLER, Olathe, Kansas.

150 THOUSAND ACRES
Black and chocolate loam farm land in Texas. Price, \$7.00 to \$10.00 per acre. Full description and testimonials furnished free. Write me today.
E. M. GIFFEE,
Blossom House, Kansas City, Mo.

35,000 LAND, PROPERTY, and the best paying business in eastern Kansas, all clear and priced right. Want good farm or ranch in Kansas corn belt. Will pay good price if worth it. Write for particulars. Box 156, Olathe, Kan.

130 ACRES
3 1/2 miles of paved streets of Ottawa, Kan. Six-room house, barn 40x50, 15 acres hog-tight, 15 acres clover, 40 acres in blue grass, remainder in cultivation. Price, \$75 per acre. Terms to suit. Don't wait to write, come at once. Owner must sell.
MANSFIELD, Ottawa, Kan.

TWO QUARTER SECTIONS—MUST SELL.
Both have paid better than 10% interest on price now asked through three of the driest years ever known. We will guarantee you 10% this year, put up the cash in advance. One quarter only 1 1/2 miles from county seat, the other only 3 miles from railroad town. All smooth, rich land, and in the rain belt. Price, \$14,000. \$7,300 cash will handle both farms. Will sell them separate on same terms.
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Will make a very attractive proposition to agents. I have a splendid assortment of land in Minnesota, North Dakota and Montana. Write me. My proposition includes a liberal commission for selling.
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If you would like to live in the most beautiful city in the West, with unsurpassed educational, business and religious advantages, in a city clean, progressive, where real estate values are low but steadily advancing, where living expenses are reasonable, a city with natural gas at lowest price, address the
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EXCHANGES EVERYWHERE. Get our fair plan of making trades all over the United States. **Graham Bros.**, El Dorado, Kan.

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Donwell, 3621 Wyandotte, Kansas City, Mo.

Live Trades Would you trade if suited? Write for our list of snappy exchanges and listing blank. Describe property first letter. **Eberhard & Mellor**, Whitewater, Kan.

EXCHANGE—Will trade my equity in 80 acres, Saline County; 6-room house, barn, well and mill, cistern, chicken house, some fenced hog-tight, 50 acres cultivated, 1 1/2 miles to school, 3 1/2 miles to two towns; mortgage, \$3,500, at 6 per cent. For live stock, hardware or clear rental.
ED. A. DAVIS, Minneapolis, Kansas.

When writing advertisers, please mention **KANSAS FARMER**.

In this week's issue of Kansas Farmer Ratekin's Seed House of Shenandoah, Iowa, appear with quite an extensive price list. They have listed practically everything for the present demand for seeds. If the price list is carefully gone over it will be readily seen that you can be satisfied with many different kinds and good prices on clover and grass seeds, seed grain, forage and fodder crops, seed corn and seed potatoes.

FIELD NOTES

Harter's Average, \$41.00.

J. H. Harter's annual Poland China bred sow sale held at Westmoreland, Kan., February 15, was, as usual, well attended, and fairly satisfactory prices were realized. However, much of the offering was bred late and a few gilts sold open. This, together with the fact that the offering as a whole lacked fitting, resulted in a great deal lower average than Mr. Harter would otherwise have received. The entire offering, including open gilts and fall boars, averaged \$41, lacking a few cents. No. 2, a tried sow sired by Mogul's Monarch, topped the sale at \$68, going to M. T. Flood of Custer, Okla. Following is a list of representative sales:

1—M. F. Flood, Custer, Okla.	\$59.00
2—William Herrington, Blaine, Kan.	54.00
3—M. F. Flood	57.00
4—Henry Krueger, Bremen, Kan.	51.00
5—L. D. Arnold, Manhattan, Kan.	63.00
6—F. E. Swanson, Randolph, Kan.	39.00
7—S. R. Barry, Manhattan, Kan.	56.00
8—J. O. Crowley, Havensville, Kan.	64.00
9—F. E. Swanson	50.00
10—William Littlefield, Belvue, Kan.	50.00
11—John Grindle, Garrison, Kan.	51.00
12—A. E. Nelson, Olsburg, Kan.	50.00
13—H. V. Elbert, Green, Kan.	46.00
14—Ed Welter, Flush, Kan.	47.00
15—H. V. Elbert	42.00
16—F. Schmitz, Alma, Kan.	39.00
17—M. A. Ryan, Blaine, Kan.	37.00
18—W. A. Dempsey, Blaine	36.00
19—Rae & Son, Randolph, Kan.	36.00
20—A. J. Reedy, St. Mary's, Kan.	43.00
21—J. M. Rhodes, Topeka, Kan.	42.00

Peckham Makes Good Sale.

R. J. Peckham's annual China bred sow sale, held at Pawnee City, Neb., February 20, was well attended by breeders from different sections of Nebraska and Kansas. Others were represented by bids carried by the different fieldmen, but cholera in the neighborhood kept local buyers away and resulted in a much lower average than the offering deserved. For it is doubtful if a like offering of spring gilts ever went through a sale ring in Kansas or Nebraska. The entire lot, composed entirely of spring gilts, averaged \$40.50. No. 3, a magnificent gilt of March farrow and weighing 415 pounds, topped the sale at \$85, going to J. W. Leeper of Norton, Kan. Every gilt in the sale was sired by Mr. Peckham's great breeding boar, Blue Valley Gold Dust. Following is a partial list of sales:

1—W. A. Lingford, Dannenberg, Neb.	\$62.50
2—J. W. Leeper, Norton, Kan.	85.00
3—J. W. Anderson, Leewardville, Kan.	61.00
4—U. G. Higgins, Nelson, Neb.	52.50
5—F. C. Swierczinsky, Belleville, Kan.	57.00
6—Henry Wisel, Roca, Neb.	57.00
7—G. S. Hamaker, Pawnee City, Neb.	50.00
8—Jacob Edmund, Roca, Neb.	60.00
9—F. Tangeman, Seneca, Kan.	41.00
10—M. T. Williams, Valley Falls, Kan.	35.00
11—Wm. Werner, Pawnee City, Neb.	40.00
12—L. C. Branic, Hiawatha, Kan.	41.00
13—J. A. Sparke	40.00
14—T. J. Meisner & Son, Sabetha, Kan.	40.00
15—Carl Jensen & Son, Belleville, Kan.	44.00
16—Carl Jensen & Son	40.00

S. J. Miller Changes Ad.
Owing to the tragic death of Col. George Bellows, the Percheron and jack sale of S. J. Miller, Kirksville, Mo., on March 6, will be conducted by Hieronymus Bros.

A. J. Erhart Sale Averages \$55.00.

The Poland China sale held on February 22 by A. J. Erhart & Son at Adrian, Mo., was a great success. Seventy-seven head averaged \$55.00. The sale of Hallsville, Mo., topped the sale at \$82 at \$102.00. The sale was well advertised and a large crowd of breeders from several states was present. The sale was a snappy one and the prices obtained were very satisfactory to Erhart & Son. Cols. Harriman, Sparks, Robbins and Beard did the selling. Following is a report in full:

1—W. R. Beasley, Washington, Mo.	\$75.00
2—W. A. Simpson, Parkville, Mo.	72.50
3—J. B. Dillingham, Platte City, Mo.	72.50
4—William Frazier, Adrian, Mo.	61.00
5—T. A. Conrad, Timken, Kan.	62.00
6—J. F. Brown, Dunigan, Mo.	55.00
7—W. A. McConnell, Eldorado Springs, Mo.	51.00
8—Ed Frazier, Drexel, Mo.	42.50
9—James Ewing, Crete, Mo.	47.50
10—H. Taylor, Bronough, Mo.	45.00
11—C. C. Frazier, Drexel, Mo.	60.00
12—Blain Crawford, Walker, Mo.	60.00
13—E. Knox, South Haven, Kan.	60.00
14—G. W. Atkins, Adrian, Mo.	93.00
15—R. L. Beagun, Harrisonville, Mo.	41.00
16—Charles Decker, Butler, Mo.	61.00
17—A. Voght, Olathe, Kan.	67.00
18—R. A. Hizer, Adrian, Mo.	46.00
19—W. W. Van Meter, Mt. Vernon, Mo.	52.50
20—A. M. Frazier, Adrian, Mo.	54.00
21—F. Baldwin, Boonville, Mo.	71.00
22—J. C. Hall, Hallsville, Mo.	52.00
23—E. Shongert, Chamolis, Mo.	58.00
24—George Argentbright, Adrian, Mo.	52.00
25—Ed Frazier	51.00
26—W. C. Pritchard, Walker, Mo.	77.00
27—Ben Bell, Jasper, Mo.	71.00
28—I. A. New, Drexel, Mo.	40.00
29—Harry Wales, Peculiar, Mo.	46.00
30—J. C. Hall	102.00
31—G. Banks, Lawrence, Kan.	54.00
32—A. B. Polhorn, Harrisonville, Mo.	60.00
33—J. Van Meter, Cleveland, Mo.	56.00
34—John Gildow, Jamesport, Mo.	75.00
35—H. B. Green, Adrian, Mo.	53.00
36—J. R. Clene, Iola, Kan.	50.00
37—Ed Barnes, Boston, Mo.	50.00
38—R. Scott, Amsterdam, Mo.	41.00
39—W. Z. Baker, Rich Hill, Mo.	61.00
40—Alterberry, Modesto, Mo.	62.00
41—J. Van Meter, Drexel, Mo.	40.00
42—O. M. Monse, Altoona, Kan.	41.00
43—W. F. Oakes, Adrian, Mo.	50.00
44—G. Banks, Lawrence, Kan.	69.00
45—J. B. Slight, Adrian, Mo.	42.00
46—T. J. Van Meter, Judsona, Ark.	44.00
47—A. Decker	45.00
48—F. Semaley	51.00
49—J. E. Axline, Oak Grove, Mo.	43.00
50—W. H. Bareff, Sparta, Mo.	50.00
51—G. Banks	68.00
52—W. S. Absinger, Adrian, Mo.	52.00
53—W. E. Copeland, Waterville, Kan.	70.00
54—H. P. Green, Hickman Mills, Mo.	62.00
55—A. G. Banks	40.00
56—T. B. Longford, Adrian, Mo.	41.00
57—H. W. Milrow, Blue Mound, Kan.	40.00
58—P. L. Ware & Son, Paola, Kan.	46.00
59—A. G. Banks	59.00
60—R. K. Ricks, Harrisonville, Mo.	51.00
61—Ed Frazier, Drexel, Mo.	65.00
62—W. H. Lacy, Fairfax, Okla.	36.00
63—W. B. Griffin, Butler, Mo.	42.00
64—J. R. Cline	53.00
65—O. Decker	41.00
66—H. P. Green	64.00
67—H. B. Griffin	47.00
68—H. B. Green	50.00
69—J. L. Cook, Cook Station, Mo.	39.00
70—W. W. Van Meter	70.00
71—L. Landers	48.00
72—W. A. McDonald, Eldorado Springs, Mo.	65.00
73—Ed Frazier	42.00
74—A. G. Banks	62.00
75—William Frazier	58.00
76—W. A. Baker, Butler, Mo.	55.00

Dispersion Duroc Jersey Sale.

On Thursday, March 13, Sturtevant & McMullen, Duroc Jersey breeders of Formosa, Kan., will hold a sale of bred sows and gilts. The sale will be held right in town and will be a closing out sale. In the advertisement which appears elsewhere in this issue an idea of the breeding is given. The offering as a whole represents the very best breeding known, and the individuals catalogued are a splendid lot individually. Nice cherry colors and lots of size, with little fitting. The 39 head of spring gilts, fall yearlings and tried sows will all be bred for spring farrow to such boars as B. & C's Chief by the noted prize winner, B. & C's Col. Crimson Prince, tracing to Crimson Wonder and other good boars. All of the breeding is strictly up to date and some of the gilts were sired by Kansas Special, Monnesmith's great breeding boar. This stock has been fed and handled in such a way as to guarantee their usefulness as breeders. This is about the last chance of the season to buy bred sows, and this sale should attract buyers from a great many localities where the shortage is so pronounced. Write at once for catalog and if unable to attend send bids to Walter Ward or Jesse Johnson in care of the parties making the sale.

Blackshire & Weaver's Duroc Sale.

Blackshire & Weaver of Elmdale, Kan., made a good sale of Duroc bred hogs last week. They averaged \$45.50 on 40 head of bred gilts. It was one of the most snappy sales of this breed of hogs held in Kansas this season. The weather was ideal and the offering was of a high class of Duroc Jerseys. The sale was conducted by Cols. Lafe Burger and Crouch & Woods. The bidding was spirited throughout and the entire offering was sold in an hour and a half. Fred Riley of Elmdale bought the top of the sale at \$80.00. Following is a list of the buyers and prices received:

1—Jas. Davidson, Rock Island, Tex.	\$42.00
2—Will Litton, Peabody, Kan.	42.50
3—Mr. Campbell, Elmdale, Kan.	32.50
4—Charles Sheff, Florence, Kan.	35.00
5—Ira Behlmer, Wellington, Kan.	47.50
6—Charles Sheff	37.50
7—Robert Nordhoff, Wellington, Kan.	42.50
8—Ira Behlmer	65.00
9—Amos Dye, Clements, Kan.	50.00
10—James Porterfield, Jamesport, Mo.	50.00
11—Ira B. Harmon, Wellington, Kan.	40.00
12—Ed Riley, Elmdale, Kan.	41.00
13—Charles Sheff	42.00
14—Mr. Campbell	36.00
15—C. W. Shaft, Florence, Kan.	52.50
16—C. W. Shaft	41.00
17—James Porterfield	67.50
18—Ed Riley	32.50
19—Mr. J. J. Jarens, Clements, Kan.	43.00
20—Amos Dye	40.00
21—Mr. Campbell	40.00
22—Mr. Kimmel, Elmdale, Kan.	42.50
23—Fred Riley	45.00
24—Charles Sheff	37.50
25—Charles Sheff	39.00
26—Charles Sheff	37.50
27—Amos Dye	49.00
28—Ed Riley	30.00
29—W. T. Hutchins, Cleveland, Mo.	37.50
30—James Porterfield	62.50
31—E. M. Foreman, Hope, Kan.	47.50
32—Ira Behlmer	60.00
33—S. P. Jacobs, Emporia, Kan.	38.00
34—Charles Sheff	37.50
35—Amos Dye	35.00
36—Charles Sheff	40.00
37—James Porterfield	50.00
38—James Porterfield	50.00

Charles Stith Makes Good Sale.

The Charles Stith sale of registered Duroc Jersey bred sows held at Eureka, Kan., Thursday, February 20, was well attended in spite of the bad weather, and the prices received were in keeping with the high quality of the offering. The sale was held in the pavilion of the fair grounds, where every arrangement was made for the comfort of the audience. Those connected with the sale did their part well, and there was not a hitch from start to finish. Colonels Snyder and Smethers and George Drybread were the auctioneers. Some of the best known breeders were present. A. L. Kuykendall topped the sale at \$46.00 on No. 43, Stith's Dewdrop Commodore. The average for the entire offering was \$38.00. Following is a report of sales:

50—John Edmonds, Eureka, Kan.	\$26.00
51—John Porter, Eureka, Kan.	26.00
52—Bert Ladd, Eureka, Kan.	26.00
53—S. C. Jacobs, Emporia, Kan.	34.00
54—Sam Drybread, Elk City, Kan.	25.00
55—J. H. Walters, Eureka, Kan.	25.00
56—John Edmonds, Eureka, Kan.	35.00
57—J. F. Staadt, Ottawa, Kan.	33.00
58—Bert Ladd	39.00
59—Samuel Drybread	29.00
60—Bert Ladd	28.00
61—W. Howe, Wichita, Kan.	40.00
62—J. F. Staadt, Ottawa, Kan.	37.00
63—D. Hale, Hamilton, Kan.	39.00
64—C. C. Nye, Eureka, Kan.	39.00
65—C. C. Nye	34.00
66—Pete Hensen, Pontiac	25.00
67—Bert Ladd	35.00
68—Theo. Peters, Pontiac	34.00
69—A. J. Haynes, Rosalia	29.00
70—C. C. Culver, Osage City	41.00

POLAND CHINAS

GREEN LAWN STOCK FARM.

Some good September and October pigs at \$30 a pair. Strictly big type breeding. Don't forget our February 22 bred sow sale. Write for catalogue.

A. J. ERHART & SONS, Adrian, Mo.

STRAUS SPOLAND CHINAS

Model Bill 54624 heads our herd, assisted by Model Wonder, one of the largest yearling boars of the breed. Fifteen spring boars for sale, priced to move them.

O. R. STRAUSS, Route 1, Milford, Kan.

12 BIG POLAND BOARS 12

I still have a dozen extra choice spring boars, including two out of the great sow, Tecumseh Goldust, and sired by Blue Valley Goldust. Special prices for one week.

R. J. PECKHAM, Pawnee City, Nebraska.

TWENTY-FIVE SEPTEMBER BOARS AND GILTS

Sired by Big Bone Pete and out of mighty big sows. Express prepaid.

J. L. GRIFFITHS, RILEY, KANSAS.

HERD BOAR FOR SALE.

Because I cannot use him longer I will sell my herd boar, Colossus Pan, a son of Colossus and out of the noted Expansion sow, Queen Over Pan. Also fall pigs, either sex. Hubert J. Griffiths, Clay Center, Kan.

FALL BOARS FOR SALE—Sired by First

Quality and First Prize, a Mouw bred boar, out of such sows as Lady Goldust by Goldust. Hadley bred sow sale February 6.

James Arkell, Route 4, Junction City, Kan.

SATISFACTION OR MONEY BACK.

For sale, 12 young boars, will make herd headers; 30 choice gilts; 100 spring pigs. Prices reasonable.

W. A. BAKER & SON, Butler, Mo.

POLAND CHINAS

For sale. A May litter, 2 boars, 5 gilts. Fine ones. Breeding the gilts to one of the best boars in the land. \$20 to \$30. No disease.

JEWELL BROS., Humboldt, Kan.

DUROC JERSEYS

DUROC APRIL BOARS—Well built, good

length, heavy bone. Gilts bred for May farrow. Summer and fall pigs, both sexes. Write me what you want to buy. Have some choice stuff I will guarantee satisfaction on. Herd material and farmer's kind.

J. E. WELLES, Fayette, Mo.

DUROC BRED SOWS AND GILTS.

25 choice Duroc Jersey tried sows and gilts, bred to a son of White Hall King. Good individuals and richly bred.

HOWELL BROS., Herkimer, Kan.

PERFECTION STOCK FARM DUROC JERSEY HOGS.

For Sale—20 Spring Duroc Jersey gilts and spring boars, pairs and trios, not related. We sell at farmers' prices. CLASSEN BROS., Union, Okla.

GOLDEN RULE DUROC JERSEYS

Young boars all sold. Sows all reserved for big bred sow sale January 30. Can spare one good herd boar December 15.

LEON CARTER, Asherville, Kan.

Crow's Durocs

Twenty-one good Duroc boars from 125 to 250 pounds. All vaccinated. Price reasonable.

W. R. CROW, Hutchinson, Kansas.

MARSH CREEK DUROCS.

Bred gilts all sold. Choice fall boars and gilts at current prices. Choice breeding and individuality.

R. P. WELLS, Formoso, Kan.

DUROC BRED SOWS FOR SALE.

Choice individuals, sired by Tatarax Chief, White House King and Carl Critch. Reasonable prices.

ALVIN VILANDER, Manhattan, Kan.

OHIO IMPROVED CHESTERS

O. I. C.—125 Head Hogs

Pigs in pairs. Bred sows, and 40 boars ready for service. Fifty fall gilts.

W. H. LYNCH, READING, KAN.

WOLFE'S O. I. C. SWINE.

Large, prolific kind, March and April boars. Gilts bred for open. Fall pigs. Prices low. Pedigree first. Write your wants.

D. W. WOLFE, Route 2, Carrollton, Mo.

O. I. C. PIGS.—H. W. Haynes, Meriden,

Kan.

HAMPSHIRE HOGS

ECLIPSE FARM HAMPSHIRE.

Tried sows and gilts for sale, bred for spring farrow. A few fall pigs left.

A. M. BEAR, Medora, Kan.

HAMPSHIRE SWINE.

We have a few gilts and tried sows, bred to Sunny Brook 1st, 9483, by the famous Pat Maloy 1415, which will farrow during the month of April. We will offer these to the public for a short time at very reasonable prices.

WM. INGE & CO., Independence, Kan.

MULE FOOT HOGS

THOMPSON'S growthy Mule Foot Hogs have won more first prizes than any herd in America. Stock of all ages for sale, sired by or bred to my 6 State Fair first prize winning males. Prices low, quality high. Write for prices and information. CHAS. K. THOMPSON, Letts, Ind.

FIELD NOTES

Amcoats Changes Copy. S. B. Amcoats of Clay Center, Kan., writes us that the Shorthorn females were all sold that were for sale recently. He offers young red bulls and 25 fall, big type Poland China boars and gilts, immune from cholera at \$20 to \$25 each. Write at once, mentioning Kansas Farmer.

A Pleased Customer. "Enclosed find check for my sale advertising. My sale was a success, making an average of over \$68, including 4 summer pigs. My advertising in Kansas Farmer was entirely satisfactory and the service rendered by your genial fieldman was also entirely satisfactory."—H. B. Walter, Breeder of Big, Smooth Poland Chinas, Effingham, Kan.

Kansas Farmer Sells Hogs. A. M. Bear, the Hampshire swine breeder of Medora, Kan., writes: "Enclosed find check, which please place to my credit. You might say that I have a few hogs left but they are going fast. I am getting from 10 to 25 inquiries a week and I don't think the hogs are going to last very long." They shouldn't. Mr. Bear has good hogs of a popular breed; there is a shortage of good hogs and Mr. Bear advertises in Kansas Farmer. That ought to make them go fast.

Herd Boar Changes Hands. John T. Higgins of Abilene, Kansas, has sold to Thompson Bros., of Garrison, the great young Duroc Jersey boar, Crimson Wonder King, bred by H. S. Allen of Russell, Iowa. Crimson Wonder King is a litter brother to Rinehart & Sons herd boar being sired by the great Crimson Wonder Again and out of Kings Maid by Valley King. He is a young boar of great promise and will make his mark in the good hands into which he has gone.

W. H. Bayless' Belgian and Percheron Sale. On Thursday, March 7, W. H. Bayless and Son, at Blue Mound, Kan., will sell 12 imported Belgian stallions from 2 to 6 years old; large, heavy boned fellows. 8 imported Belgian mares, 2 and 3 years old and safe in foal. Two home bred Belgian mares, 2 and 3 years old. Six imported stallions and several head of good jacks of serviceable age and broke. This is a clean offering and should attract the attention of horsemen from all parts of the state. Please read the ad in this issue and send for a catalog and arrange to attend the sale. Remember the date is March 6th and Blue Mound, Kan., the place.

J. O. James' Sale. The J. O. James sale of big type Polands held at Braddyville, Iowa, February 7, was one of the good sales of the season. The offerings by Mr. James never fail to attract breeders wanting high-class big-type Polands. He is one of the constructive breeders, and breeding stock from his herd will be found in practically all of the leading Poland China herds. The 45 head sold at the last sale averaged \$84.75 per head. The top of the sale was a gilt 11 months old bred to Otis Big Orange. She was bought by Ed Klever of Bloomington, Ind., for \$172.50. Otis Big Orange is conceded by the best judges to be one of the most promising young sires now in service.

Moss B. Parsons Offering Good Jacks. Moss B. Parsons of Lawson, Mo., is offering a splendid lot of jacks from 2 to 6 years of age and ranging in height from 30 to 36 hands. Every jack in his offering is black with white points. They are a big-boned high class lot having good heads and ears and all are well broke and good performers. Mr. Parsons guarantees all jacks sold by him to be just as represented and buyers are taking no chances in making a selection from this herd. He is offering jacks at prices that make them well worth the money. Look up his card in Kansas Farmer. Write him for description of stock and prices. Please mention Kansas Farmer when writing.

Last Call for Roan's Jack Sale. This will be the last call for the G. C. Roan great jack sale at La Plata, Mo., March 10. Clover Leaf Valley Farm has sent out many great jacks and their offering this year is conceded by all critics to be the best in the history of the farm, which means that one of the greatest offerings of jacks and jennets that breeders will have a chance to buy at public auction this season will be found at La Plata, Mo., March 10. The sale includes 25 jacks. They are a great lot. There will be no culls, every jack will be right. The offering will include some of the best 2 year olds in the state. It will also include the great jacks, Missouri King and Mammoth J. C. Missouri King is the sire of the prize winning mule at Sedalia and Royal at Kansas City, 1912. Mammoth J. C. is a noted sire of high priced jacks, and 12 two year old jacks sired by him sold at an average of \$850 per head. There will be 20 head of jennets in the sale that are as good as will be found anywhere. They are among the tops of the herd. Send for catalog at once and attend one of Missouri's greatest jack sales.

Mitchell County Horse Sale.

The Mitchell County, Kansas, horse sale, to be held in Beloit, Thursday, March 6, will be the chance of the year to buy high-class registered Percherons. It is a combination sale, and some of the best herds in the state are being drawn upon to complete the offering. Among other consignors is Grant Arbuthnot of Cuba, Kan. His consignment consists of five very choice young stallions, including Rowdy Boy 93891, winner of first as a two-year-old at the Kansas State Fair in the "bred by exhibitor" class; also champion Percheron stallion, any age, bred by exhibitor. At the American Royal as a two-year-old he won first in class as champion American bred Percheron, also first in "bred by exhibitor" class, winning gold medal. He also stood second in open class for Percherons. The following year he won three gold medals at Kansas State Fair and more cash than any other horse on the ground. His winnings were about the same at the American Royal the same year, and he now has nine gold medals to his credit. This stallion, as well as the other four, were sired by Gaffner, grand champion at Hutchinson in 1912. Two of the others were prize winners at the same fairs, along with Rowdy Boy. They are all good individuals and will be attractions in this sale. For catalog write to Mat Smith, Cawker City, Kan., or J. A. Gifford, Beloit, Kan.

Richards & Sons' Sale. Attention is called to the sale advertising of J. F. Richards and Son of Beaver, Mo., in this issue of Kansas Farmer. On March 19 they will sell an offering of Shorthorn cattle and Poland China hogs that will be one of the choice offerings of the season. Their offering of Shorthorn cattle will include sons and daughters of their great herd bull, Lord Collynie 34844, a son of the great bull imported Collynie. Lord

POLAND CHINAS

POLAND CHINAS

50 HEAD POLAND CHINA SOWS FOR SALE 50

WE WILL not make a public sale and we are offering 50 of the best big-type sows ever listed at private treaty. Among these are prize-winning sows, yearlings, spring gilts and mature sows. These are bred to our 1,024-pound boar, Chief Price Again 2d, and W's Wonder. Bred for January, February, March, April and May farrow. Write us at once.

WIGSTONE BROS. - - - STANTON, IOWA

C. S. NEVIUS, GLENWOOD HERDS

The Designer kind of large type Poland Chinas and Searchlight Short-horns

Having decided not to hold our February sow sale, we will offer at private sale 10 tried sows, 10 fall yearlings and 10 spring gilts. Blood lines Designer, Major Look, or Gold Metal. Safe in pig for March and April farrow. Price, \$25 to \$50.

C. S. NEVIUS, Chillicothe, Kan.

Dean's Mastodon Polands The big-boned type, will weigh when mature 800 to 1,000 pounds. Boars, Bred Sows and Gilts for sale. ALL IMMUNIZED BY DOUBLE TREATMENT AND ARE IMMUNE. Phone, Dearborn; Station, New Market, and Postoffice, Weston, Mo. Address CLARENCE DEAN, WESTON, MO.

WRAY & SON'S BIG TYPE POLAND CHINAS

Herd headed by Sterling Prince, one of the largest and best 2-year-old boars of the breed. Assisted by Chief Price's Wonder, one of the best sons of the great breeding boar, Chief Price Again. Young stock for sale. Better than your grandpa ever raised.

B. T. WRAY & SONS, Hopkins, Mo.

Hillwood Herd of Hampshires

Twenty head of choice gilts sired by the great boars, Earlring, Pirate and Edward's True Belt, the prize winning boars, bred to Sure Shot and Taft for March and April farrow. Priced right for quick sale. Have no room for them.

J. Q. EDWARDS SMITHVILLE, MO.

BRED SHROPSHIRE EWES

Both imported and American bred, and all mated to the best imported rams obtainable. These rams have won many important English prizes, as well as the most coveted American blue ribbons, and now head the flocks at Henley Ranch.

Our flocks are large and we can offer you the best values on all classes of Shropshires. We absolutely guarantee all stock shipped. Place your order with us early, while the ewes can be safely handled.

HENLEY RANCH, GREENCASTLE, MO.

Members American Shropshire Registry Association. Henley & Vrooman, Managers.

SHROPSHIRE SHEEP

Yearling and Two-Year-Old Shropshire Rams, sired by imported sire and out of registered ewes, priced right for quick sale.

ED GREEN, Howard, Kan.

ROCKFORD BELL SHROPSHIRE

Thirty extra quality registered Shropshire ewes for sale. Sired by imported Buttar and Dakin rams. All safe with lamb to imported rams. Write.

J. W. ELLIOTT, Polo, Missouri.

RED POLLED CATTLE

PHILIPS COUNTY RED POLLS. For Sale—Cows and heifers, sired by the great Launfal and bred to Crema 22d.

CHAS. MORRISON & SON, Phillipsburg, Kan.

AULD BROTHERS Red Polled Cattle

Five head of bulls from 11 to 17 months old, ready for service and for sale right. Herd headed by Prince, one of the best sons of Actor.

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Coburn Herd of Red Polled Cattle and

Percheron Horses. 25 extra good young bulls and 7 first class young stallions for sale at bargain prices. Also young cows and heifers.

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Collynie is one of the great Shorthorn bulls in service at this time. He is the typical beef type and will weigh 2500 pounds and has the show bull quality. This herd was established in 1904 with Sharon Knight by Rose's Knight as the head of the herd. He was one of the great bulls of the breed and was succeeded by the great 2500 pound bull Riverdale Chief sired by Clipper's Chief, and descendants of these two great bulls are still in this herd and a finer lot of Scotch and Scotch topped cows would be hard to find. They also have daughters of Roan Chief, Village Knight and other good ones. All cows and heifers of breeding age are bred to Lord Collynie. The Poland China offering of bred sows and gilts and young boars will interest Poland China breeders wanting the big, easy feeding kind. They have a herd of sows second to none in the corn belt, including Lady Price 2nd by Chief Price 4th; Wonder Beauty by Longfellow 7th; Lady Jane by Chief Price 4th; Lady Wonder by Boxer Chief and daughters of Big Wonder and other great sires. The head of the herd, Pawnee Price by Big Price by Pawnee Lad is one of the great boars of the breed in service today. He has the size and quality and is a proven breeder. The offering of tried sows, fall and spring yearlings and young boars will be extra good. The tried sows and fall yearlings will be bred to Pawnee Price. The younger sows to one of the best sons of Big Wonder. Write at once for catalog. Please mention Kansas Farmer when writing.

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Reds and roans, mainly Captain (205741) Archer blood, from 8 months up. Two good roan herd bulls. Reasonable prices. Write for prices, breeding and photos.

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High grade cows and heifers, about 40 head, heavy springers, from two to five years old. Fifteen head coming two-years to freshen this spring and summer; all bred to registered bulls. Also bulls, high grade and registered, from 4 to 12 months old. These are all highly bred dairy cattle and fine young stuff.

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land Cornucopia Sir Detry, who has a 32-pound sister and a long line of A. E. O. relatives. Dams sired by Prince Ormsby Mercedes DeKol and other good bulls.

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Fifty head of registered heifers and bulls; also 75 head bred heifers and young cows, \$58.50 up. Come and see them.

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J. M. NOLAN

Paola Kansas

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IMPORTERS
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Percherons—Belgians—Shires. The best importation we ever made is now in our barns ready for inspection. The mares include some of the best fillies that came out of the Perch this year. See what we have before buying elsewhere.

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33 head of mammoth Jacks and Percheron stallions—33. Jacks from 2 to 6 years old, from 15 to 16 hands high. Percherons from 2 to 5 years old weighing from 1,800 to 2,000 pounds. Farm and sale barn on 21st, one mile east of union stock yards.

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Nine black, mealy-nosed, heavy-boned fellows, 6 months to 7 years, weighing up to 1,000 pounds, and 15 hands high. Also 15 jennets, all ages. Inspection invited.

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17 head large mammoth black Jacks for sale, ages from 2 to 5 years; large, heavy-boned, broken to mares and prompt servers. Prices reasonable. Come and see me.

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Nine head mammoth Jacks, all but one Kansas raised, from weanlings to 16½ hands, seven years old. Best stock. Fine, proved, and good getters. Write or come see them. Reference, Protection State Bank. Now is the time and here the place to buy.

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I have an exceptionally good lot of Jacks for sale. They are from 2 to 6 years old from 14½ to 16 hands high, black with white points. They are all big boned mammoth Jacks, priced to sell. Come and see them. Lawson is 38 miles from Kansas City.

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One yearling bull and several bull calves sired by Roan Hero (Junior champion of 1911), also a few young cows and heifers from the greatest show and prize winning herd in Kansas, priced reasonable.

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Choice Young Shorthorns

Several blocky, sappy bulls, in age from 7 to 12 months. Females all sold. 25 choice strictly big type Poland China fall boned and gilt. \$20 to \$25 each. IMMUNE FROM CHOLERA.

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Lord Mayor 3d 249943, 8 years this spring, weight 2,200, on pasture alone. Three years in show ring, won 22 championships. His calves never defeated. Price \$200. Lords Duplicate, May Calif. Good all over. Show prospects. Price \$150.

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125 Miles Southeast of Kansas City.

TENNEHOLM SHORTHORNS.
Have on hand for sale two 11-month-old bull calves, good, big, useful ones, out of good Bates cows and sired by Scotch bulls. Am pricing them to move them soon.

E. S. MYERS, Chanute, Kansas.

Last Call for Miller's Percheron and Jack Sale.

This will be the last call for the Percheron and Jack sale of S. J. Miller to be held at Kirksville, Mo., March 6. The offering of imported stallions and mares as well as Jacks and jennets will probably not be duplicated this year as to high quality. The offering was selected by Mr. Miller with a view to making it the greatest offering of the kind to be sold this year and many of the best judges who have inspected the entire offering pronounce it one of the best ever offered in this section. Every animal to be sold will be guaranteed to be just as represented in the sale ring, and breeders are held to the guarantee.

FIELD NOTES

Last Call for Luckhardt's Sale.

Breeders wanting extra good registered stallions and mares or mammoth bred Jacks should make arrangements to attend L. H. Luckhardt's sale at Tarkio, Mo., March 12. There will be stallions in this sale weighing 2,000 pounds. They have not only size but quality and are proven breeders. There will be mares in the sale weighing 1800 to 2000 pounds and an extra good lot of mammoth bred Jacks weighing from 1000 to 1,200 pounds. It will be a high class offering throughout.

Last Call for DeKalb's Sale.

Farmers and breeders interested in Hampshire hogs should remember H. D. DeKalb's sale at Council Bluffs, Ia., March 12. Breeders wanting the best there is of the Hampshire breed will find them in this sale. They are a top lot picked from a herd of almost 300 head. There will be a number of tried sows, a lot of fall gilts and some spring gilts that for size and quality will not be duplicated in any other Hampshire sale this year. They will be bred to such boars as Major by Stone's Duke; De Kalb's King 15 by Major; Show Me by Signet; De Kalb's King 13th, also Major. The sows to go in this sale are daughters and granddaughters of prize winners, including Earlinger, Stone's Duke and other great ones and the entire offering for size, quality and breeding will not be duplicated this year either in public or at private sale.

W. F. Davis' Hampshire Sow Sale.

The W. F. Davis Hampshire sale at South St. Joseph, Mo., February 18, attracted buyers from several states. The attendance was good and the bidding was spirited throughout the sale. 116 bred sows sold at an average of \$59.60 per head and 30 head of boars at an average of \$35 per head. The two top sows of the sale were bought by H. D. DeKalb, of DeKalb, Ia., one at \$160 and the other at \$125. Mr. DeKalb was one of the consistent bidders on the good ones of the offering. Kansas buyers purchased 31 head of the 116 sows offered and 6 of the 30 boars. The offering was sold by Col. Thos. E. Deam, of Cameron, Mo. He was assisted in the ring by Col. Stone and Col. Carson. The offering was sold in a little over 4 hours. The following is a list of buyers of sows and prices paid for same: R. W. Weatherby, Texoma, Okla., \$70.00; S. C. Wisdom, Long Island, Kan., \$65.00; S. C. Wisdom, Long Island, Kan., \$45.00; S. C. Wisdom, Long Island, Kan., \$60.00; W. H. Baker, Stillings, Mo., \$62.50; John Settler, Reading, Kan., \$52.50; R. L. Weatherby, \$62.50; E. L. Clark, Ford City, Mo., \$47.50; R. L. Weatherby, \$70.00; C. A. Brooks, Washington, Ia., \$67.50; H. D. DeKalb, DeKalb, Ia., \$150.00; Walter Scheely, Nishnabotha, Mo., \$72.50; W. M. Strong, Leavenworth, Kan., \$50.00; F. T. Quire, Sully, Ia., \$57.50; J. E. Rielby, Quitman, Mo., \$60.00; J. E. Morton, St. Joe, Mo., \$62.50; F. H. Parks, Olathe, Kan., \$75.00; J. C. Cross, Felmington, Mo., \$62.00; Joseph Morton, St. Joseph, Mo., \$75.00; C. A. Brooks, Washington, Ia., \$67.50; Verne Patterson, Fairmont, Neb., \$105.00; K. Knudson, Rabunson, Kan., \$57.50; R. L. Weatherby, \$67.50; J. M. Snapps, Fauvette, Mo., \$57.50; Adolph Lortscher, Sabetha, Kan., \$65.00; J. E. Rielby, Quitman, Mo., \$67.50; Joe Morgan, \$60.00; C. R. White, Miami, Mo., \$70.00; C. A. Brook, Washington, Ia., \$85.00; C. A. Brook, Washington, Ia., \$80.00; C. R. White, \$60.00; J. C. Cross, Felmington, Mo., \$70.00; S. A. Kenney, Kenney, Neb., \$52.50; S. A. Kenney, Kenney, Neb., \$85.00; W. H. Ryherd, Horton, Kan., \$60.00; Mark Whitaker, Miami, Mo., \$62.50; F. Longheiming, Nishnabotha, Mo., \$47.50; F. Longheiming, Nishnabotha, Mo., \$52.50; S. E. Smith, Lyons, Kan., \$47.50; R. L. Weatherby, \$75.00; W. E. Transue & Son, Plattsburg, Mo., \$45.00; J. C. Cross, Felmington, Mo., \$62.50; Dave Batman, Mound City, Mo., \$52.50; A. Lortscher, Sabetha, Kan., \$47.50; S. C. Wisdom, \$60.00; Emery, Davis, Mound City, Mo., \$52.50; A. Lortscher, Sabetha, Kan., \$67.50; Q. A. Seibert, Miami, Mo., \$60.00; W. Jacobs, Reading, Kan., \$57.50; W. G. Huffman, Shenandoah, Ia., \$57.50; O. D. Rice, Bedford, Ia., \$52.50; L. Little, Clarke, Neb., \$75.00; Mark Whitaker, Miami, Mo., \$52.50; F. A. Clancy, Montrose, Ia., \$67.50; T. E. Nickel, Poole, Neb., \$55.00; C. Ketcham, Edgerton, Mo., \$55.00; W. G. Huffman, Shenandoah, Ia., \$57.50; G. P. Hartman, Cosby, Mo., \$50.00; Frank Schrick, Cummings, Kan., \$52.50; S. A. Kinney, Kinney, Neb., \$65.00; John McKee, Guilford, Mo., \$55.00; J. C. Black, Rushville, Mo., \$45.00; John Settler, Reading, Kan., \$57.50; Wood & Westcott, Sheffield, Ill., \$50.00; D. E. McGinnis, Westboro, Mo., \$50.00; D. E. McGinnis, Westboro, Mo., \$67.50; M. Mandrick, McFall, Mo., \$62.50; Thos. Perry, Platte City, Mo., \$52.50; G. Hershey, Portis, Kan., \$50.00; W. L. Spencer, Neosha Rapids, Kan., \$80.00; Thos. Perry, Platte City, Mo., \$57.50; Frank Schrick, Cummings, Kan., \$75.00; Orville Brown, King City, Mo., \$47.50; Silas Berry, Rushville, Mo., \$47.50; Thos. Perry, Platte City, Mo., \$50.00; C. R. Woodson, Agency, Mo., \$55.00; J. H. Meyer, Sabetha, Kan., \$50.00; E. W. Petty, Monticello, Ark., \$52.50; F. Longbering, Nishnabotha, Mo., \$52.50; Frank Schrick, Cummings, Kan., \$67.50; F. Longbering, \$55.00; E. I. Miller, Jarbalo, Kan., \$50.00; C. R. Woodson, Agency, Mo., \$55.00; W. Williams, Preston, Neb., \$55.00; C. R. Woodson, \$50.00; J. B. Lolar, Lawson, Mo., \$47.50; S. C. Sifert, Elk Point, S. D., \$45.00; W. W. Williams, \$50.00; A. Lortscher, Sabetha, Kan., \$47.50; M. Mandrick, McFall, Mo., \$50.00; Jno. Settler, Reading, Kan., \$45.00; Wm. Prim, Elk Point, S. D., \$55.00; W. A. Safely, Bedford, Ia., \$52.50; Wm. Prim, \$70.00; S. E. DeVare, St. Joe, Mo., \$47.50; W. Jacobs, Reading, Kan., \$47.50; G. R. Wiss, Sabetha, Kan., \$45.00; J. A. Hook, Osage City, Kan., \$40.00; S. B. Moreland, Republic, Kan., \$50.00; Elmer Dow, Hiawatha, Kan., \$45.00; C. R. Woodson, Agency, Mo., \$55.00; C. R. Woodson, Agency, Mo., \$55.00; C. A. Christian, St. Joe, Mo., \$90.00; M. Mandrick, Cosby, Mo., \$42.50; Elmer Dau, Hiawatha, Kan., \$45.00; H. K. Lawler, Lawson, Mo., \$47.50; J. H. Olliver, Kewana, Ill., \$100.00; H. D. DeKalb, Ia., \$102.00; A. R. Anderson, Audubon, Ia., \$75.00; C. R. Woodson, Agency, Mo., \$67.50; F. B. Moreland, Republic, Kan., \$50.00; C. S. Boynton, Pleasant Plains, Ill., \$42.50; Frank Schrick, Cummings, Kan., \$50.00; G. P. Hartman, Cosby, Mo., \$55.00; Chas. Combs, New Market, Ia., \$52.50; G. N. Orla, Nodaway, Mo., \$52.50.

Richly Bred Jersey Bull.

R. J. Linscott of Holton, Kan., owner of the only official record Jersey herd in Kansas, announces the sale of a very promising young bull to Johnson & Nordstrom of Clay Center, Kansas. His name is Ciceros Rochette Noble. He is sired by the \$15,000 imported bull Rochette Noble, a son of the noted Noble of Oaklands and a full brother to Rochette's Noble, first prize winner on the Island. The dam of the young bull sold is the imported cow Cicero's Golden Cowslip, a daughter of Fancy's Pioneer. Sire of many tested daughters on the Island, he also won sweepstakes on the Island in 1908 and is himself a grandson of

JERSEY CATTLE

THE ENNIS FARM

Holme Station, Mo.
(Thirty Miles South of St. Louis.)
JERSEY CATTLE—BIG-BONED SPOTTED POLANDS.
Send for quarterly bulletin listing stock for sale. Best breeding and individuals. Prices reasonable.
ALBERT S. ENNIS, Holme Station, Mo.

T. A. Wiles' Jersey Herd

Sixty Head of Registered Jersey Cows and Heifers. Some will be fresh soon, all by early spring. All bred to the splendid island-bred bull, Vest Financial King 77826. Best blood lines and good individuals, priced right. Come and see them, or write, mentioning Kansas Farmer.

T. A. WILES, Maryville, Mo.

FOR SALE—One of the greatest young Jersey bulls ever bred. Sired by Eminent Cornet, by Eminent 2d, which sold for \$10,000. Dam of the calf is Sultana's Golden Tipsey, on official test will make a Register of Merit cow. Her dam gave 10,500 pounds milk, from which 740 pounds of butter was made in one year. Nice fawn color and elegant type.

R. J. LINSKOTT, Holton, Kan.

BANKS' FARM JERSEYS

Quality with milk and butter records. One of the best sons of CHAMPION FLYING FOX, imported, at head of herd. Stock for sale.

W. N. BANKS, Independence, Kan.

GOLDEN RULE JERSEYS.

Richly bred heifers and bull calves for sale. The blood of Golden Lad and other noted sires. Farm one mile north of town. Inspection invited.

Johnson & Nordstrom, Clay Center, Kan.

WINELAND FARM JERSEYS.

One of the strongest official record herds in the west. For sale, 10 choice young bulls, sired by Imp. "Duke's Raleigh," and other good bulls. Out of cows now undergoing or having authenticated tests. Also, 25 females of different ages. H. C. YOUNG, Lincoln, Nebraska.

50 HEAD Solid fawn colored, registered Jersey cows and heifers; a nice lot of springers; Forfarshire, Imp. Stockwell, Fox and Guenon Lad breeding. Three light fawn bull calves, St. Lambert blood.

S. S. SMITH, Clay Center, Kan.

JERSEY BULLS.

For Sale—An extra good tried sire of Terminator breeding. Cannot use any longer. Also, a 2-months-old calf of St. Lambert breeding. O. E. NICHOLS, Abilene, Kan.

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The Missouri Big Type Hog Auctioneer.
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JOHN D. SNYDER,

Kansas Live Stock Auctioneer.
Write or wire for date. Hutchinson, Kan.

the noted bull Golden Lad and the famous cow Golden Lilly. His dam was the great public butter test cow Fancy's Rose, winner of eight public tests; her dam winning three gold medals, making as high as 2 pounds and 11½ ounces in 24 hours. The dam of Ciceros Golden Cowslip was Ciceros Cowslip 20th, by the same sire as Golden Maids Prince, who has 18 daughters in Register of Merit class. The Cicero Cowslip cows are among the greatest cows on the Island. This bull, because of the great butter and show records back of him and the fact that his sire and dam are both imported, has a right to be a splendid producer and young bulls sired by him should be in demand.

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Lamer's Percheron Sale

Thursday, March 13, 1913

44 MARES and 44 STALLIONS

Consisting of

Twelve Stallions, 3 years old (imported), weighing from 1,900 to 2,100 pounds.

Eight Stallions, 1 to 5 years old (home bred).

Thirty Mares and Fillies.

WRITE FOR CATALOG.

C. W. Lamer & Co.

Salina, Kansas

P. S.—On Wednesday, March 12, we sell 100 head Brood Mares, Work Horses and Mules.

Shorthorn Cattle (70 head) of C. G. Cochran & Sons will be sold here on Friday, March 14.

H. A. DeKALB'S Hampshire Sow Sale

At Kiel's Barn, Council Bluffs, Iowa
Wednesday, March 12



SIXTY HEAD EXTRA QUALITY HAMPSHIRE SOWS
The Tops of One of the Biggest and Best Bred Hampshire Herds Now in Existence.

A number of tried sows that are among the best of the herd. Forty head of outstanding fall gilts and a few extra good spring gilts. Every one is the ideal brood sow type. They are bred to boars that are among the best of the breed in service today. They have the size, quality and breeding. Bids sent to fieldman and auctioneers in my care will receive careful attention. Be sure and mention Kansas Farmer and ask for catalog. Address

H. D. De Kalb, DeKalb, Ia.

COLS. H. S. DUNCAN and R. H. GLENN, Auctioneers.
W. J. CODY, Fieldman.

Belgian & Percheron Sale

AT BLUE MOUND, KANSAS

THURSDAY MARCH 6, 1913

28 Head of the Best Draft Horses that Ever Entered a Sale Ring. 28

Ten Imported Belgian Stallions, 2 to 6 years old.

Eight Imported Belgian Mares, 2 to 3 years old; 3-year-olds in foal to imported horse.

Two American-bred Belgian Mares, 2 and 3 years old; 3-year-old in foal to imported horse.

Six Imported Percheron Stallions, 2 to 4 years old.

One French Draft Stallion, 4 years old.

One Cross-bred Stallion, 7 years old.

Seven Jacks, 3 to 6 years old, 14½ to 15 hands.

Four Big Jennets.

Sale held under cover, rain or shine. Catalogs ready February 24. Write for catalog and arrange to come to this sale.

W. H. Bayless-DeRo & Co.

Blue Mound, Linn Co., Kansas

Auctioneers: Cols. Harriman, Long, Robbins, Macon, Bridges.
Fieldman, O. W. Devine.

Cochran's Big Short-Horn Cattle Sale

Lamer's Pavilion, Salina, Kansas,

Friday, March 14, 1913

70 Head, Select Draft from our Herd Numbering Over 500 70

Fifty-Five Females.

Fifteen Bulls.

The females consist of choice young cows and heifers, mostly descended from animals that we have purchased out of the best herds in this and other states. Our policy was always to buy the best without much regard to cost if the animal suited. Every female in the sale will be in calf to a bull that has proven his greatness as a sire. The bulls included are good, blocky, thick-fleshed fellows of serviceable age. The offering is Scotch and Scotch topped, and full information can be had by writing at once for catalog. We have raised these cattle under the most natural conditions possible and fed them only such feeds as grow upon Kansas farms in our part of the state, and they will be sold without the big fat, but will be all the more valuable for their new owners.

C. G. COCHRAN & SON

Plainville,

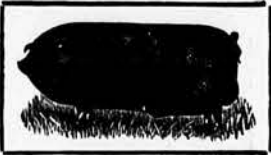
Kansas

Auctioneers, W. C. Curphy and Others. Fieldman, Jesse Johnson.

C. W. Lamer sells Registered Percherons at the same place the day before. Attend both sales.

DISPERSION DUROC JERSEY SALE—Formoso, Jewell Co., Kansas, Thursday, March 13, 1913

FORTY RICHLY BRED DUROC JERSEY BRED SOWS AND GILTS. FOUR TRIED SOWS. THIRTY-FIVE FALL YEARLINGS AND SPRING GILTS. ONE HERD BOAR.



Sired by such boars as Hebron Wonder, Kansas Special, Nebraska Boy by Bonnie K, Defiance 2d by Defiance, and Triumphs Hero by Bell's Chief. The offering as a whole represents the big, well formed type. Among the attractions will be Kansas Bessie by Kansas Special, and Bessie Mack by Hebron Wonder. Every female in the sale will be safe in pig to one or the other of these great boars: Red Bobbie 135203; B. & C's Col. Chief 135709, or Crimson Prince. Send for catalog and if unable to attend send bids to Jesse Johnson or Walter Ward in our care.

Auctioneer, John Brennen. Fieldman, Jesse Johnson.

STURTEVANT & McMULLEN, Formoso, Kan.

A Well Improved Stock Farm at Auction

March 12, 1913



2½ Miles from Louisburg, Kan.; 30 Miles South of Kansas City, Mo.

On rural route, telephone, close to good school. Large new modern house, good outbuildings, plenty good water, new orchard with all standard varieties of fruit, good barn 32 x 54, good sheds, plenty of spring water at barn, good hog houses and other buildings. A good six-room tenant house with other buildings. Ten acres prairie, 60 acres bluegrass and timber pasture, three springs and never-failing water in pasture, 14 acres alfalfa, fine stand; 40 acres good meadow, 12 acres rye; 210 acres under cultivation; about 40 acres extra good bottom land; 50 acres fenced hog-tight.

This farm will be sold to the highest bidder on March 12, 1913. Louisburg, Miami County, Kansas, is a beautiful little town; good stores, good schools and six churches, including one Catholic. Very liberal terms can be made to purchaser. Free transportation from Louisburg on sale day. For further information write or wire

W. C. McDOWELL, Clerk, Louisburg, Kansas.
Andy Weir, Auctioneer.

Dispersion Sale of Red Poll Cattle

At Farm Near Smith Center, Kansas,
Tuesday, March 4, 1913



21
Head of Registered
Red Poll Cattle
21

Foundation Stock from Best Herds.

14 Cows and Heifers.

7 Choice Young Bulls.

Also one choice registered Percheron Mare and two young registered Stallions. The cows in this offering are heavy milkers and very desirable in every way. I find it necessary to make a change, which is the only reason for selling at this time. Write or wire bids to auctioneer or fieldman. Catalog upon application.

L. W. Beem, Smith Center, Kansas

Auctioneer, John Brennan. Fieldman, Jesse Johnson.

DEIERLING & OTTO'S PRIZE WINNING JACKS



50—Mammoth Jacks and Jennets—50

From 2 to 5 years old, big-boned, big black kind with white points; 15 to 16 hands high. We are offering our prize winners at Missouri, Iowa and Illinois State Fairs, 1912. Every jack and jennet guaranteed just as represented.

DEIERLING & OTTO, QUEEN CITY, MO.



IMPORTED PERCHERON STALLIONS, JACKS AND JENNETS.

FOR SALE—5 imported black Percheron stallions, 4 to 6 years old; all tried and regular breeders; can show colts; weigh 1,800 to 2,200 pounds. One Morgan stallion, 7 years old. 10 large black jacks, 2 to 7 years old, all broke; good performers; can show colts and mares in foal. 10 head big black jennets, all bred to our imported jack. Prices reasonable. Write or come to farm 4 miles from Raymond or Chase. Our horses and jacks were shown at the Kansas State Fair at Hutchinson, September, 1912, in six different classes, and won in every class. Come and see us. J. P. and M. H. MALONE, CHASE, KAN.



For Sale at Riverside Stock Farm—Registered Percherons.

10 head of young stallions from 2 to 3 years old. 4 head coming 3 years old that weigh from 1650 pounds to 1800 pounds. 4 head coming 2 years old that weigh from 1500 to 1600 pounds, blacks and dark greys. They are the big bone kind. 2 head standard bred and weigh from 1250 to 1280 pounds. 3 head of large young jacks, Mammoth bred, from 15 to 15½, well broke. A warrantee goes with every animal as to soundness and breeding.

O. L. THISLER & SONS, Chapman, Kan.

On the main line of the Union Pacific R. R., 150 miles west of Kansas City, Mo.

CEDARSIDE STOCK FARM, WAVERLY, IOWA

wants to sell you some nice OXFORD ewes; also, 15 rams; all from imported rams and part from imported ewes. The ewes will be bred to a 400-pound ram. Some nice HOLSTEIN bull calves, with several 30-pound records backing. Get busy and write me.

C. A. NELSON.

You run no risk to patronize persons or firms whose advertisements appear in KANSAS FARMER.

SAVE YOUR PIGS

Farrowing Season is Here



They are made from specially tempered spring wire, all nickel plated and sanitary. You cannot injure the mother and need not injure the young. Thousands have been sold on a guaranty and not one returned.

SAFE—SURE—SANITARY

Endorsed by Instructors in Veterinary Surgery of State Universities, and State Veterinarians wherever their attention has been called to it as the best thing in its line.

REGULAR PRICE \$1.00.

You may not need one of these instruments more than once or twice in a season but when you do need it you need it **MIGHTY BAD**. It may mean the saving of a valuable sow and her litter of pigs. What would that be worth? Can you afford to take chances when you can get one of these reliable instruments free?

Size opened, 26 inches long. Closed, 11 inches. Weight, 4 ounces. Simplest instrument of the kind ever made. Any one can use it intelligently.

WE ONLY HAVE A FEW

But while they last we will send one **FREE** by Parcel Post, to any old or new subscriber to KANSAS FARMER sending us one dollar for a year's new or renewal subscription to KANSAS FARMER, and fifteen cents extra for postage. Do not wait until your sows begin to farrow. Send your order today.

KANSAS FARMER, Topeka, Kan.

MENTION KANSAS FARMER WHEN YOU WRITE.

FIELD NOTES

FIELD MEN.

O. W. Devine.....Topeka, Kan.
Jesse R. Johnson.....Clay Center, Kan.
W. J. Cody.....Topeka, Kan.

PURE BRED STOCK SALES.

Percherons and Other Draft Breeds.
March 6—Mitchell County, Kan., Percheron Breeders. Sale at Beloit, Kan.
Mar. 6—S. J. Miller, Kirksville, Mo.
May 21—J. C. Robinson, Towanda, Kan.

Percherons and Jacks.

March 12—L. H. Luckhardt, Tarkio, Mo.

Jacks and Jennets.

March 4—L. M. Monsees & Sons, Smithton, Mo.

March 6—S. J. Miller, Kirksville, Mo.
March 10—G. C. Roan, La Plata, Mo.
March 12—J. E. Clary & Sons, Sheridan, Mo.

Shorthorns.

March 14—C. G. Cochran & Son, Plainville, Kan.
Sale in Lamer's pavilion, Salina, Kan.
March 19—J. F. Richards & Son, Bevier, Mo.

Holstein Friesians.

Oct. 21-22, 1913—Woodlawn Farm, Sterling, Ill.

Poland Chinas.

March 19—J. F. Richards, Bevier, Mo.
April 3—Roy Johnston, South Mound, Kan.
April 18—W. F. Fulton, Waterville, Kan.

Duroc Jerseys.

March 10—Sam Drybread, Elk City, Kan.
March 15—John McAllen, Formoso, Kan., and J. G. Sturtevant, Formoso, Kan.

Hampshire Hogs.

March 12—H. D. DeKalb, DeKalb, Iowa. Sale at Council Bluffs, Iowa.

FRANK IAM'S DRAFT STALLIONS AND MARES

are "up to the minute." They are the "drafty, big-boned type"—"nifty, big black boys"—the real "medal winners"—sensational "show and business horses" of note, "ripe peaches." Big, classy "peaches and cream" black boys. The "Iams brand" of "top notchers." Iams' importation of Percheron and Belgian stallions and mares are in the "pink of condition" and ready for a "good selling." "Ikey boy," smile sweetly, and hundreds of Iams' satisfied customers "will sit up and take notice" that Iams, the "king pin" horse importer, is still "doing business" at the "old stand." Iams is "pushing" his horses to the front. The big "peaches and cream" "boys and girls" are attractions that can't be overlooked. Iams mesmerizes buyers with "real drafters" at "bargain prices" and having the "horses as advertised." Iams' "competitors" and "hammer knockers" are "boosting Iams" by their "knocks," until now he is known as the "millionaire horseman," and on "Easy Street," and growing fast. Ikey, buzz around and sing Iams' song. He is selling these "aristocratic," fancy "black boys" cheaper than ever—or better horses for less money—\$1,000 and \$1,400 (few little higher.) Iams has

80 PERCHERON AND BELGIAN STALLIONS AND MARES 80

They are "models"—"drafters." They are 2 to 5 years old, weigh 1,700 to 2,500 pounds, 80 per cent blacks, 50 per cent. ton horses. All "registered," "approved and inspected by governments of France and U. S. and certificates "stamped O. K." Iams gives a certificate of "soundness and health" with each horse—signed and sworn to by a "Nebr. state V.S." Many Paris "prize winners" and "gold medal horses." Big, drafty "topnotchers," with big bone, quality, style, finish and action to burn. They are "eye openers"—larger and better horses than seen elsewhere. Big "business propositions" that make "the wheels work fast" under a "buyer's hat." "Georgie, dear," Iams made a "big killing" by buying his horses in Europe. "War scare," "bad crops," "close money" and "Iams' cash" caused the "prize winners" and "tops" to be thrown on the market for a "good selling."—Iams cut the melon and bought the "rippers" at "knock-out prices." Iams will give his customers the benefit of his "good buy," "Ikey boy," "come on along"—see Iams—"Everybody is Doing it."

Get into Iams' "get rich wagon" and save \$1,000 on a "top stallion"

(and you wear the diamonds.) Iams is a "big fly in the jelly" in the horse world. "He keeps the gang guessing." Iams sells "imported horses only." They win 90 per cent. of prizes at big horse shows). No "American-bred full-bloods"—no "auction stuff" or "peddler's horses"—only "choice drafters" of big size, bone, quality and finish. Iams has the "crack stallions and mares" you "read about." Buy horses of Iams and you won't "get stung" in horse or price. "Dolly D." waltz me around once again, "Ikey," land me at Iams' box office and importing barns. Full to "the roof" with "black boys" (and all must be sold). Reduced prices. All the world knows Iams and his "peaches and cream" horses. 1913 promises to be a bumper year to Iams and his customers. He saved \$300,000 to stallion buyers in 1912. Watch "Iams' smoke." Iams' 31 years of successful business make him a safe man to do business with. Iams sells horses "on honor." A boy or a lady can buy as cheap as a man. Iams' 1913 horse

Catalog is an "eye opener." It has a "laugh" and a \$1,000

bargain in every line. A "bunch of gold" to stallion and mare buyers. It is full of real "peaches and cream" stallions. It is the finest, most elaborate and original up-to-date horse book in the world. Iams, the "square deal" horseman, makes every statement in ad or catalog good—or you get the \$500 he hangs up. Iams guarantees to sell you a better

IMPORTED STALLION AT \$1,000 AND \$1,400

(few higher) than are sold to stock companies for \$4,000. Imported mares, \$700 and \$1,000. Iams gives 60 per cent breeding guarantee; pays freight on horse and fare of one buyer. He can furnish \$1,500 insurance. Iams buys and sells every stallion himself. Saves buyers \$1,000 in middlemen's profits. He buys stallions by "train load." He speaks languages—(saving 20 per cent). He is not in the "stallion trust." No partners to share profits. He "pays cash" for his horses—and sells "top notchers" by "hot advertising" and having "the goods." "Big Ikey," leave your "happy" home and buy a "top" stallion or pair of imported mares (of Iams) that bring colts that sell at \$500 each. "Papa," don't let those "auction men" "hand you a lemon" in one of those "so-called" "American full bloods" of questionable breeding. Buy an imported horse of Iams, the "reliable horseman." (Then we will "all wear diamonds.") Iams' "selling clothes" fit all buyers. Write for Iams' million-dollar horse catalog. Iams won't let you go without a peaches and cream stallion or mare. "He sells the tails off them." Iams' guarantees are backed by "half million dollars." References—1st Nat'l and Omaha Nat'l Banks, Omaha; Packers Nat'l Bank, So. Omaha; Citizens State, 1st State and St. Paul State Banks, St. Paul, Neb. Iams buys big ad space because it is cheaper than flannel-mouthed horse salesmen.

ST. PAUL, NEBRASKA

My Fourth Annual JACK and JENNET SALE of the Clover Leaf Valley Jack Farm

WILL BE HELD IN MY NEW SALE PAVILLION AT

La Plata, Macon County, Mo., on March 10th, 1913

When I absolutely guarantee to sell the best bunch of Jacks and Jennets that I ever have offered for sale, and a bunch that will equal or surpass any offering of this kind of stock made during the year of 1913.

Every Jack and Jennet registered and black with white points, and the prices will be entirely within the reach of the man buying for public service. I want you to write for my catalog, illustrated with the photographs of each animal taken from life on January 2, 1913, and telling you more truths about this stock than I could put in a big five-page advertisement costing thousands of dollars.

I sell more Jacks that pay for themselves in one and two years than any man in the world. WRITE FOR IT TODAY.

G. C. Roan, Prop., La Plata, Macon County, Mo.

J. F. RICHARDS & SONS

Sale of Short-horns and Poland Chinas at Bevier, Missouri

Wednesday, March 19, 1913

20 Head, High Glass Scotch and Scotch Topped Short-horn Cattle

Six bulls sired by the great Lord Collynie, by Imported Collynie. A number of choice yearling heifers sired by this bull, and a high-class lot of two and three-year-old heifers and cows, all of breeding age and safe in calf to Lord Collynie.

Also thirty head of tried sows and gilts, including daughters of our great herd boar, Pawnee Price, by Big Price. Tried sows that are right for size and quality, a number of young boars sired by Pawnee Price, tried sows and fall yearlings bred to Pawnee Price, and others to one of the best sons of Big Wonder. We have the size with quality, the easy feeding kind. Bids sent to fieldman or auctioneers in our care will receive careful attention. Write for catalog at once. We have no mailing list.

AUCTIONEERS—COLS. HARRIMAN AND COTTINGHAM.
W. J. CODY, FIELDMAN.

J. F. RICHARDS & SONS, Bevier, Missouri

CLARY & SONS

Sixteenth Annual Jack Sale

at Sheridan, Missouri

Wed. March 12, 1913

25 Big High Class **25**
Jacks and Jennets

The jacks range in age from yearlings to four-year-olds. They are a lot of big-boned jacks with quality, black with white points, and right in every way. An extra good lot of jennets ranging in age from four to eight years old and all bred to the great jack, Ben Hur.

Will also sell a select lot of horses and mules, including extra good road and draft mares. Twenty head of choice cows, some with calves by side. Ten head extra good brood sows. Sheridan is 55 miles north of St. Joseph, on Great Western Railroad. Good train service. This will be one of our biggest and best offerings.

R. L. HARRIMAN, Auctioneer.

W. J. CODY, Fieldman.

J. E. Clary & Sons, Sheridan, Mo.



SUNFLOWER HERD

HOLSTEIN-FRIESIANS

Never before have we had as choice a lot of young cows and heifers to pick from, in lots of one to a carload. Some twenty head to calve within next 90 days by sires of the best A. R. O. backing. A clean, straight, sound lot, all tuberculin tested. The calves from these cows should be worth half the purchase price. Come see the herd, or write for breeding and prices. Herd numbers nearly 50 head, all registered.

F. J. SEARLE, Prop. Oskaloosa, Kans.

Percheron Mare Sale

AT

GRAND VIEW, MO., THURS, MAR. 6

Five Percheron mares, bred to Gaulois, an imported Percheron stallion; one two-year-old stallion, one yearling stallion, one yearling filly, and 25 grade draft horses and mares. Sale at farm near Grand View, Mo., 12 miles south of Kansas City, on Frisco and Kansas City Southern Railways. Send for catalog and come to sale.

FRED B. GLOVER, GRAND VIEW, MO.

O. W. Devine, Fieldman.



ROBISON'S PERCHERONS

One hundred fifty percheron stallions, mares and colts. Fifty imported. All for sale.

J. C. Robison, Towanda, Ks.

The West's Largest Importing and Breeding Establishment.

IMPORTERS AND BREEDERS OF

Percheron Belgians and Shire Stallions and Mares.
120 Head to Select From.

Our stallions and mares are strong and massive, with great quality, style and conformation, with splendid color and dispositions. They are selected with an eye single to the wants of the most critical American buyers, and we can sell them for less money than any one in the business, quality considered. The stallions will go into any community and command the best mares, command the men who are the best pay and who take the best care of their stock. Let us know your wants. We can suit you in both price and quality.

L. R. WILEY,

EMPORIA, KANSAS

PARK & FIRKINS' PERCHERONS AND JACKS.

Imported and American-bred stallions. All blacks and grays, all registered in P. S. of America. Some ten 3-year-olds. Also Kentucky and Missouri Mammoth Jacks from 15 to 15½ hands high, heavy bone and good performers, registered. Everything sold with safe breeding guarantee. Barns in town, 50 miles north of Kansas City, on Rock Island Railroad, 35 miles east of St. Joseph on Burlington Railroad.

J. E. PARK AND A. A. FIRKINS, CAMERON, MO.

Samuel Drybread Duroc Sale

at Farm Near Elk City, Kansas

Monday, March 10, 1913

50

Head of choice individuals, consisting of Fifteen Tried Sows, every one a producer and bred for March litters; Fifteen Fall Yearling Gilts, all bred and safe for March and April litters; Fifteen Spring Gilts, all bred for spring litters; Five Spring Boars. The sows and gilts represent the blood lines of B. & C.'s Colonel, Bell's Chief, Pilot Wonder Chief, Buddy K 4th, Red Advance, and other good breeding. The sows and a number of gilts are bred to Model Top, the Ohio, Indiana and Kentucky State Fair champion. I am selling a useful lot and I invite farmers and breeders to attend. My catalogs are ready to mail out. Please send for one and arrange to come to my sale. Your presence will be valuable whether you buy or not. If you can not attend, send a bid to O. W. Devine representing Kansas Farmer and you will be treated fair. Please write at once for catalog to

SAMUEL DRYBREAD

Elk City, Kansas

S. J. Miller's Percheron and Jack Sale

at Kirksville, Mo., March 6, 1913

Twenty-Four Head of Imported and Home-Bred

Percheron Stallions and Mares

Including such imported stallions as Incident and Introuvable and others equally as good. The mares are a lot of prize winners and are bred to the best Percheron stallions now in service. Fifteen mammoth bred jacks and an equal number of mammoth bred jennets. Will also sell saddle stallions and mares at private sale, Kentucky bred and registered. Catalogs now ready. Write for one at once.

S. J. MILLER, KIRKSVILLE, MISSOURI
Colonel Bellows, Auctioneer.

LaFAYETTE JACK FARM

HIGGINSVILLE, MISSOURI

MAMMOTH JACKS AND PERCHERON STALLIONS



TWENTY JACKS—Three to six years old; 14½ to 16 hands high. All black; all broke and guaranteed.

TEN PERCHERON STALLIONS—Two to eight years. Mostly imported. All guaranteed breeders.

Will Exchange Stallions for Good Jacks. One German Coach stallion eleven years old. One Belgian stallion five years old. Both sound.

Twenty jennets in foal to my champion jack, Dr. McCord.

ALL FOR SALE PRIVATELY—NO PUBLIC SALE THIS SPRING.

Visit or Write.

W. J. FINLEY

HIGGINSVILLE, MO.

Fifty-five Miles East of Kansas City on C. & A. R. R.

IMPORTED DRAFT HORSES



I have now for sale a lot of personally selected coming 2 and 4-year-olds as good as France and Belgium can produce. Good heavy bone. Straight draft type with quality and the best of breeding. I give a gilt-edge guarantee, good for two years, with each horse sold. All in just good breeding condition and will be a good investment to the purchaser. I can save you some money on a stallion. Barns four blocks from the A. T. & S. F. depot.

W. H. RICHARDS, - - EMPORIA, KANSAS

Imported Stallions: Percheron, Shire, Belgian

Each year we show our new importation the same month they land. Each year they win more than all other exhibitors combined. At the American Royal this year they won second on 4-year-old Percheron; first, third and fourth on 3-year-old; first and third on 2-year-old, and first and champion group of five stallions. Our horses are handsome and the best to buy; our guarantee and insurance the very best.

PERCHERON IMPORTING CO., Chas. R. Kirk, South St. Joseph, Missouri.

50—PERCHERON STALLIONS—50

Bishop Brothers have 50 big boned stallions that weigh 1,700 to 2,100 pounds that they can and will sell for less money than any firm in the business, quality considered. Write us what you want.

BISHOP BROS., TOWANDA, KAN.

Mr. Stallion Buyer.
 Cheer up! Never mind who is president "Bryan or Wilson"—it's "the man" that "does things" that makes the "government wheels" run smoothly and makes the "people prosperous." That's Frank Jams of St. Paul, Nebraska. He keeps "butting in" selling more first class Percheron and Belgian stallions and mares annually. You will buy of him if you visit his barns. Jams began life "a poor boy," without money, friends or rich relations. Today he loans money to "11 banks" in Iowa, Kansas, Nebraska, Colorado and the two Dakotas and has the largest collection of first class imported Percheron and Belgian stallions and mares owned by one man in U. S. He has enriched his customers and their customers "ten million dollars" by placing first class big drafters on their farms and for sale to "big cities" (at "let live prices.") "Jams" 31 years of successful business ("making every statement good") selling 5444 Registered Stallions and mares "in 30 different states"—also Mexico, Canada and Japan. Also 140 horses "on order" (or "on honor") from one to seven horses to "a party" and has never yet seen any of these "120 buyers." Jams has crossed the ocean 30 times for first class horses and is good for "50 more." Jams has sold from 3 to 11 head of stallions and mares—each to 60 different farmers and ranchmen—1 to 5 at a time. These men have "made good" in the horse business. They are Jams "big whole page" advertisers daily. Mr. Business Farmer: If these many prosperous, "money-making horsemen" can buy stallions and mares of Jams and save \$1000.00 a stallion and buy a better horse, why is it not "good business" to buy your stallions and mares of the "King Bee" Horseman—Jams? Jams has 80 Percheron and Belgian stallions and mares—2 to 6 years old. Weight 1700 to 2500 pounds. 50 per cent. "ton horses." 25 per cent. grays—at \$200.00 less price than blacks. 75 per cent. blacks and bays. Jams sells these stallions at \$1000.00 and \$1400.00 (few high-er). Imported mares \$700.00 to \$1000.00. All these stallions and mares have been "inspected" by two V. S. in France and are approved, registered and branded by French government. They have been "inspected" by two federal V. S. at New York City and horses pronounced "healthy" and their certificates "stamped and approved" by "Chief of Animal Husbandry" at Washington, D. C. Also Jams has had a "Nebraska Deputy State V. S. inspect" all his horses. Jams gives each buyer a "certificate of health and soundness" from this "State Deputy V. S." Jams' six financial letters of recommendation from six of the best banks in Nebraska (shown in his 1913 catalog). They tell why you should buy imported stallions and mares of Jams. His 31 years of successful business—his "one half million dollars" behind his guarantee—the fact that he is a "live wire" business man and expert horseman. He makes all competitors "stammer and stutter" and get "their hammers out for Jams." But every "knock" is a "boost" for Jams, and when stallion buyers find the horses as represented and that Jams "makes good" and his "old customers" are his best "whole page advertising." Write for Jams' 1913 "catalog and eye opener" with a "laugh and \$1000.00 bargain" on every page. It's the finest and most up-to-date "horse catalog" in the world. Buy a "through ticket" to "Jams horse town." Then "buzz around" and see Jams' horse show, as he has the "best bunch" of big "black boys" he has ever owned. His "selling clothes" fit all buyers.

C. M. Prater Makes Good Sale.
 The Poland China sale held by C. M. Prater of Oxford, Kan., on Friday, February 14, was very satisfactory. The sale being well advertised, it was attended by a large crowd of farmers and breeders. The herd boar, Master Strove, went to the Morton Bros. of Tampa, Kan., and, judging from the class of sows the Mortons have to cross with this hog we predict trouble in the show ring from this cross. The herd boar, Edgewood, went to J. V. Haddick, Gueda Springs, Kan. The top sow went to A. E. Campbell of Geary, Okla., at \$75. The next highest went to E. C. Bruster, Belle Plaine, Kan., at \$55. Col. Labe Burger did the selling. Following is report of head sold for an average of \$38.50. The balance of the offering was late sold at \$20 per head.

1—The Mortons, Tampa, Kan.	\$45.00
2—J. V. Haddick, Gueda Springs.	41.00
3—E. C. Bruster, Belle Plaine, Kan.	55.00
4—A. B. Campbell, Geary, Okla.	75.00
5—William Riggs, Oxford, Kan.	35.00
6—F. Heisterstadt, Oxford, Kan.	47.00
7—C. B. Secola, Gueda Springs, Kan.	46.00
8—J. W. Riggs, Oxford, Kan.	30.00
9—J. W. Riggs, Oxford, Kan.	30.00
10—J. W. Riggs, Oxford, Kan.	30.00
11—R. M. Brooks, Oxford, Kan.	30.00
12—R. M. Brooks, Oxford, Kan.	30.00
13—R. M. Brooks, Oxford, Kan.	30.00
14—R. M. Brooks, Oxford, Kan.	30.00
15—R. M. Brooks, Oxford, Kan.	30.00
16—R. M. Brooks, Oxford, Kan.	30.00
17—R. M. Brooks, Oxford, Kan.	30.00
18—R. M. Brooks, Oxford, Kan.	30.00
19—R. M. Brooks, Oxford, Kan.	30.00
20—R. M. Brooks, Oxford, Kan.	30.00
21—A. Brown, Wellington, Kan.	28.00
22—J. D. Nofsinger, Oxford, Kan.	35.00
23—J. E. Webb, Oxford, Kan.	30.00
24—J. B. Shockey, Oxford, Kan.	30.00
25—J. B. Shockey, Oxford, Kan.	30.00
26—R. M. Brown	40.00
27—B. F. Cronin, Greensburg, Kan.	32.50

H. B. Walter's Average Nearly \$70.
 H. B. Walter, one of the corn belt's most successful swine breeders, has demonstrated the fact that no breeder of good hogs need go outside of Kansas to look for buyers. At his sale held at Effingham, February 14, Mr. Walter sold 45 bred sows and gilts and five summer boars for a total of \$3,390.50, every animal but two staying in Kansas. The sale had been judiciously advertised and there were enough mail bids carried by the newspaper representatives to have bought at least a third of the offering at fair prices, but the breeders present liked the offering so well that only one hog was bought on a mail bid. The arrangements and place for selling were ideal and the beautiful day matched the splendid offering and hospitality of Mr. Walter and his good family. U. S. Byrne of Saxton, Mo., topped the tried sows, buying Ohava, a five year old gilt, for \$125, and J. W. Leeper of Norton bought the highest priced gilt, No. 30, a long yearling sired by Expansive, paying \$105. Breeders and local buyers and visitors packed the new sale pavilion to overflowing, but Col. Frank Zaun demonstrated his ability to hold the attention of a big audience and get the high dollar on every animal sold. Forty-five bred sows and gilts sold for \$3,101.50. Five summer boars sold for \$289.00. A complete list of sales follows:

1—G. H. Walter, Scandia	\$70.00
2—John D. Henry, Leocompton	85.00
3—G. W. Nowles, Leocompton	55.00
4—George Franklin, Everest	60.00
5—Herman Groninger & Sons	67.50
6—M. T. Williams, Valley Falls	66.00
7—John D. Hawk, Moravia	65.00
8—U. S. Byrne, Saxton, Mo.	125.00
9—G. M. Nowles	125.00
10—John Coleman, Dennison	81.00
11—Joshua Morgan, Hardy, Neb.	77.50
12—C. A. Kibler, Brenner	65.00
13—William Madison, Seneca	70.00



JAMS AND "MODELS" OF HIS "NIFTY" "BIG" IMPORTED "PEACHES AND CREAM" PERCHERON AND BELGIAN STALLIONS AND MARES. PRICES REDUCED ON "BUSINESS" AND SHOW HORSES. ALL HAVE BEEN "INSPECTED" BY U. S. A. VETERINARY AND CERTIFICATES "STAMPED" O. K. BY GOVERNMENT OF U. S. A. EVERY BUYER GETS A CERTIFICATE OF SOUNDNESS FROM JAMS. SEE JAMS AND SAVE \$1000.00 AND BUY A "HUMMER." HE HAS MANY PARIS AND EUROPEAN PRIZE WINNERS. JAMS SELLS "TOPPERS" AT \$1000.00 AND \$1500.

14—E. L. Shepherd, Wayne	63.00
15—A. F. Latta, Melbourne	70.00
16—W. A. Little, Holton	60.00
17—N. E. Copeland, Waterville	77.50
18—Isaac Hersher, Ames	67.50
19—William Winkler, Seneca	75.00
20—A. Scalapino, Everest	77.00
21—W. A. Davidson, Simpson	82.50
22—W. A. Davidson	65.00
23—William Winkler	75.00
24—Ransauere, Everest	47.00
25—Barn Haynes, Effingham	60.00
26—Tunis Tarkenton, Everest	67.50
27—J. W. Leeper, Norton	81.00
28—O. R. Strauss, Milford	80.00
29—W. E. Pelfish, Lawrence	85.00
30—J. W. Leeper	105.00
31—John D. Hawk	76.00
32—B. T. Sanders, Lawrence	60.00
33—John Chamberlain, Everest	57.00
34—John Chamberlain	56.00
35—A. F. Latta	80.00
36—John W. Coleman, Dennison	78.00
37—J. W. Leeper	66.00
38—G. H. Walter	71.00
39—John Chamberlain	52.00
40—Joe Felton, Effingham	58.00
41—Charles Moore, Muscotah	43.00
42—Lloyd Loudermilk, Glen Elder	51.00
43—George Smith, Agenda	86.00
44—A. F. Latta	51.00
45—F. W. Fassantech, Valley Falls	51.00
46—Herman Groninger & Sons	70.00
47—George Smith	65.00
48—John Wilcox, Ottawa	50.00
49—George Kile, Scandia	36.00

Kansas Farmer Sells Them.
 Enclosed find my check in payment of advertising bill. Allow me to say this in behalf of Kansas Farmer: It is one of the very best mediums I ever used. Have had excellent results from my investment in Kansas Farmer advertising and will keep it running in your columns.—D. W. WOLF, Breeder of O. I. C. Swine, Carrollton.

New Piano Offer.
 A specially attractive piano offer is now in effect which means the saving of \$100 to \$200 to the first purchaser in every neighborhood of the famous Merriman piano. This instrument has been standard of high quality for 28 years, and heretofore has been sold only through dealers. Now it is sold direct under the same binding guarantee it has always carried. Liberal free trial is cheerfully given and any terms of purchase can be arranged for. This is an unusual opportunity to secure and elegant, refined and permanently satisfying piano at a remarkably low price on the purchaser's choice of terms. Write Merriman Piano Factory Branch, Topeka, Kan., for full particulars.

C. D. and E. F. Caldwell's Angus Herd.
 C. D. and E. F. Caldwell of Burlington Junction, Mo., owners of one of the great herds of Aberdeen Angus cattle, now have a herd numbering 275 head. They have purchased all of the outstanding tops of the Robinson-Chapell herd at Maryville, Mo., and with this addition their herd, already noted for fine individuals and breeding, is now one of the very best herds of Aberdeen Angus cattle in this country. The herd bulls now in service in this herd are a trio of the great bulls of the breed. They are Undulata Blackcap Ito II, 116275 (Blackbird of the Blackcap branch); Blackcap Lad 2d, 56893 (Blackbird of the third branch); and Woodlawn Blackbird Prince 84497 (Blackbird of the second branch and a son of Prince Ito). They have a herd of breeding cows, the best blood to be found in the United States, Canada and Scotland. A large per cent of them are Blackbirds, Ericksen's Frides and K. Prides. They will have a show herd this year that will be heard from.

S. E. Smith's Hampshire Herd.
 S. E. Smith of Lyons, Kan., is one of the progressive Hampshire breeders of the west. Mr. Smith started his herd with the best breeding and individuals of the Hampshire breed that money would buy, and his rule has always been to buy the best. His excellent herd is headed by T. R. Fancy 10631 by Chicago 6965 by Miller's Plowboy 3567. His dam, Price's First, 7314, was by the

famous boar, Col. Stone 2660, and out of Nigger 3965. T. R. Fancy is a great young boar and was a winner in the under a year class at Hutchinson, 1912. Competent judges are predicting a great future for this youngster. Mr. Smith has an excellent herd of sows, a number of them by that great Hampshire sire, Mark Hanna. His recent purchases from the W. F. Davis herd of Pat Malloy sows will be a valuable addition to his already fine sow herd, and breeding stock from his herd will be right. He will have a number of early litters. Watch Kansas Farmer for his announcement.

George Wedd & Son Make \$50 Average.
 The Poland China sale held on February 20 was one of the good sales of the season. The offering was good and, the sale having been well advertised, several mail bids were in evidence. A number of breeders and a good local crowd made a quick, snappy sale. Col. R. L. Harriman sold the 47 head in less than two hours. Following is report in full:

1—H. Zimmerman, Olathe, Kan.	\$50.00
2—J. Craig, Chiles, Kan.	57.00
3—Charles McKay, Spring Hill, Kan.	58.00
4—Frank P. Jamison	55.00
5—H. M. Denny	46.00
6—Donavon, Gardner, Kan.	50.00
7—H. Zimmerman	62.00
8—C. Boehm, Lenexa, Kan.	47.00
9—J. Nicholson, Spring Hill	50.00
10—W. B. Wallace, Buncheon, Mo.	49.00
11—A. L. Wiswell, Spring Hill, Kan.	56.00
12—J. F. Bates	60.00
13—A. L. Wiswell	50.00
14—C. Stahl, Olathe, Kan.	44.00
15—A. J. James, Lenexa, Kan.	44.00
16—J. Wise, Spring Hill, Kan.	42.00
17—Charles McKay	37.00
18—F. P. Robison, Maryville, Mo.	62.00
19—R. Taylor, Spring Hill, Kan.	51.00
20—C. Bohm	50.00
21—O. H. Taylor, Odell, Mo.	40.00
22—J. T. Lewis, Stilwell, Kan.	49.00
23—Homer Gruver, Spring Hill, Kan.	49.00
24—Homer Gruver	55.00
25—J. J. Vohs	47.00
26—J. Bates	45.00
27—C. J. Woods, Chiles, Kan.	47.00
28—F. P. Robison	65.00
29—Bert Harriman, Pilot Grove, Mo.	65.00
30—A. Mulligan, Olathe, Kan.	39.00
31—C. Stahl	54.00
32—A. E. Daugherty, Stilwell, Kan.	47.50
33—S. Wright, Olathe, Kan.	40.00
34—J. T. Bates	46.00
35—W. J. Renner, Merriam, Kan.	47.00
36—J. Wise	53.00
37—C. Stahl	46.00
38—J. Lorrimer, Olathe, Kan.	49.00
39—P. L. Ware & Son, Paola, Kan.	49.00
40—L. V. O'Keefe	63.00
41—Homer Gruver	45.00
42—J. T. Bates	49.00
43—M. Kelley, Olathe, Kan.	40.00
44—Homer Gruver	47.00
45—J. Nicholson	53.00
46—C. Stahl	46.00
47—C. S. Nevius, Chiles, Kan.	46.00
48—C. Stahl	46.00

The 47 head sold for a total of \$2,331.50, an average of \$49.60.

The Ft. Dodge Chemical Co. of Ft. Dodge, Iowa, are again advertising their Gopher Death and Raticide Tablets. These preparations are meeting with great success and seem to be very popular among the users. The preparations are endorsed by many agricultural colleges and thousands of users.

Red Poll and Percheron Sale March 4.
 This issue contains the announcement of L. W. Beem of Smith Center, Kan. Mr. Beem finds it necessary to change locations, and for this reason is compelled to disperse his fine herd of registered Red Poll cattle consisting of choice young cows and heifers and seven fine bulls. Also, one registered Percheron mare and two registered Percheron stallions. Write for catalog, mentioning this paper, and either attend or send bids by letter or wire to auctioneer or fieldman in Mr. Beem's care at Smith Center, Kan.

The Place to Buy Shorthorns.
 The opportunity of the season and year to buy choice registered Shorthorn cattle, either sex, will be at the C. G. Cochran & Son's sale to be held at Salina, Kan., on Friday, March 14. On this date this prominent firm will sell to the highest bidder a

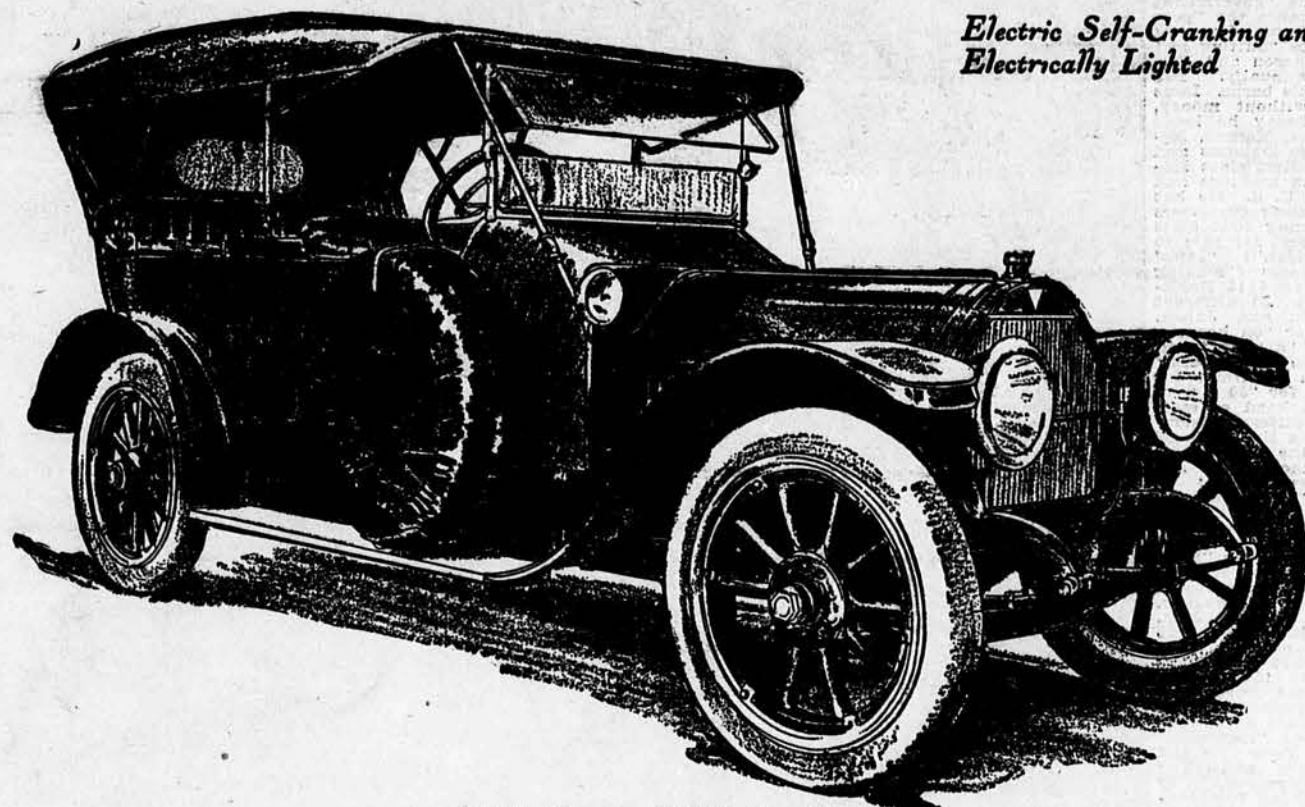
draft selected from their great herd at Plainville, Kan. This herd, which now numbers 500 head, is one of the strongest herds in this state and is the largest. When laying the foundation for this herd a good many years ago the Cochrans visited a large number of the best herds in existence at that time and bought liberally and always around the top. They have always bought outstanding bulls, and the culls, if any, have gone to the fat stock market. Their cattle have been noted for great scale, combining finish and high feeding quality, and this sale will contain 70 head of as high class cattle as was ever offered in one sale in the west. Fifty-five head will be bred females and the remainder choice bulls of serviceable age. Write at once for catalog, mentioning this paper.

Prairie View Stock Farm Jacks.
 Twenty-six years ago Ed Boen of Prairie View Farm, Lawson, Mo., commenced breeding jacks. His foundation stock was the best mammoth blood and individuals that money could buy, and Mr. Boen soon earned a reputation for breeding jacks that in size and quality were second to none. As year after year the herd was increased its reputation grew also, and buyers from many states have annually flocked to Prairie View Farm to find one of the great jack herds in the country. The writer recently visited Prairie View Farm and inspected the herd of 60 jacks and jennets that for size and high quality is one of the very best herds now in existence. His offering to the trade this year consists of 25 head of big, high-class jacks that range in height from 14.3 to 16.1 hands. They are black with white points, every one with a good head and ear. They are just the kind that will interest breeders wanting the best. Among the lot are two 2-year-old jacks, one of which is by Gen. Washington, a famous jack that stood 16½



hands high and weighed 1,240 pounds. His dam is Miss Yelberton, an extra good jennet that is 15½ hands high. The other 2-year-old is 16 hands high, sired by McNew's great Kentucky jack that is 16 hands high and weighs 1,200 pounds. This great 2-year-old is out of a jennet sired by Handsome Duke, a jack that was 16 hands and 1 inch high. These two great youngsters have been conceded by many competent judges to be the two best 2-year-old jacks in Missouri. The entire offering is high class in every respect. Mr. Boen guarantees every jack in his barn to be just as represented, and along with his reputation for breeding the best jacks in Missouri he has also earned a widespread reputation for fair dealing. His rule is to represent every jack just as it is and then make every guarantee good, and a long list of satisfied customers is evidence that he has made good to purchasers. It will pay prospective buyers to visit his barns. He will meet you at Lawson, Mo., by appointment, and always takes pleasure in showing his stock. Write him for description. He also guarantees description of stock. Please mention Kansas Farmer when writing. See his card in this paper.

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*Electric Self-Cranking and
Electrically Lighted*

"54" Phaeton \$2450 Complete

These Only Are The Cars You Should Buy



While there are approximately 250 different makes of automobiles on the American market, it is not so difficult to choose a car that will prove satisfactory. Your neighbors tell you of their experiences. The dealers speak in highest terms of the cars they sell. You are appealed to from practically every angle to consider the advisability of this car and that car.

But in all this there is apt to be much confusion as to what car can really be trusted unless you bear in mind easily understood conditions that often result in selecting the very car you should not have bought.

If you will bear these facts in mind in weighing the guarantee of each car it will save you much worry.

These Are the Cars You Should Not Buy

Cars offered at a cut price should never be purchased. Just think what effect a cut price has upon the second-hand value of the car when you want to sell it. In reality the apparent price reduction means no more, so far as actual value is concerned, than does the offer of a quoted \$25 suit of clothes at \$14. The suit never was worth \$25, it is out of date or the dealer is losing money.

If the dealer is so poor as a business man that he will sell cars at no profit, he is an unsafe man with whom to trade.

Every time a dealer fails he does inestimable injury to the manufacturer in shaking the confidence of the people of the community in the car and also depreciates the market value of your car.

Be sure also that the manufacturer is prosperous. Be sure he has had years of successful experience. New companies may have a well designed car, suffi-

cient capital and the intention to give generous values, but are unable to always produce just what they intend because a smoothly working organization of men cannot be quickly perfected.

A Car You Can Trust

Howard E. Coffin, America's foremost engineer, and his board of engineers—48 in all—combined in building the new HUDSONS.

The "37," the four-cylinder car, is a masterpiece of its type. The "54," a Six, is offered as the equal of any motor car ever built at any price.

Road performance, comfort of riding, deep, luxurious seats, small maintenance cost, long service without attention further than lubricating and cleaning are distinctive qualities.

With 48 experts, each a specialist in some feature of motor car construction, you can see how improbable it is that anything essential to value, comfort or service can have been overlooked.

Several thousands of these cars are now in the hands of owners. They are giving satisfactory service over every kind of road. Many have been driven thousands of miles without even requiring the use of a screw driver, wrench or hammer to make adjustments or repairs.

Don't expect to buy a HUDSON at a discount. You must pay just what your neighbor pays—no more, no less.

Send for catalog of either the "37," which sells at \$1,875, or the "54" the Six, at \$2,450. The prices are f. o. b. Detroit. Or go to a HUDSON dealer and he will prove their value in a hundred different ways.

Bodies for either car are furnished in Touring car, Phaeton—five-passenger—and two-passenger Roadster. Cars are fully equipped with electric self-starter, electric lights, speedometer, clock, windshield, top, demountable rim, extra rim, tire holder and everything needed ready to operate.

IMPORTANT NOTICE.

All the leading makers find this year, because of the unusually fine weather of the past winter, that they have more orders than they have cars.

Therefore whatever car you choose should be ordered now. Otherwise you will not be able to get any of the makes it would be safe for you to buy.

See the Triangle on the Radiator

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