

KANSAS FARMER

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Tenth International Live Stock Show

For the tenth time the International Live Stock Show has thrown its gates wide and its invitations to both breeders and general public has been accepted in the spirit in which it was offered. At no time in the history of this great show, however has the city at the foot of the lakes been so blessed with weather conditions for this great assembly of breeders and their products. This year the show extends over two weeks, and it is not possible at this time to give full details of the awards made.

More prominently than ever before this was a show by the agricultural colleges. While it is true that equal numbers of College men have participated in the past perhaps, it has never been true that so much interest centered around the work of these institutions as it has shown in the show rings. While it seemed to some of the exhibitors that certain classes were not so strongly filled as had been true in the past, it was admitted by all that the college influence was dominant, especially in the meat-making sections.

It is within the easy recollection of the writer that the real value and utility of this great show was not fully appreciated by the men who might be thought to be closest to it. It was also true that the value of the agricultural colleges as practical institutions was not valued at the full. Since these colleges took hold of the work of competition in the larger state fairs and the exposition both they and the shows have profited and are now more nearly valued at their true worth. While some critics may claim that the International Live Stock Shows have inspired and served to develop the practical animal husbandry departments of the colleges, it seems equally plain to others that they have been mutually helpful and the present high standard attained by each is in no small measure to do the influence of the other.

The winning of prizes by these college boys under the direction of their several departments of animal husbandry is of great value in itself, as an incentive to better effort and for the reputation it brings to the college and its work. But it is vastly more valuable because of the necessary study and development of the problems which have to do with our greatest industry, that are a part and parcel of the prize-winning.

Of course there was the never-ending battle of the breeds among the beef producers and each can claim for his favorite breed a fair share of the glories won in the arena. Being international in its character this show brings together some herds that are not seen in other shows further away from the Canadian line but the visitor who attends the big corn-belt circuits and the American Royal is tolerably well acquainted with the animals that appear in the great international. Thus, while the Shorthorns seemed stronger in the breeding classes than ever before, and their exhibitors were out with an even lot of cattle, it was difficult to give them any preference over the Angus whose owners claimed for them that they are the market-toppers. Many of the car-lot prizes so far as awarded went to the Shorthorns, but the winnings of the Angus breed in individual classes was little short of wonderful.

As before stated this work is chiefly

Kansas a Strong Winner Among the World's Best Exhibitors

valuable for the making of the young men themselves in that it involves a study of modern breeding and feeding operations. It is therefore no wonder that the prizes offered are keenly contested for among the individuals who compose the different teams and that college interest in these contests is great. For a number of years the chief prize offered at this contest has been won by the Iowa Agricultural College team. This year they were winners with a score of 350 points higher than that ever made at this great show. Their total was 4,940 points out of the possible 6,000. The Ontario College stood second with a score of 4,741 points. The Ohio team, third with 4,722 points, Kansas fourth with 4,622, and Texas seventh with 4,443 points. The Iowa

team stood first on cattle and hog judging, Missouri first on horses and Ohio first on sheep. An Ohio man won the highest score with 1,036 out of a possible 1,200.

While Kansas has been represented in many prize rings before by worthy representatives her State Agricultural College made a record that has never been equalled with its showing of fat steers this year. The grand champion fat steer of the tenth International Live Stock Show King Ellsworth was a pure bred Angus that had been fed and shown by the Kansas Agricultural College before going to Chicago. This grand champion was a 2-year-old and stood first in his class, as he had done at both the American Royal and St. Joseph. The reserve grand champion was Symboleer, also

fed and exhibited by the Kansas Institution. The champion steer calf of the show was owned by the Missouri University.

The Kansas Agricultural College also made a sensational showing in the fat cattle ring for Shorthorns. They won first and championship on the calf Benefactor which was bred in the Tomson herd at Dover, Kan.

Kansas Jim stood at the head of the exhibit of Galloway steers made by the Kansas College and won first in his class although the championship went to Nebraska. The grand champion steer, King Ellsworth, sold at 18 cents a pound for Christmas beef. After having captured all of the first and championship prizes which seemed to be within reach in the state fairs of the corn-belt circuits and having won more than any other college or individual exhibit at the International serves to place it in a class by itself when it comes to beef production. The college would have a right to feel proud had it won the grand championship steer, but to win this most sought-for honor and the reserve grand championship as well, is an unprecedented record.

The Kansas College won first prize in the get of sire class of grades and crosses of beef animals. Fowler & Todd of Maple Hill won first on car-lot of 3-year-olds for the southwestern district. These were Herefords as were also a car-load of 2-year-olds on which they won second prize. Their car-load of yearlings were Shorthorns and were awarded first prize, while their car-load of calves were Hereford, on which they won first also. They were also given the Hereford specials as follows: 1st on car of 3-year-olds, 2d on car of 2-year-olds.

The officers of the Percheron Society of America, which held its annual meeting at Chicago during the week, are to be congratulated on their very successful year which is just ended. The secretary's report shows a total of \$38,453.82 received, and a balance in the treasury of \$2,993.07. There were registered during the year 2,085 imported Percherons, and 5,445 native-bred animals, making a total registration of 7,530 head compared with 5,172 last year. Of the imported animals 1,267 were stallions, and 818 mares. The officers of the Association are President H. G. McMillen, Rock Rapids, Ia., vice-pres. A. P. Nave, Attica, Ind., Secy. Geo. W. Stubblefield, Chicago.

Pres. M. A. Judy of the Aberdeen Angus Breeders' Associations, called the annual meeting to order with about 75 members present. Directors were chosen as follows: Stanley R. Pierce, Creston, Ill., John R. Evans, Cedar Grove, Ill., and H. L. Cantine, Quinday, Ia. Officers were elected as follows: President C. E. Martin, Payne's Depot, Ky., Vice-Pres. A. C. Binnie, Alta, Ia., Sec'y Chas. Gray, Chicago, Treas. C. J. Martin, Churdan, Ia. The Association directed its officers to hang up a special \$500 prize for the International entries of Angus cattle next year instead of the \$200 which has heretofore been given.

The Shorthorn Association held its annual meeting and elected Governor A. C. Shallenberger, Alma, Neb., T. F. Flynn, Des Moines, Ia., John R. Tomson, Dover, Kan., E. W. Harding, Waukesha, Wis. and E. R. Silliman, Colo., Ia., as directors. The details of the Secretary's report will be placed in the hands of the members of the Association.

"Have You Caught the Christmas Spirit?"



"I don't know of a better Christmas present than a year's subscription to Kansas Farmer."

Water For Western Kansas

C. W. ASKEW, UTICA, KAN.

Why Not Convert the Semi-Arid Belt Into the Most Productive Country on Earth

It is not my desire to discuss this subject from a scientific standpoint, or in a scientific way, as is evident science suffers many changes. But we prefer rather to discuss it from the standpoint of experience and observation of actual facts which stand out so prominently that they can not be doubted.

It has already been demonstrated that the altitude makes no difference in the amount and regularity of the rainfall, since the very highest and the very lowest points of our country are each receiving the greatest amount of rain or snow.

There must be some other cause for this semi-arid condition in the dry belt extending from the British line southward almost to the Gulf of Mexico. What is the cause of this condition? I will answer by saying: The simple reason is that the lay of the country is such that every particle of the surface water drains out of it in a few hours after the heaviest rains, leaving no lakes, ponds or swamps, and but few running streams. The country is left without any surface water to be picked up by the atmosphere and conveyed to supply the food of all vegetation, that is so essential for its life nourishment.

The dry plains are left with their burning soil over which the air will pass and re-pass without contributing the least particle of moisture to be condensed into rain.

But instead the heat is generating by the sun shining upon the surface, and the air passing over it until it attains the propensities of a hot wind that scorches the life out of what little vegetable life that may have started.

Now the remedy is this: To make our conditions the same as those in the localities that receive sufficient rain, together with an atmosphere that produces good crops and a good growth of vegetation every year.

If you will take a look over our country, you will see that the most reasonable conditions are where the country is supplied with the largest per cent of water surface, accompanied with a good supply of timber growth. Those parts are supplied with water surface, some by the Great Lakes, some by small streams converging into larger ones, and all have a greater or less number of small lakes, ponds or swamps.

Now since the lay of the country in the semi-arid belt is such that it does not naturally contain these facilities, it is necessary that the work of man come to its rescue, and it would be a very simple and inexpensive matter compared with the value that would be received from covering our western country with ponds and lakes.

The plan that I would suggest would be to begin at a point on the high flats, or divide, where the draws head and scrape a fill or dam across all of the draws on the section lines. This would serve for the double purpose of creating good roads and a dam to hold a pond of water. Take up the work on all of the section lines in an easterly direction as the work advanced.

By so doing the volume of water would not become so great from one dam to another but what it could easily be held. After holding the water in the draws the larger streams could be brought under control and a dam erected cheaper than an iron bridge would otherwise cost. In order to make this work substantial it would be necessary to cut a race around the end of the dam, back on the higher land, to carry off any surplus water in case of cloud burst or heavy dashing rains that might overflow the dam. These outlets on larger streams would necessarily need small bridges. These races would be back on high land, where in a great many cases the water could be conducted into small draws where reservoirs could easily be constructed and the water used on the soil below for irrigation at such times as it might be needed. A small appropriation by the government and also from each of the several states directly interested, together with a county road tax applied in the proper way would in a very short time bring wonderful results.

The dams could be tapped with water pipes, which would enable the

of the atmosphere, and the growth of timber, orchard, shrubbery and other green vegetation would be as essential as the water surface, and would be a natural development, one working in harmony with the other.

There are but few draws that have sand and gravel bottoms that would not hold water good on the start, but even damming those would bring about a beneficial result, for the water forced into the earth at an altitude of 2,000 or 3,000 feet would be likely to crop out somewhere to an advantage.

Here I want to call your attention to one very noticeable feature brought about by the lack of atmospheric humidity which was displayed throughout the dry counties this last season. It was this: Whenever there was a local shower extending in a narrow strip in an east and west direction the corn did not seem to receive any benefit from it as the moisture was licked up and the crop burned about the same as the locality that received no shower. And in the localities where fell similar rains but extending north and south there was a greater per cent of humidity that the south wind carried with it which caused a vast difference in the appearance of the growing crops. Now with plenty of surface water always on duty, why would not those last named conditions always prevail? The ponds stocked with fish would also contribute largely to the products of our country and there would hardly be a quarter section that would not have a pond, orchard and grove on it, throughout the arid belt.

If this plan were carried out our conditions to contribute moisture to the air would be on an equal with the eastern and central states. For we could hold as great a per cent of water surface as they now have. Our atmosphere would contain the same amount of humidity. The hot winds would be a thing of the past. Our fruit could stand as low a temperature as that on the shores of Lake Michigan. We could expect more healthful conditions, for with the ice ponds in winter and the water ponds in summer the temperature would not fluctuate to so great an extent which feature is so characteristic of any country that does not contain a good supply of water surface.

With those conditions we would not have the premature hot weather in winter that pushes out the fruit buds before the proper season only to get caught by a hard freeze later in the spring. There is hardly a season but what our precipitation is sufficient to produce abundant crops with the atmospheric humidity this amount of water surface would maintain, even if we did not get one drop more moisture. And there is no reason why with the equal chance for the center of a low barometric pressure that those conditions would give us that we should not expect regular and sufficient rain to produce good crops every year. To verify my assertion I wish to call your attention to the change that has been brought about by tilling the swamps of Illinois. It is very noticeable that droughts are more frequent in those places since the swamps have been drained. I recall another thing to verify my statement: Have you noticed that when there is a big fall of snow in the mountains of Colorado and the streams running through Kansas are swollen by the summer thaw that we can expect a good season even though those streams are few and far apart.

The eastern part of the state which suffers to such a great extent from the high floods which would be abated to a great extent by holding the water where it falls, would thereby receive an equal benefit with the western areas, and the increase of taxable property resulting from the increased production would bring in a revenue that would probably exceed the expenditures.

There is no reason why the state should not push this project to the front and give the most fertile soil in her domain a chance to contribute its share to the state's wealth. It is not necessary that the work be done all at once, but let us each year advance the work and nature will be doing its part at the same time.

"Have You Caught the Christmas Spirit?"

(See cartoon on first page.)

Some of our subscribers have. The cartoon on the front page of this weeks Kansas Farmer was suggested by an order just received from one of our subscribers. Mr. Philip Lux, of Topeka, Kan., ordering the Kansas Farmer sent for one year to his son, Walter G. Lux, and to each of his two sons-in-law, W. L. Bowman and C. W. Jackson all of Olivet, Kan.

Mr. Lux says that he could not think of a more appropriate gift than this, and Mr. Lux knows, for he has read the Kansas Farmer for years, has been a practical farmer himself and knows the value of a good Agricultural paper.

Believing that many of our subscribers would like to do just what Mr. Lux has done we have decided to accept the scribe sent us between by any of our present cents, one half of our price.

If you would like to send the Kansas Farmer friends or neighbors, 50 cents for each name and we will prepare a neat card notifying each of your subscribers that you have paid for a years subscription and that the Kansas Farmer will be sent them for one year as a Christmas gift from you.

You don't have to notify them yourself. The gift will be all the more pleasing if they know nothing about it until just before Christmas and receive the notice direct from us.

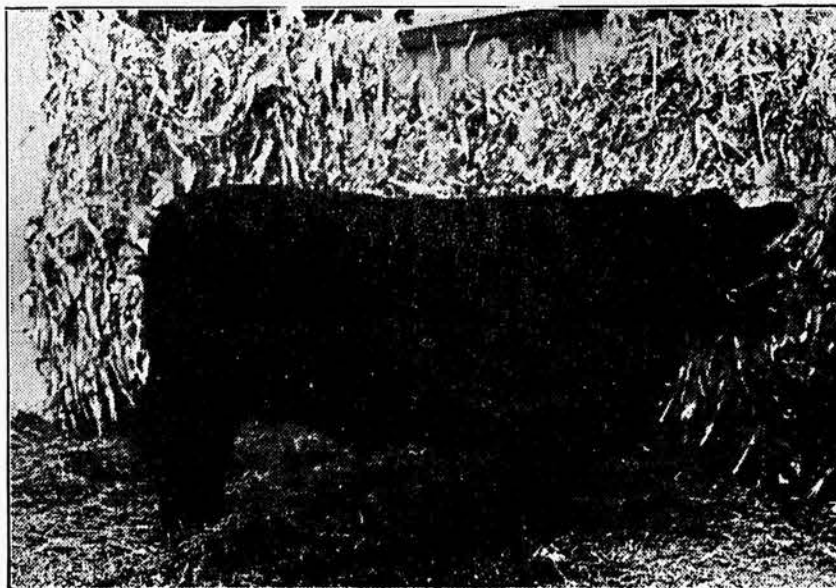
If you want to renew your own subscription, send us only \$1.25 and we will renew your subscription and send the Kansas Farmer one year to your friend. Better yet, send us \$1.50 and we will renew your subscription for two years and send the Kansas Farmer absolutely free to one of your friends or neighbors as a Christmas present from you. Still better, send us only \$2.00 and we will renew your subscription for three years and send the Kansas Farmer one year free to two of your friends or neighbors.

A years subscription to the Kansas Farmer will prove the most pleasing gift you could possibly make, and you will be spreading the gospel of better methods of farming and stock raising, which should in itself be of no small satisfaction to you.

Remember that these names must be new subscriptions to the Kansas Farmer and that this offer is good only until Christmas of this year.

water to be used for irrigating the land below for orchards, truck patches or any other crops that would bring

in the greatest returns per acre. The water thus absorbed by the soil would contribute its share to the humidity



King Elsworth, Grand Champion Steer, International Live Stock Exposition, Chicago, 1909. Fitted, owned and exhibited by Kansas Agricultural College.

THE SOIL--WHAT CROPS USE

Effect of Continued Cropping as Compared With Live Stock Farming and Sale of Animal Products.

The Country Life Commission found a man in Illinois who had bought his land from the government and has farmed it since. He is now 90 years old. His neighbors' farms are producing 35 to 40 bushels of corn to the acre, but his land is producing only two bushels of wheat and less than ten bushels of corn per acre. His poor farming exhausted the soil so that it is almost worthless. A man may think that his land can not be exhausted or he may not have enough knowledge to realize what he is doing. Nevertheless, bad farming will exhaust any soil. In the east, the farms that are for sale are advertised in big and numerous catalogs. Many of them are run down farms. The Atlantic states produce small crops unless fertilized. The wheat lands of the Dakotas, Oregon and California were among the richest in the world. Now some farms there are producing one-half or less wheat than at the beginning.

On the other hand, much land in the middle west which has been farmed for 50 years or more is now producing even bigger crops than when first broken. This has been done by rotation of crops, raising live stock, better tillage and better seed.

The fertility of the soil is its power to produce crops. This power depends upon the following factors:

Physical—Temperature, moisture, tillage (plowing, harrowing, etc.).

Chemical—Plant food.

Biological—Microorganisms (bacteria, etc.), plant excretions.

Tillage is one of the oldest ideas of crop production. For that reason it is the best understood and most used factor. Proper tillage gives the best condition of moisture and temperature. Otherwise these are problems of drainage, irrigation and hot-house gardening. How to control the bacteria so as to get the biggest crops is not well understood. What is known shows that proper tillage also gives the best bacteria conditions. Soil inoculation for alfalfa and clover has sometimes produced good results.

Plants, like animals, give off excretions which are harmful to the creature that gave them off and to many others. Growing the same plant on the same ground every year is liable to fill the soil with these excretions that they become injurious and decrease crops.

The question of plant food is important. The soil consists of broken down rocks—a rock powder. In most soils the rock powder has mixed with it decaying vegetable matter called humus. The decay of this vegetable matter is largely a process of slow burning and the plants are transformed into a sort of fine charcoal. It gives the soil its back color. Humus plays an very important part in liberating food from the rock powder, conserving moisture, decreasing stickiness and clodding, and most important of all, destroying poisonous excretions. The most important plant foods are nitrogen, phosphorus and potassium. Nitrogen is closely bound up with rock powders. Phosphorus and potassium are in the rock powder. They are loosened from it by the action of the elements and humus. Only a small portion of them is in the loosened or available condition at one time. This is fortunate because otherwise they might be washed away. All plant foods must be dissolved in the water of the soil before plants can feed on it.

The seed contains enough food for the young plant till it forms roots and leaves. Then the leaves breathe oxygen from the air. When the sun is shining the green material in the leaves takes carbonic acid from the air and builds it up into sugar, starch and fat. The roots push their way into the soil. About one-tenth of an inch of the root can absorb water. The rest of the root will not take in water. As the root grows its tip moves into new and unused parts of the soil. When it has fed a while it becomes corky, gives off injurious material, and will not let in water. Just as fast as this happens the root tip grows, getting away from the poisonous excretions into new parts of the soil where there are no excretions but more food.

The analysis of Illinois soils are representative because they show the composition of the types of soil that

occur in the middle west, and these show that an acre of surface soil 6-2-3 inches deep contains on the average of 4,800 pounds of nitrogen; 1,200 pounds of phosphorus and 344,000 pounds of potassium. These materials are used in building up a crop. Every time a crop is removed from the land some of this plant food is removed and the supply becomes that much less. Crops take plant food out of the soil at the following rate:

	Nitrogen lbs.	Phosphorus lbs.	Potassium lbs.
Supply in the soil..	4800.00	1200.00	344000.00
10 bushels wheat (seed) removes..	12.3	2.37	2.82
60 bushels wheat (seed) removes..	73.8	14.25	16.93
1000 lbs. wheat straw removes..	6.0	0.96	5.22
10 bushels corn (seed) removes..	8.96	1.4	1.66
100 bushels corn stalks removes..	89.6	14.03	17.18
1000 bushels corn stalks removes..	4.8	1.67	18.61
1000 lbs. timothy hay removes..	10.0	2.20	11.70
4000 lbs. clover hay removes..	21.2(?)	2.42	15.52
6000 lbs. clover hay removes..	127.2(?)	14.52	98.12
1000 lbs. cow's milk removes..	5.6	0.48	1.16
100 lbs. 30 pct. cream removes..	.55(?)	0.04(?)	.10(?)
1000 lbs. living beef removes..	26.6	3.18	1.40
100 lbs. living swine removes..	20.	3.87	1.49

Taking the amount of plant food in the soil, the amount removed by a crop, and figuring how many crops the soil can produce gives a great number of crops. The average soil apparently has enough nitrogen to grow 151 twenty bushel crops of wheat; enough phosphorus to grow 274 crops; enough potassium to grow 2,833 crops. It figures out such a big supply of plant food that one would expect very large crops of wheat. But the average yield of wheat in the United States (1895 to 1904) was only 13.4 bushels!

The fact is, that only a very small portion of the plant food in the soil is available; that continued cropping with the same plant leaves so much harmful excretions in the soil and so many pests that yields become small. When a man's legs get tired he can rest them and they will be as good as ever. But if he has them amputated for any cause, he has to buy wooden ones which cost money, and never are as good. If the crop yield decreases because the soil is "tired" of one plant a change of crops will make it almost as good as ever. But if its available fertility is taken out and shipped away on a railway train, new plant food in the shape of fertilizer has to be shipped in, bought at a big price, and put on the land to make it grow crops. The land never is as good as if it had not been exhausted. It is like wooden legs. A bad farmer can take a good farm worth \$200 an acre, exhaust it so that it will be worth only \$10 an acre, and in doing so he will

not make enough money on his crops to buy another farm at \$190 per acre.

Feeding the crops to live stock, using the straw for bedding and returning the manure to the land is the most economical method of conserving fertility. Nitrogen can be restored by growing leguminous crops (clover, alfalfa, peas, beans and vetch) but the only way in which phosphorus and potassium can be supplied, is to buy them and put them on the land. Phosphorus is usually the first to give out. The following illustrations show the rate per acre at which the biggest crops remove phosphorus and potassium:

PHOSPHORUS TAKEN AWAY BY THE BIGGEST CROPS.

60 bushels of wheat (seed and straw) takes away 21 pounds.
100 bushels of corn (seed and cob) takes away 17.6 pounds.
1 bale of cotton (lint and seed) takes away 4. pounds.
500 pounds of living beef takes away 4. pounds.
1,166 pounds of 30 per cent cream takes away 0.53 pounds.
600 pounds of butter takes away 0.06 pounds.

POTASSIUM TAKEN AWAY BY BIGGEST CROPS.

60 bushels of wheat (seed and straw) takes away 54.6 pounds.
100 bushels of corn (seed and cob) takes away 23. pounds.
1 bale of cotton (lint and seed) takes away 10.8 pounds.
500 pounds of living beef takes away 4.4 pounds.
1,166 pounds of 30 per cent cream takes away 1.0 pounds.
600 pounds of butter takes away 0.11 pounds.

Butterfat is built up from material that comes from the air. It does not take any fertility from the soil. Butter and cream take less out of the land than any other product. The richest the highest priced and the finest looking farms in Europe are dairy farms. They are in Holland, Germany, Denmark and Switzerland. Dairy land in Holland and Germany is worth \$400 to \$2,000 an acre; in Switzerland mountain land \$300 to \$700 an acre; farming and \$1,500 to \$1,600 an acre. Renters pay \$40 to \$60 an acre a year for the use of such lands. Although this land has been farmed for hundreds of years it is still producing big crops.

Crop rotation gives great results. Of all the ways for increasing crops, it is the easiest to put in practice. A change of crops "rests" the land. It gives it a chance to get rid of the excretions of the previous crops. All plants do not draw alike on the plant food; some use more of one kind, others more of another kind. A cultivated crop eradicates weeds and benefits in nitrogen. Leguminous crops eradicate weeds, adds humus, makes the soil looser and thus gives better conditions with respect to tillage and moisture.

The following crop rotation is very successful in the middle west:

Hay, one or more years. Grasses: like timothy, blue-grass, brome, etc. Legumes: clover or alfalfa. Followed by:

Pasture, one or more years on the hay land. Followed by:

Corn, one or more years. Corn changes with grain and finally grass

seed is sown with the grain to make hay land again.

Manure for the corn. Manure is sometimes applied on the hay land or pasture.

Timothy and clover thrive better in the north. Alfalfa and Bermuda do well in the south and in semi-arid localities. Ensilage gives the most feed of the best quality.

In intensive dairy farming, ensilage and roots are grown for winter feeds. In the summer the cows are fed in the stables on green forage which is cut and hauled in. This is called "soiling." Some grain may be grown on the farm or some grain and mill by-products may be purchased. In this way, one acre will feed a cow 12 months. Since everything is taken from the field and hauled to the stable in intensive dairying, the manure must be returned to the land to maintain plant food and humus.

Dairying can be done better on hilly, stony or wet land than any

other kind of farming. Roughage like straw, coarse hay, corn fodder, etc., are best utilized by cows.

Legumes are nitrogen gatherers. By means of bacterial warts on their roots it is taken up from the air and stored up in great quantities in their roots, stalks and leaves. When fed to animals they produce a manure correspondingly rich in nitrogen and therefore of a high fertilizing value. Straw is very poor in nitrogen, so when fed it produces a manure with a small amount of nitrogen. While grass and grain crops remove large amounts of nitrogen the legumes store it. They form a class by themselves which maintains the fertility of good soils and builds up poor ones. The poisonous excretions of other plants are neutralized or destroyed by legumes. They are of great value for this purpose.

The usual way of handling manure wastes from one-fourth to one-half of it. This waste happens:

By running off of the liquid manure.

By leaching by water from the roofs and yard.

By heating (fire-hanging) and too much rotting.

These wastes can be avoided:

By plenty of bedding to absorb the liquid which contains most of the nitrogen.

By protecting from washing with large quantities of water. An ordinary rain is all absorbed and does little harm.

By piling closely. Air enters loose manure, makes it heat, and causes great losses of nitrogen in the shape of ammonia. Plenty of moisture stops heating.

Mixing cattle manure with hog manure, which are moist and cold, with horse manure, which is dry and hot, lessens or stops heating. There is a risk of some waste if the manure is allowed to rot. Although rotten manure is a good fertilizer it should be remembered that rotting reduces its quantity greatly. Spreading the manure on the field as soon as possible, makes the most of the manure and is practical.

The most practical way to keep up soil fertility is to sell those products which remove the least plant food; to prevent the waste of manure; and to supply the manure on the land. Run down land can be built up by plowing under legumes to add humus and nitrogen; by pasturing; and by manuring. Dairying, of all lines of farming, will do this in the most practical and profitable manner.

EDITOR'S NOTE: The above is taken from a bulletin distributed by the American Association of Creamery Butter Manufacturers and shows how the sale of milk, butter-fat or meat does not rob the soil.



Prize Winning Exhibit, Cheyenne County, Colorado Fair. See announcement of Cheyenne County Land Co., Cheyenne Wells, Colorado, on another page of this issue.



KANSAS FARMER

EDITORIAL



There need be little fear that the area of well planted and well tilled farm crops will be too large.

Some where we found this sentence which states an important truth: He who abandons the farm will find too late that good fortune has abandoned him.

Are the barns and sheds in good repair? Is the live stock comfortable? If not you are losing money every minute.

Farmers sometimes complain that their work is an endless job. Did you ever stop to think how many men there are in this world who would like an endless job?

Do not forget that the profit lies very largely in the saving. Produce as cheaply as possible, save every bit of the crop in the best condition, and note the increased profit.

The farm boy has greater opportunities for a successful life in its broadest meaning than the city lad, capital and everything else being equal at the start.—American Farm World.

The most practical way to keep up soil fertility is to sell those products which remove the least plant food; to prevent the waste of manure; and to supply the manure on the land. Run down land can be built up by plowing under legumes to add humus and nitrogen; by pasturing; and by manuring. Dairying, of all lines of farming, will do this in the most practical and profitable manner.

The man who does not believe in up-to-date methods is the man who does not believe in new things says Farmer and Breeder. He is the man who condemns the scientific farmer, or the book farmer as he is pleased to call him. If the whole world were like him this same individual would be plowing the ground with a crooked stick, cutting his grain with a reaphook, and thrashing it out with oxen. No, maybe that is too far. He might be roaming the woods, hunting with a club, living in holes in the ground, even much worse than the white man ever found the American Indian.

What is to be a permanent exhibit exploiting the government's irrigated lands has established in Chicago. The exhibit, the first ever established by the government, in charge of J. C. Waite, settlement agent for the United States reclamation service. Displays of grain, fruit and farm products raised on the irrigated land, together with photographs and literature, have been established by Mr. Waite. The office of the settlement agent is run on a business basis and a campaign of education regarding government lands will be conducted. The office is a bureau of information to persons all over the country.

The editor has this week traveled among the grain farmers of Kansas. There are not a great many of these left but there are still to many. These men are losing some easy money through their failure to keep live stock enough to clean up the stalk fields and eat out the wheat stubble. In the stalk fields, even though the cleanest husking is done, there still remains from 2 to 5 bushels of corn per acre and this eaten with the roughage is a considerable saving. The wheat stubble is full of fine volunteer wheat pasture. This is a fine as any seen in recent years. This feed is too valuable to waste. Besides the sown wheat is large and will afford pasture now and would be benefitted by pasturing. The grain farmers cannot afford to be without some live stock.

Start right. No difference what you undertake make the right beginning. "Well begun is half done," is an old saying, true indeed. If you intend building up a herd of pure bred hogs, beef cattle, dairy cattle or horses do not make the mistake of selecting inferior animals in either breeding or quality for the foundation herd. The tendency of the beginner in the pure bred stock breeders is to economize in first cost. Lasting impressions are being formed when the progeny of the first pure bred animals have matured and those impressions are either such as will

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OUR GUARANTEE—It is our belief that all advertisements in this paper are from reliable persons or firms. To show that we are in earnest in protecting our subscribers we guarantee the trustworthiness of our adver-

disgust the farmer and cause him to overthrow all of his good intentions or will be of such character as will encourage him to greater undertaking. The theory and practice of good stock is sound and every failure from a poor beginning is a setback to importance and advancement.

Not enough farmers plan their work. The farmer too often forgets that he has a brain and by the exercise thereof, capable of saving himself and his men many hard licks. The mechanic works to a plan. If he did not he would fail. KANSAS FARMER has urged this point for years. Farmer and Breeder puts the idea in these words: "One of the things that would pay the farmer well, would be to take more time to 'figure it out.' Too much time and energy are lost by too much haste." Some time spent in careful planning many times saves hard licks and money as well. In our haste to get our work up we hurry and often lose time by not stopping to 'figure it out.' We seem to forget that we have a few brains and neglect to use them. Brains are like folks, they are made better by the right kind of use, and they will both always be improved by working at honest legitimate business. Take some time to 'figure it out' and see if it will not pay."

The best farmers—tillers of the soil who have come to the notice of this editor are the potato growers and the truck farmers of the Kaw Valley between Topeka and Kansas City. Right now they are busy plowing as deep as they possibly can every acre of ground which is next spring to be planted. On many pieces a rank growth of rape is being plowed under for manuring. On other farms barnyard manure has been spread. The rape has grown and the top dressing of manure has been given since the summer crop has been harvested. It is plain to be seen that these men have fooled no time away. But, in deep fall plowing what are they doing? Building deep cisterns over their fields. That is what deep plowing amounts to. It plows the soil in condition to take up every drop of moisture falling on the field. The fall and winter rains run up the cistern. The planting is done. The cultivation of the soil and the maintaining of a dust mulch places a cover on the cistern so that no moisture evaporates and practically all the waste stored up in that deep plowing is available for the growing crop.

Kansas has always been fortunate in having connected with its Agricultural College men of more than average ability as teachers and investigators and through these Kansas and the Agricultural College have been able to keep well to the front in the public. As a rule these men have developed in the great Kansas school and when their work began to attract attention they were employed by other states. This is a peer system Kansas has. She de-

velops able men but does not hold them in her own institutions. Kansas will be well represented with speakers on the progress of the National Corn Exposition held the next month in Omaha signifying that Kansas has the talent from which the world desires to hear. Prof. H. F. Roberts will appear on the program of the American Breeders' Association with a paper giving a detailed account of the methods of improving wheat. Prof. Roberts will also present a paper before the Society of American Agronomists on the results of the alfalfa studies made by him at the Kansas station. The experiments by Prof. Roberts in both these lines have attracted wide attention. President Waters will give an address before the breeders' association on "The Effect of Nutrition Upon the Type of Animal." Other members of the Kansas State Agricultural College faculty and experiment station staff will appear on the programs of various scientific societies which will hold their meetings at the corn exposition.

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

KANSAS FARMER COMPANY,
Topeka, Kansas.

KANSAS CORN SHOW.
The largest corn show ever held in the state promises to be that at Manhattan Dec. 27 to Jan. 1. The show is under the auspices of the Kansas Corn Breeders Association and the extension department of the Kansas State Agricultural College. Over \$800 in prizes is offered.
Professor TenEyck, in looking over the premium list remarked that more money and larger premiums were offered at the state show this year than at the Omaha National Corn Exposition. Every farmer in the state growing good corn should attend the corn show and make an exhibit. An entrance fee of one dollar will be charged each exhibitor, but a yearly subscription to some farm paper will be given each exhibitor not winning other premiums.
Premiums are offered for the best ten ears of white corn, yellow corn, and any corn other than white or yellow. Prizes will be given for the largest sworn yield of corn per acre. A fifty dollar alfalfa shovel cultivator will be given for the best ten ear sample of corn grown west of the west boundary line of Jewell, Ellsworth and Kingman counties.
Kansas farmers and their sons should attend this show. It will be worth the time and expense to learn what really good corn is, how to select seed, how to plant and cultivate. The knowing of the things well is worth a great deal of money. The women folks will enjoy the show, too. There are other things in the week of institutes which will interest the women aside from corn. Take 'em, God bless 'em, take 'em.

WHEAT PROSPECTS GOOD.
During the past three weeks all parts of Kansas have been visited by a copious rainfall—a fall almost unprecedented at this season the year. The state's big crop of this year has been, for the most, harvested and se-

curely stored. Some corn is still in the field and a great deal of wheat is in the bin unsold. But conditions of soil now are very favorable for a good start of everything to be planted next spring and winter-wheat could not be more promising than now. Secretary Coburn recently said:

"I do not recall a year, when the first of December saw Kansas in a more promising condition agriculturally. The gentle rain, falling today and all last night, along with the several inches showered on the state everywhere within the past week, not only fills the ground with the moisture which means so much toward giving next year's crops a vigorous start, but fills the wells, creeks and ponds with a supply of clear water well calculated to make the stock man's heart glad.

"The mild days and ample moisture are also causing the millions of acres of winter wheat to develop a vigor and growth both above and below ground that will enable the plants to successfully resist adverse conditions of one sort or another that may occur in the following spring or early summer. All this has worked an astonishing transformation in great areas of wheat that was sown late because of delayed rains at plowing and seeding time. This late seeding made the outlook at the time, in many localities, far from promising. Now, however, this is all reversed, and there are considerable unpromising wheat fields in Kansas their whereabouts is being carefully concealed from this office. On the other hand, unofficial reports coming in are so uniformly optimistic as to seem almost like exaggerations. Their uniformity is well calculated to not only surprise but to delight the oldest inhabitant."

GET THE MANURE ONTO THE FIELD.

Readers are oftentimes led to believe that the editor of their favorite farm paper is "chesty" on matter regarding which he writes week after week. KANSAS FARMER has been urging on its readers the value of manure and the necessity of getting it directly from the stable to the field. It seems that there is little more to be said on the subject. But, these words from Henry Wallace will serve to once again forcibly remind the reader:

We wonder if it is possible to induce our readers to make a determined effort this winter to get the manure made in the horse and cow stable directly to the field, instead of leaving it out in the yard and allowing it to take its chance of getting to the field next spring, and most probably next fall, when half its value has been lost.

"Farmers are very slow about undertaking any new method. They are accustomed to doing things in a certain way. That way has often been adopted not for any good reason, but simply because it is the easiest. Farmers, like all others, move in the line of least resistance.

"Some farmers, however, have formed the excellent habit of cleaning out their horse stables into the manure spreader and taking it directly to the field. Some few have followed the same plan in cleaning out their cow stables. These men get twice the ordinary value out of the manure, and we are wondering whether their example and the good results from it will induce other farmers to make a very vigorous effort to keep their stables clean by putting the manure on the spreader and getting it out on the fields every day except the Sabbath.

What do you think about it? Business men, if they saw the measure profit ahead that this plan promised would not hesitate a minute about adopting it. Why is it not possible for the farmer to do what any business man would do at once? This is a matter over and see if it is possible for you to double the value of the manure by taking it direct from the stable to the field and putting it on grass. If you can, put it on grass which you intend to plow under next spring, or, better still, this fall in the southern part of our territory, where the soil can be plowed till December."

IN MEMORY OF BRADFORD MILLER.

At the last monthly meeting of the Shawnee Alfalfa Club the following resolutions were read by Col. J. F. True in memory of the work and abilities of the late Bradford Miller who was one of the founders and the first president of that club. These were unanimously adopted:

"Whereas, our beloved friend, co-worker, and comrade-in-arms in every battle that has been waged in Shawnee county for progression, morality and reforms during the last half century, has been called to his eternal home, his co-laborers know we can but feebly express our sorrow, but feel impelled to try to give utterance in our feeble way to our feeling at this, the first meeting of this club, of which he has been the heart and life ever since the day of its organization.

"Kansas is progressive and happy. Would it have been so much so if our beloved and efficient friend, Bradford Miller had not always worked to that end? Shawnee county is progressive and happy. Has not our friend, Bradford Miller, done as much as any man? Yea, as any live man in Shawnee county. We know the members of this club will sadly miss him and be lost without his leadership, but a recollection of his promptness and self-sacrifice in furthering its work, will stimulate us to better efforts and more zealous work in the future.

"While words of sympathy spoken to those nearest and dearest to him may have but little comfort, on our part we can nevertheless extend that sympathy and the assurance that we do know that this Redeemer liveth and hence so doth the beloved friend we so recently committed to the grave.

"So be it resolved that a copy of these resolutions be sent to the press of the city and that a copy be sent to the family of Mr. Miller.

"J. F. TRUE,

"W. QUAIL,

"O. C. SKINNER,

"Committee."

NATIONAL GOOD ROADS CONVENTION AT TOPEKA.

Plans for the big National Good Roads convention to be held in Topeka Dec. 14 and 15 are rapidly maturing and it is expected that 6000 delegates representing every state of the Union will attend. President H. W. McAfee of Topeka Shawnee Good Roads Association, and county engineer Parkhurst are in charge of the advertising and details of arrangements and they have letters from a number of mayors saying that delegates have been appointed to attend the conference, and also a number of governors have signified their intention of doing the same thing. He thinks nearly all delegates will be experienced road men, and a number of whom will be experts in various lines of the work.

One of the important features of the convention will be a display of road machinery. There will be crushers, grading machines and similar contrivances with, perhaps, a paving machine or two on exhibition. Road machinery men will be out in force and also bridge men with designs and plans, and miniatures of the patent bridges they represent.

A feature of the exhibition will be a miniature of an ideal farm with an ideal road in front of it. The miniature will be seven by 10 feet in size, and is one of the neatest designs ever attempted, it is said. It will be exhibited by the W. S. Dickey Clay Manufacturing company of Kansas City, Mo., and probably will be on exhibition at the state house, where the big meetings will be held.

This convention is one of special importance to the agricultural interests of Kansas. The spirit for better roads is in the air. Here the road experts will gather and give the best information possible to obtain in good roads building. Here is where county commissioners, engineers, surveyors, township boards and farmers themselves can gain the knowledge and inspiration necessary to make of the already naturally good roads the best public highways in the west.

ALFALFA AS HUMAN FOOD.

One of the most interesting papers that has ever been presented before the Shawnee Alfalfa Club was that given by Miss Edith Ingham at its last meeting. Miss Ingham is a graduate of the Domestic Science Department of the Kansas Agricultural College and has been doing considerable

lecturing and demonstrating in domestic science and art. She has recently been investigating the possible value of alfalfa as a human food. As this plant contains a very high protein value it was suggested that if it could be made palatable it might be an economic source of food supply for the future. Her exhibit consisted in bread, biscuits, ginger snaps, fruit and other kinds of cakes, and her method of preparing these is herewith given.

"Everyone is familiar with alfalfa and its importance in animal feeding. If it has enough nutritive value to make good feed for animals, it surely may be valuable as human food.

Alfalfa is known to have a high percentage of protein in comparison with most vegetables and cereals. Corn, one of our most nutritious cereals, has only 7.14 per cent of protein to 10.58 per cent protein in alfalfa. The fat percentage is lower than in corn, and this is also true of the percentage of carbohydrates. If then alfalfa can be used as human food, the excessive use of meat protein may be eliminated from the daily dietary, as it induces unnecessary waste of body energy. The protein of alfalfa is about 75 per cent of that of fresh beef and carries with it carbohydrates and fat to make a fairly well balanced dietary by itself.

Economically, alfalfa used at tea or meal is very inexpensive, and the ordinary grade of tea is 60 cents a pound, while alfalfa with the stalks removed is less than 2 cents.

A mixture of half tea and half alfalfa would then cost 31 cents a pound, and by actual experiment, it is impossible to tell the difference. Using alfalfa in this proportion would do away with half the tannin, the effects of which are so injurious.

Used as a meal, it is just half the price of graham flour, and a trifle over the half price of white flour. The meal is very easy to procure, by rubbing the dry leaves fine and then putting through a sieve.

Theoretically, the use of alfalfa as human food is entirely desirable. Practically, we find a few difficulties in using it for food. The two principle objections are the taste and the deep green shade produced by cooking. At present, those objections have to be remedied by the ingenuity of the cook, but there will undoubtedly be found some method of preparing the meal without this color. The best remedy, now when the use of alfalfa is such an undiscovered field, is to cover up the taste and color by use of dark food materials and spices.

Knowing that the cereal companies buy alfalfa meal at \$40 a ton, it is immediately seen that it must be an important constituent of some of the cereal products.

The first experiment was with cereals. Alfalfa was boiled with cream of wheat and oat meal, but the results were unsatisfactory, owing to the unappetizing green color. A cereal coffee was tried using one-fourth al-

falfa meal with three-fourths bran, moistened with molasses. This was browned in the oven and then ground and used as coffee. The results were far from satisfactory.

The other experiments were with alfalfa as a flour substitute. Boston brown bread was made from the following recipe and was good, the color and taste being concealed by the other constituents.

Boston Brown Bread.

1 cup alfalfa meal, 1 cup corn meal, 1 cup graham flour, $\frac{3}{4}$ cup molasses, 1 teas. salt, $2\frac{1}{2}$ teas. soda, (level), 2 cups sour milk, raisins.

Alfalfa biscuits seemed possible and three trials were made before the results were satisfactory. At first alfalfa meal was substituted for all the flour. The color was too dark and the flavor too strong. In the next trial half alfalfa and half white flour was used, with unsatisfactory results. The biscuits were finally made in the proportion of one part alfalfa to three parts graham, and were decidedly good.

Two other experiments were tried with alfalfa in 1:2 or 1:3 parts. The recipes follow:

Hermits.

$2\frac{1}{2}$ teas. butter, $\frac{1}{2}$ cup sugar, 1 egg, $\frac{1}{2}$ teas. cinnamon, $\frac{1}{8}$ teas. cloves, 2 teas. baking powder, $\frac{3}{4}$ cup flour, $\frac{1}{2}$ alfalfa, 2 teas. milk, 6 black walnuts, $\frac{1}{4}$ cup raisins. (A little caraway was added.)

Brown Nut Bread.

1 cup graham, $\frac{1}{4}$ cup alfalfa flour, $\frac{1}{2}$ cup alfalfa meal, $\frac{1}{2}$ cup sugar, 2 teas. baking powder, $\frac{1}{2}$ teas. salt, $\frac{1}{2}$ egg, 1 cup milk.

In allowing these alfalfa products to stand, they improved. The flavor was sweeter and they retained the moisture much better than when straight flour was used.

At present we are not recommending alfalfa as a great delicacy, but it is wholesome and inexpensive. For persons with good appetites, needing hearty, nourishing food, it is excellent."

TO IMPROVE QUALITY KANSAS WHEAT.

Director Webster, is attracting the attention of farmers throughout the state to the great good they can realize through the Kansas Experiment Station, provided of course the farmer is in a receptive frame of mind. Director Webster's present plan is one by which he hopes to improve the quality of Kansas wheat. He would do this by having the station employ a competent man to take up a study of the handling of wheat after it is cut and all of the stages which it goes through before it reaches the market. The idea is to improve the quality of wheat grown in this state.

Before urging the employment of such a man, director Webster wants to know what the wheat raisers, elevator men, millers and others who deal with wheat, have to say. He wants to know whether they would cooperate

with such a man. In order to get a line on the situation he is sending out letters to wheat men all over the state, giving his plans and asking for information. He wants to bring Kansas wheat up to the point where it will be the very best there is. In the letter he is sending out he says:

"Kansas has earned a world-wide reputation as a wheat-producing state. Kansas No. 1 hard winter wheat stands at the very top in point of excellence from the milling and baking standpoint. Kansas mills are making a reputation that extends around the world for their flour made from the highest grade hard winter wheat.

"The name 'Kansas' on a sack of flour should be synonymous with the best obtainable—not equal to the best, but the best.

"Unfortunately there are many local conditions operating to defeat the very end we all so much desire. All Kansas wheat is not hard wheat, and all hard wheat is not No. 1. Adverse climatic conditions some years tend to produce low-grade wheat. Poor seed is responsible for much difficulty, and too often the farmer is not careful to keep his seed pure or to put it on clean ground.

The Kansas experiment station has done much for the farmer by improving his methods of tillage, by giving him better seed and generally encouraging him to better practice in all his farming operations.

"Up to the present time this work has stopped with the growing of the crop. The station has not taken into account the many things which are vital from the millers' standpoint.

"On this question I want to ask your advice and assistance.

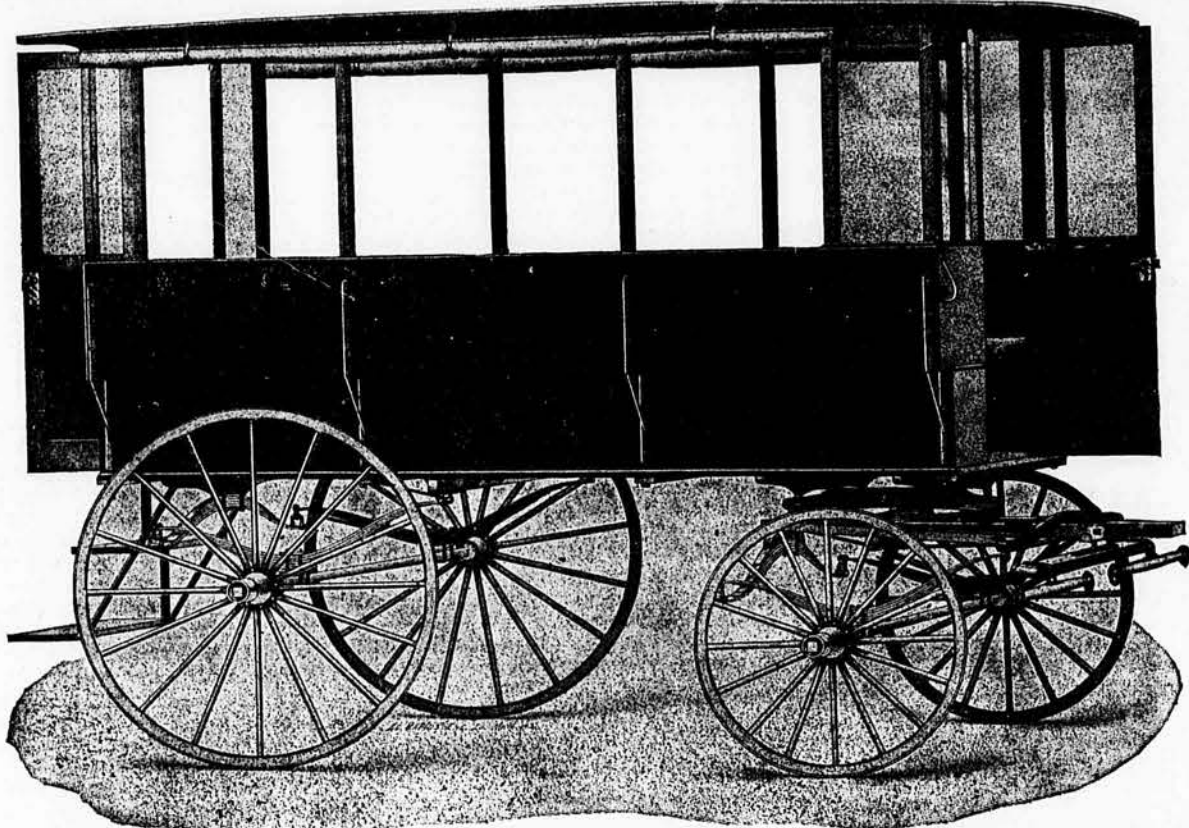
"It has occurred to me, and in talking the matter over with President Waters he has agreed in the matter, that the time is ripe for taking up some advanced work, the main point of which will be market and milling qualities of Kansas wheat. The problem is to be approached in about this manner.

"1—A thorough study of the handling of wheat after it is cut; i. e., the shocking, stacking, thrashing, storing on the farm, and the handling in local elevators as this practice may influence its market grade and milling qualities.

"2—A study of the present system of grading as practiced by buyers, state inspectors, etc., and its influence on the general situation of marketing Kansas wheat.

"3—The eventual establishment of a state testing and baking plant of sufficient magnitude to make results reliable and to have such a plant operated for the benefit of elevator and mill men.

"Now my question is: If we can employ a competent man with experience to take up such a line of work, would you co-operate with him in solving many of the problems confronting the milling industry of the state?"



The wagon used in conveying Boys and Girls to the Kansas Consolidated Rural Schools. This covered wagon with oil heater makes going to school in the country a picnic.—Courtesy Delphi Wagon Works.

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Shorthorn Bulls for Sale.
In this issue of Kansas Farmer C. W. Dougherty, of Sedalia, Mo., starts an ad in Kansas Farmer. Mr. Dougherty is offering three extra good young bulls for sale. They are sired by Master of the Grove and are large, well grown out individuals. Mr. Dougherty has only a small herd but what they lack in number they make up in quality. They have in this herd 25 cows and heifers that represent excellent individuals, best of breeding and noted mothers, such as Imported Lady Star 45th, Duchess of Gloucester, the dam of Searchlight, Princess of Lancaster, Park Violet 3rd. The younger stuff are as fine as can be. Write for prices and kindly mention Kansas Farmer.

LIVE STOCK



Fatten Cow or Heifer.
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Annual Farm Implement Purchases.
About \$100,000,000 worth of farm machinery is made and sold each year in the United States. It is said that fully half of this goes into the hands of men who do not know how to select it wisely or to keep it in proper condition. The waste which results runs into millions of dollars annually. It has been stated that farm machinery manufacturers claim that twice as much machinery is sold per year as would be needed if farm implements were properly housed.

To Develop Milking Shorthorns.
KANSAS FARMER has called attention to the demand for a milking Shorthorn. It is the claim of some Shorthorn breeders that they have real milking or dairy animals. To ascertain the facts and possibilities experiments in breeding and feeding Shorthorn cows for milk have been begun by the dairy division of the United States Department of Agriculture in co-operation with the Minnesota Experiment Station, and with nine Minnesota breeders, the breeders having agreed to allow their herds to be used, and to manage them according to the instructions of the department.

Sheep on the Farm.
An Arkansas reader states what a few sheep are doing for him, but thinks sheep in Kansas would do better. He says:
I figure my sheep produce an average of about 10 pounds of wool at 20 to 30 cents per pound, which is from \$2 to \$3 per head for the wool alone. I expect my lambs to bring at least \$3 per head, depending, of course, on size and market prices. Total for wool and lamb, \$5 to \$6 per head per year. This is, I consider, about an average for common sheep, but with selling a few for breeding purposes the average price can be raised, which will mean more profit on the herd.
I think the average man can take a flock of sheep and will find no trouble in making \$5 to \$6 and often much more clear money per head per year. I find that the raising of sheep is one of the surest profits of any on the farm, and it comes when it is usually needed.

Mistake in Hog Feeding.
J. L. Stratton told the Farmers' Institute of Franklin county, Kansas, of these sixteen mistakes in feeding hogs:
It is a mistake for one inexperienced to undertake the feeding of hogs unless he expects to make a study of it and improve upon his mistakes.
It is a mistake for the city farmer, living in town, to trust the feeding of his hogs to the average hired man. He is not likely to make a success of it.

It is a mistake to try to raise hogs on an exclusive diet. You ask what kind of feed to give them. I will ask what kind of feed can be produced on your farm and in your locality, then give them a variety of it. These feeds should be given in such relation to each other as to meet the varied needs of the swine system.
It is a mistake to forget that the hog is a grazing animal.
It is a mistake if the hog is not fed in a clean place, free from both dust and mud.

It is a mistake to overlook or underfeed.
Ordinarily it is a mistake not to feed the liquid before the solid food. It is a mistake to feed constipating food and nothing to correct it.
It is a mistake to feed breeding stuff as if you were fitting it for the market.

It is a mistake to feed all sizes together whenever the smaller ones are to a disadvantage.

It is all a mistake not to provide the herd with comfortable quarters at all times. Failure in this will impair the usefulness of the feed.

It is a mistake not to grow the pigs rapidly from birth to market. They should gain every pound possible on the way.

It is a mistake to feed the brood sow corn before farrowing. She should have cooling and laxative foods.

It is a mistake to feed her heavily for some days after farrowing.

It is a mistake to feed her pigs sour milk when they are learning to eat.

It is a mistake to fail to feed the pigs bone and muscle materials during their growth.

Winter Feeding of Stock Cattle.
Generally, the age of the animal will affect materially the kind, quality and amount of feed, that may profitably be used in wintering, says H. J. Waters, president Kansas State Agricultural College. In other words, the age will determine largely whether they are to be fed liberally on palatable and nutritious feeds, or to be roughed through on coarse fodders of the cheapest sort.

Young cattle will require the former class of feeds in more liberal quantities, while the older cattle will be able to utilize to advantage the poorer and coarser grades. This is principally true because it is more important to keep the animals gaining steadily at the age of six to 18 months than later.

Checking the rate of gain after 24 months of age, when the rate of growth has naturally declined, and when the tendency of the animal to lay on fat begins to assert itself, will make much less difference than if it be checked in the earlier stages when the tendency to grow and not to fatten is much more marked.

It is believed that to make growth at the natural or proper time, that is, when the animal is young and when the tendencies of the entire organism are to convert food into growth, and when it may be made with the least expense of food, room, labor and investment, will be highly advantageous, as compared with so feeding the animal as to restrict the growth at this age and depend upon making up this deficiency by liberal feeding later.

In fact, it is believed that from birth until the steer goes to grass at the age of 12 months, there should be sufficient food of a palatable and nutritious character to supply the requirements of the maximum growth of which each individual is capable, without laying on any considerable quantity of fat. This is, of course, on the supposition that they are not to be fed out as baby beef. In case they are to be made into baby beef, naturally the quicker they are made fat the greater the profit in the feeding. The first winter, between the ages of six and 12 months, is not the time to attempt to utilize cheap, coarse fodders extensively, like stover, etc. These materials should be used chiefly on older cattle.

Hard After the Old Cow.
An English firm is introducing a new kind of margarine, "banana margarine." A food expert has elaborated a process of blending bananas with milk, butter and other wholesome ingredients, and has produced a product resembling in appearance and texture Danish butter, and characterized by the flavor of the banana.

Patch Your Rubber Boots.
Here is a recipe which would have saved this editor many a pair of rubber boots if it had been available. This is to re-inforce their places and before they wear through. To make the cement needed take five cents' worth of rubber and dissolve it in benzine or chloroform. Keep the bottle containing the cement tightly corked. Wet first with benzine for an inch or

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CAUSTIC BALSAM.
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more around the hole and scrape until clean and a new surface exposed, then apply the liquid rubber with a brush as quickly as possible that it may not harden.

Good Value of Nuts.

Nuts should be regarded as food rather than condiments, as they supply appreciable nutrients in the forms of fat and protein. The hickory nut is exceedingly rich in fat, containing about 65 per cent. Chestnuts are richer in carbohydrates than other nuts, containing about 40 per cent. In southern European countries they are extensively used as food and certain protein, fat and starch in a well-balanced form. Peanuts which belong to the same family as peas and beans have as much protein and a large amount of fat. Like other legumes they are somewhat slow of digestion. Cocoanuts have a high food value, being particularly rich in fat.

To Chill Molds and Bacteria.

It is often desirable to destroy mold in cellars or to fumigate a room. The most practical disinfection is with formaldehyde and is as follows: The room to be disinfected should be made quite air tight by pasting openings with paper or filling with clay. The objects should be so placed that gas can come in contact with all sides. Only the moist formaldehyde gas disinfests, the dry does not. The gas is generated from the following mixture: Equal parts by weight of water, or formalin and of potassium permanganate. One half ounce of formalin will disinfect a cubic yard of space. The ingredients are stirred together quickly in the above order in a large stone jar placed on a tray. The mixture foams over and the gas is generated in large quantities as soon as the permanganate is added. The gas should be left in the room for four to six hours. After that the stinging odor of formaldehyde can be neutralized with ammonia gas.

A Living From One Acre.

KANSAS FARMER has printed a number of stories showing how good livings and money besides have been made from small well tilled farms. The Technical World chronicles the year's work of a woman on the supported herself and two children on the proceeds of one acre of ground. Not that this feat is new or in any respect phenomenal but it requires an amount of know how combined with an optimism possessed by few. She went in debt for the land and the only profit bearing fixtures on the place were 30 stands of bees and 12 fine current bushes.

With borrowed money she secured five ducks and one drake, a setting of Wyandotte eggs and six pairs of pigeons. She has now been on the place four years and in the past year from the quarter of an acre devoted to poultry, bees and small fruits, over 1,000 ducks 2 and 3 months old were sold and about 400 pounds of feathers. On the rest of the acre there are now 600 currant bushes, 50 raspberry bushes, 100 White Wyandotte chickens, 24 White Holland turkeys, 60 pairs of pigeons and 75 stands of bees. The bees were the increase from the original stands secured with the place, the currant from cuttings taken from those first bushes and all the chickens developed from that first setting of eggs. From the pigeons 400 pairs of squabs were sold. Though this is an extreme case, and depended for success on the proximity of a near market, it is undoubtedly true that the majority of farmers work more land than can be handled with profit.

For Better Seed Corn.

Many individual farmers have awakened to the importance of securing a higher grade of corn by planting better seed and giving the crop better cultivation. Nearly any farmer has the means at hand to grow his own seed and make improvement from year to year. It is a good place to get the best seed sown available for use in your climate. Do not mow the seed corn too far north or south. On most farms the quality of seed begins to determinate after the first crop. This is the farmer's fault. It is the best policy to have a seed corn plot—a plot in which the seed corn for the next year is grown.

First select an acre or a half acre for nursery or seed patch. This seed patch should be isolated from other fields to be planted to corn. Plant

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With the high price of grain and hay the feeding of stock for profit is a serious business. Hundreds of the largest feeders in the country have found a sure way to feed for big profits. They have learned by actual tests and long experience the value of molasses feed and especially of the superior merits of the best of all molasses feeds—
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There is an Honorbilt style that will exactly suit you and fit you.
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DAIRY



Cost of Milk and Butter.

Following is the cost in feed of producing 10 pounds of milk and one pound of butter of each of the four breeds mentioned at the Pan-American test: Cost of feed in making 10 pounds milk, Holsteins, .0421 cents; Ayrshires, .0427; Guernseys, .0504; Jersey, .0510. Cost of feed in making one pound butter, Guernseys, .0927 cents; Jerseys, .0948; Ayrshires, .0988; Holsteins, .1097.

Select Old Tested Bull.

While most dairymen favor the selection of a young bull as a herd bull, there always is the uncertainty about how he will transmit the desired characteristics. This is to get an old tested bull, one who has sired daughters of merit and showed himself to be the exceptional animal wanted by every breed. The most skilled breeders are always on the outlook for such an animal, but many others only after it is too late. Whenever possible it is always advisable to retain an old bull until the results of his breeding can be ascertained.

Increasing Test of Milk.

For years investigators have endeavored to increase the percentage of fat in milk by feeding. Every conceivable combination of feeds rich in fats and oils have been fed but a method has not been found whereby a cow whose average test is 3.2 can feed to produce 4 per cent milk. If such investigation had been successful then the Holstein could be fed to produce a large quantity of the very richest milk.

Professor Eckles of Missouri claims that by feeding a milking cow till she accumulates fat in the body and then feeding only moderately the percentage of fat in the milk has been increased as much as from 3.2 per cent to 4 per cent. In this way some phenomenal seven-day tests are made. The scheme may be successful for a seven-day record but with the breeders and breeders' associations demanding and striving to make large yearly records this plan will have little practical use.

One Cow to the Acre in Holland.

In Holland, the most remarkable of all dairy countries, the farmers support an astonishing number of cows on a very small area. In some cases the land is made to carry two or three cows to the acre. For the entire country the land will carry a half to a whole cow to the acre. The ordinary 20-acre farm carries 10 to 20 cows, with the horses necessary to do the farm work, and three sheep to each cow. On best soil the 20-acre farm will carry 20 cows, three to four horses and 60 sheep, with the usual

flocks of poultry. This means pasturage and soling for the animals in the summer, and grain, roots, hay and roughage in the winter.

The cows are the gigantic "black-and-whites," known there as Friesian and here as Holstein-Friesian cows, and their average production for the country is over 9,000 pounds of fine milk per head. Evidently the Hollanders must practice intensive farming and glitche breeding of the most intense stripe. At all events such farming figures as those quoted cast a lurid light on the American 150-acre farm that carries at a loss 15 to 20 cows, several horses and no sheep or poultry.

The Holland land sells at \$600 to \$2,000 per acre, while the American land is rated at \$5 to \$30 per acre. The tenant farmer in Holland pays a rent of \$50 to \$100 per acre, and by extensive culture and great-yield cows he makes a living, clears the heavy rental, maintains or increases the fertility of his soil, and lays up some money.

Selling the Cream of the Stock.

The greatest mistake the farmer, dairyman or hogman or poultryman can make is to sell the cream of his stock. Money is tempting and is the fault of most of the crime and poverty in the land. It is the cause of the trusts "holding up" the public. But it's work does not stop there. It has ruined business men and farmer alike through their lack of foresight as to what the future will bring to them.

"Good morning, Mr. Jones," says the cattle buyer, "have you anything to sell today?" "Yes sir, I've got two cows—they'll be fresh soon—just drive down and we'll look them over." "I'll take \$35 a piece for them," said Jones when the price was asked. "Wouldn't you take \$65 for both of them, Mr. Jones?" the buyer asked. "No, couldn't do that."

"Well, Mr. Jones, I came out here to buy something and I tell you what I'll do, I'll give you \$50 cash for the black one." Jones studied a moment before answering, while through his mind rushed the thought of a large sum of money for a cow, almost as much for Bess as for the other two. Then those two together would give more milk than Bess anyway, though he knew well that she was by far the finest cow in his herd, but he needed the money so he closed the deal and the next day the cow was taken away. From that time on Jones kept going backward and all the time selling his stock, the best first until finally he didn't have anything worth selling.

Now Mr. Farmer don't make the mistake that Jones did. When a cattle buyer, hogman or poultryman comes and looks over your stock, he almost invariably attempts to buy the best you've got before he leaves. Sell off the poorest ones, the most unprofitable ones and then invest the proceeds in better stock and keep building up. Keep your best cows. If they are worth \$50 to the other fellow, they're worth that much to you. If the good animal will make money for the other fellow, the same animal will make money for you. You'll find a profit in the upward climb but you'll squeeze it all out going down.

If you are trying to sell the inferior stock and the buyer won't take it, stop talking business. You can't afford to rob yourself.—Fred W. Greene, Washington Co., Neb.

Winona, Kan., Nov. 13, 1909.
The Wm. Galloway Co., Waterloo, Ia.
Will now write to you in regard to the Galloway manure spreader that I bought last spring. I am perfectly satisfied with the same. I've tried it in all kinds of manure and it gives good satisfaction. I consider it as good and as cheap a manure spreader as there is on the market. I only use two common horses on it. I am more than pleased with it and I also thank you for your favor. Very truly yours, J. E. David.



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"You've got an anvil and a drill press in your repair shed, haven't you?" asked our foreman.

"Yes," replied the farmer visiting our factory.

"Well, there's a lot of people think they can build separators with about that equipment," continued our foreman, "and to show you the difference let me tell you how we do it at our factory."

"First we get high-carbon steel—that costs more, but with it we can secure exactness down to a fourth-of-a-thousandth of an inch."

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"When it comes to the bowl we draw each one from discs of the toughest steel cut to exact size so there will be no waste."

Every stamp of the big press draws the bowl a little deeper until finally it comes out a perfect shell without seams.

"But the hardest part

is yet to come—the bowl must be balanced so as to run smooth and quiet without the slightest jar or vibration. We employ the most expert men and pay them big wages for this delicate work."

"Yes," interrupted the farmer, "but how can you sell the machine for such a low price?"

"Because we are making more than 50,000 this year," smiled our foreman. "We divide our overhead

expense among this tremendous number so it amounts to a very little on each machine. Then we sell it direct to the farmer and avoid the traveling salesman's expenses and the profit for the local dealer and county agents."

"The big 600-pound machine we sell for \$43.65 would cost if sold through dealers about \$125.00."

"Perhaps you would like to see the factory," suggested our foreman. "Just step over this way into the first room where we —"

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Will also sell at same time 10 head of good common dairy cows.

One of these bulls is a fine bred one. His dam is Hadra 2nd, who made third highest official test at World's Fair of 460 lbs. milk and over 20 lbs. butter-fat in 7 days, and whose sire has 24 A. R. O. daughters up to 27 lbs. butter-fat in 7 days.

Some of these heifers are equally as well bred, producing up to 40 lbs. milk as a 2-year-old, and another 55 lbs. as a 3-year-old, and whose ancestors produced up to 27 lbs. butter-fat in 7 days. All cows and heifers not giving milk will be fresh soon.

Farm at S. W. corner Washburn campus. Take Washburn car to the college, then right across the campus to farm. Cattle sale will commence at noon, lunch on grounds. Remember the date, December 20, and Topeka, Kan., the place.

C. M. Crews, Auctioneer.

IRA ROMIG, Topeka, Kan.

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Cow or Steer.

In a recent dairy demonstration a Holstein cow made the largest yield of milk, fat and solids not fat. Her daily average was 67.31 pounds of milk 2.35 pounds of milk fat and 5.17 pounds milk solids, other than fat-making a total daily yield of 7.52 pounds of milk solids. Assuming that these milk solids are as valuable per pound for human food as is the gain in live weight of a steer, we see that it would require about three steers to produce as much human food daily as did this one cow. We thus have another remarkable illustration of the economic value of the cow as a food producer for mankind. The author points out that the three best cows (two Holsteins and a Jersey) producing during 120 days the equivalent in food value of five fat steers weighing 1,126 pounds each. The total food production of the 70 cows during 120 days was equal to the food value of 70 fat steers weighing 1,405 pounds each.

A Minnesota View of Dairying.

"I would call attention to the great loss that Minnesota is sustaining because the average farmer does not realize the importance of having the farm animals especially adapted to the

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work that they are to do. The cow on the average farm should be primarily a milk producer because that is the most profitable part of cattle production. We are milking over a million cows. They are giving only about 150 pounds of butter during the year. They should give 250, and even with the cows you have that yield could be secured if proper care and feed were bestowed, so we lose 100 pounds, per cow because of lack of this knowledge, or the disposition to do as well as we know. At present prices this means a loss of at least \$25.00 per cow and since we are milking a million cows it means that we are actually getting \$25,000,000 less than our farmers might if we simply observed these two things: First, give proper care; second, the kind of feed she needs to make the milk." This condition exists in practically all states which are not regarded as strictly dairy states. It is true of all states in which dairying is conducted as a side line and not as the main issue.

Cost of Rearing and Keeping Beef and Dairy Cow.

Hoard's Dairyman gives these figures:

We estimate that it costs about \$50 to raise a two-year-old dairy heifer, under average farm conditions, and that \$40 a year will come very close to the average cost of keeping a cow when she is in milk. It would cost on this basis \$370 to raise and keep a dairy cow until she is 10 years old. The annual return from 400 pounds of butter, at 25 cents a pound, would be \$100 and from 7,000 pounds of skim-milk (which would be only a reasonable allowance for a cow making 400 pounds of butter a year) at 15 cents a hundred would amount to \$10.50 or a total income of \$110.50 per year from the cow, beside her calf. In eight years, which would be the time that she would give milk, the income would amount to \$8.84. Subtracting the cost of the feed that she consumed, which was \$3.70, we have a profit of \$514.00 and the cow would be worth \$20 to \$30 as a canner, making the total profit from the cow \$534 to \$564.

It is very difficult to find any data upon the cost of raising and keeping a beef cow. We should say that under comparable conditions it would cost at least 75 per cent as much to feed a beef cow as the dairy and perhaps a little more to raise her to a two-year old, at least if permitted to nurse her mother. The cost of keeping the beef cow would be, according to our hypothesis, \$30 a year. This would have to be added to the cost of the beef heifer, for this is all that the beef mother does, is to raise her calf. The calf would nurse six to eight months and would have to be fed for four to six months which would cost at least \$10, calculating at the same rate that it costs to raise the dairy heifer. The beef heifer at two years old would cost \$65 where the dairy heifer costs only \$50. The difference comes in the manner of feeding during the first year. In the beef animal nurses and the dairy animal receives skim-milk. In 10 years the beef cow will have cost for keeping, \$305 and her profit will be the calves that she pro-



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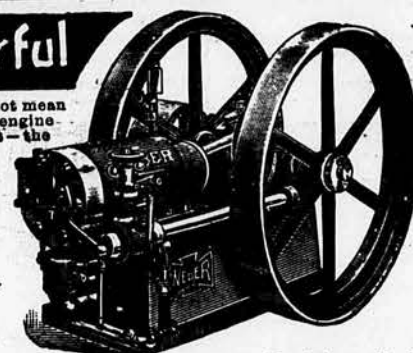
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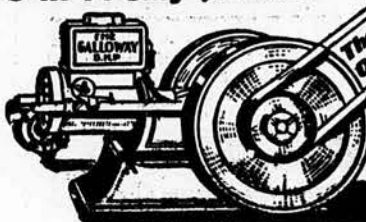


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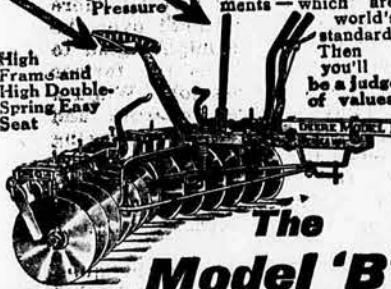
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A "Wise" Hog Raiser's Idea Of Merry War Lye

Just take it from me that this "Merry War" Lye will do to "tie to", when it comes right down to increasing pork profits. *I've tried it and I know!*

I was born and raised on a farm and lived with the hogs, as you might say. I know 'em clean through and through—one end to the other—from "snoot" to "stern."

For many years I have studied hog habits. I know their ways in sickness and health, and want to tell you Hog Raisers right now—straight from the shoulder—that it's your own fault if you let worms and cholera carry off your hogs.

No Excuse For Hog Losses

Yes, sir, I mean just that! There's no excuse nowadays for losing your pork profits, since the discovery of "Merry War" Lye.

Of course it was different in the old days before hog raising was reduced to a science and carried on as a regular business. When I was a boy on the farm, we never knew just what would happen—whether our hogs would bring a big price for ham and bacon or have a "soap kettle" finish.

It was all a matter of "luck"; we just took our chances against worms and cholera. Many a time I have nursed a big drove of hogs along into prime condition ready for market, only to see my piled up profits in flesh and fat go glimmering in a few days from those pesky hog diseases.

What Merry War Lye Does

But now it's different. With the aid of a reliable remedy like "Merry War" Lye, I can snap my fingers at worms, cholera and all other hog troubles.

I sleep well nights because I know that my big droves are healthy and happy, fat and "sassy," eating well and laying on the firm, juicy flesh that means good eating for thousands of hungry people and big profits for me.

That's what "Merry War" Lye did for me, and it will do the same for any Hog Raiser who has the "gumption" to try it, as I did. Don't argue—don't think you "know it all"—don't doubt, but get busy and save your hogs.

A Friendly Warning

Just take my advice. Buy a can of "Merry War" Lye, mix a tablespoonful with slop for ten hogs, or one-half can with barrel of swill for larger number. Stir well, and feed night and morning.

In a few days you'll see marked improvements in your "porkers." "Merry War" Lye fixes 'em up right. It cleanses the system, tones the digestive organs, puts sick hogs in prime shape and makes 'em immune to contagious diseases. It both prevents and cures.

At Your Dealer's

Don't accept any "substitute" for "Merry War" Lye. Tell your grocer or druggist, that it is the only safe and specially prepared hog remedy, and that you want "Merry War" and nothing else. It comes in 10c cans, 24 for \$2.00.

If you can't get "Merry War" Lye, I would advise you to write direct to the makers. Ask 'em to send you their valuable book on "HOW TO GET THE BIGGEST PROFITS FROM HOG RAISING." Address your letter to—

E. Myers Lye Co., Dept. 12, St. Louis, Mo.

THE FARM



Dry Farming in Syria and Palestine.

There are many of the so-called new things which are not new—only as old that they had long since been forgotten. KANSAS FARMER has long contended that the so-called dry farming which has commanded wide attention during the past few years was not a new system—that it was only good farming and its principles as old as agriculture. We knew this to be true but did not know just where to lay our hands on the evidence. A few days ago scientific exchange printed the following article and the reliability of the statements are beyond question:

"In Syria and Palestine the farmers need little rain. From the beginning of April until October there is practically no rain, yet in July the fields teem with a vigorous growth of water-melons, tomatoes, cucumbers, etc., all flourishing without artificial watering, although at that time no rain has fallen for many weeks. In fact, the Syrian peasant, from the moment his seed has been sown, prays that no rain may fall. During the period of growth of a crop the surface of the soil to a depth of six or eight inches is perfectly dry and loose. Below this surface layer will be found moist soil in which the roots extend, and grow vigorously. In this moist subsoil plants continue to grow until late autumn. When the crop is removed in the autumn the rains commence, and the land is plowed after each heavy rain as soon as the soil begins to dry. Two primary objects are kept in view in plowing, to furnish a favorable surface for taking up all the water and to prevent its upward evaporation from the subsoil. The great point is to keep the upper six inches of soil perfectly loose and friable, so that the moisture from below is not drawn upwards and lost in evaporation, but does not ascend higher than the compact subsoil that is not broken up by the plow. For this reason the plowing is shallow, averaging from four to six inches in depth. When the time for sowing the seed arrives the land is plowed to a depth of about six inches, and the seed is sown from an arrangement attached to the plow, falls on the damp subsoil, and is covered by the soil closing over behind the plowshare. From this time the upper stratum of loose soil prevents the escape of moisture upwards beyond the wet subsoil on which the seeds rest, and into which their roots, after the process of germination, spread."

It is well to add that the dry season of Syria and Palestine is much longer than that of our western section and for that reason greater precaution must be taken to condense the moisture. It is for that reason that a dust mulch of six to eight inches is maintained instead of two to three inches as required under our dry farming system. These people probably know nothing of the principles of dust mulching but they know that by such cultivation they can produce crops. Without the dust mulch they know they cannot. In this country most dry farmers know the principles of the dust mulch but will not provide the mulch. Who, then is the best farmer—the Syrian, not knowing but growing the crops, or the westerner knowing the principles but failing to do the work?

Getting Most Out of the Manure.

The usual way of handling manure wastes from one-fourth to one-half of it. This waste happens: By running off of the liquid manure. By leaching by water from the roofs and yard. By heating (fire-fanging) and too much rotting. These wastes can be avoided: By plenty of bedding to absorb the liquid which contains most of the nitrogen. By protecting from washing with large quantities of water. An ordinary rain is all absorbed and does little harm. By piling closely. Air enters loose manure, makes it heat, and causes great losses of nitrogen in the shape of ammonia. Plenty of moisture stops heating. There is

some waste if the manure is allowed to rot. Although rotten manure is a good fertilizer it should be remembered that rotting reduces its quantity greatly. Spreading the manure on the field as soon as possible, makes the most of the manure and is practical.

Farming an Endless Job.

We are told everywhere that farming is an endless job. The constant routine of planting, cultivating, harvesting and preparing the soil may be handled in such a way that there would be a little rest period between but the endless amount of smaller details that have to be taken care of occupy every moment of the farmer's time whether the sun shines or the clouds overcast the sky. It is not the purpose to refute the statement that farming is an endless job but rather to show that there are some things a good deal worse than having an endless job, says Kimball's Dairy Farmer.

In the first place the farmer who carries on his work systematically is never deprived of a vacation of a few days or weeks, as the case may be. If he will handle his work right he may leave it safely and go away for a change of scene and for a rest. There are countless men scattered over the country who would be mighty glad to have just such a job as the farmer has; that is, an endless job. When a man is away looking for work and when his family is at home suffering for the needs that his wages must buy for them, the bugbear of an endless job loses all its gruesomeness and looks more like a blessing than a curse.

There is another side of the question also. These countless details that make farming an endless job are invariably of a nature that will increase the profitability of the farm and the farm stock. When a man is working in such a way as to constantly increase the value of his holdings he takes such an interest in his work that all the hardships quickly fades away. There are a great many things that are worse than an endless job and consequently there are a great many things worse than farming.

Winter Storage of Apples.

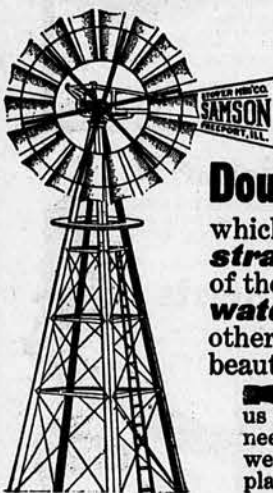
The Wisconsin Experiment Station says only selected apples which are free from blemish or insect injuries should be stored for winter keeping. The apples should be carefully selected, as only sound, perfect fruit will keep for a long period. All imperfect fruit should be used immediately. The apples should not be allowed to lie in piles in the orchard as the sweat which occurs there will cause them to keep imperfectly. They should be placed in a cool room at once.

"The best farm storage for apples is a cellar where the temperature remains just above the freezing point. A fair amount of moisture in the cellar is desirable, but excessive moisture will induce mold and rot. The cellar should be separated from the furnace room or other heating arrangement, and needs but little ventilation except occasionally on pleasant days, when the temperature is above the freezing point."

"Apples can best be stored in crates and boxes which hold about one bushel each. Large bins or barrels are inconvenient, since it is difficult to detect the beginning of rot, which may spread rapidly throughout the bin, and the apples can readily be sorted when rot appears. Small crates and boxes are much easier to handle, as the fruit can be removed without additional handling which causes some loss from bruises."

"In case the apples should freeze in the cellar, they should be allowed to thaw out slowly, and must not be touched while they are frozen or they will quickly decay. To prevent freezing in the cellar, when cold weather is anticipated a tub of warm water should be placed in the room. This water will keep the temperature above the freezing point, and is much preferable to placing a fire of coals in the cellar, as there is thus no danger of fire."

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these good sows and a lot of spring p
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POULTRY



Cleaning out the nest boxes and re-filling with fresh hay or straw will help keep down the lice.

If the hen house is damp scatter some air-slaked lime in it or take dry coal ashes and scatter around.

The value of poultry products is increasing at the rate of 20 per cent yearly, according to the report of Secretary Wilson.

Unless a fowl is a valuable one, it does not pay to doctor it when it is sick. The best plan is to kill it and then burn the carcass.

This wet weather is hard on all kinds of poultry. See that their quarters are dry. Fowls can stand a lot of cold weather but dampness is fatal to them.

A few drops of coal oil in the drinking water is a good thing to give the chickens occasionally. It acts as a preventive of disease and will often cure a slight cold.

Grain is too concentrated a ration for laying hens. They need a bulky ration. Steamed alfalfa leaves will supply bulk and protein as well. Vegetables of all kinds are also good for the bulky part of the ration.

The best medicine for poultry is good care, cleanliness, sunlight, warmth, dry houses, sound feed and pure water are better than the whole list of remedies. If these things are attended to there will be no necessity for doctoring any fowls.

In order that hens may lay in cold weather it is not necessary that the house should be heated by artificial means. But it should be made so tight as to prevent water from freezing. It is that the hens can keep themselves warm by exercising in the litter, scratching for grain. It would be well on cold mornings to see that the drinking water given is warm and a warm mash is always acceptable to the fowls.

There should be no question in the mind of any well-informed person that pure bred fowls are better than scrubs and will give better returns. They have been bred for their laying qualities for generations and will outlay the scrubs two to one. Then again one is apt to give better treatment to pure bred stock than he is to mongrels and better care and attention goes a long way towards filling the egg basket.

Much has been written of Petaluma, Cal., as a great poultry center, but few persons have any idea of the magnitude of the poultry industry in that locality. The editor of the Petaluma Poultry Journal has carefully kept figures on poultry matters for several years and his tabulation shows that the sum of \$5,798 is received in Petaluma for every day in the year from this industry. The total receipts for 1908 were \$2,116,604 and are divided as follows: Total receipts from eggs shipped, \$1,726,601; from poultry shipped, 332,544; from baby chicks shipped, \$57,459. His figures show that there are 1,008,436 hens in the vicinity of Petaluma, making an average of 100 eggs per hen per annum. Conservative figures place

the estimate of eggs laid at 8,403,638 dozen, or 100,843,656 eggs. The number of hens in the Petaluma section, if roosting side by side, would require a perch at least ninety-five and one-half miles long, or if a house was built for them with three rows of roosts running lengthwise, the house would have to be nearly thirty-two miles in length. Guess Petaluma is entitled to her reputation as being the greatest poultry center in the world.

Automobile in Actual Farm Work.

J. A. Green, Woods county, Okla., is an enthusiastic farm owner of an automobile. He writes: "I find the auto a great convenience and a great time saver. Have had my header to break twice in one day and each time I left the men and teams standing as they were, jumped into my auto, went to town (four miles), got the necessary repairs, and in less than one hour had the work moving on with renewed energy owing to the short rest. I paid my help for full time and believe I got value received. A motor car is an indispensable piece of machinery on any up-to-date farm. Automobile owners as a class are the most enthusiastic good roads people in the world. I will venture to assert that any man who has owned an auto any length of time has done more toward improving the public roads than our friend."

Gret Profit in Eggs.

It is not every poultryman that keeps a detailed account of his business and his profits and loss are unknown quantities to the average poultry raiser, but A. H. Hunter of the Poultry Advocate is a different kind of man and has kept tab on his hens and finds that a flock of about twenty of them make a profit of 3.49½ each for a year. The following is his detailed account of the matter.

It is a constant surprise to us that there should be so great interest in our little flock of fowls. The monthly egg-record which we have published has caused much favorable comment, and we have half a dozen special requests for the year's account by letter. The writers of these requests say they do not want to wait till the arrival of the November number, they want the account right away. Obviously we haven't the time to spare to write personal letters; we are too busy.

Our flock laid steadily to the end of the year, laying from five up to nine eggs a day through September. They showed considerable falling off towards the end of the month, the last two days' score being 5, 5. The total for the month was 199, which is one egg short of being 12½ eggs per hen for the month; it is 12 7-16 eggs apiece. Here is the full year's account in table form:

Month	No. of eggs	Price of eggs	Value of eggs	No. of hens	Average No. eggs apiece
Oct. '08	147	44c	\$ 6.39	20	7 7-20
Nov.	282	52c	12.22	20	14 1-10
Dec.	303	43c	10.86	20	15 3-20
Jan. '09	313	40c	10.43	19	16 8-19
Feb.	336	36c	10.08	18	18 2-3
March	384	25c	8.00	18	21 1-3
April	321	22c	5.84	17	18 15-17
May	257	24c	5.14	16	16 1-16
June	263	23c	6.13	16	16 7-16
July	237	32c	7.12	16	16 11-16
Aug.	249	35c	7.26	16	15 9-16
Sept.	199	40c	6.63	16	12 7-16
Total	3321		\$35.13		

Average number of birds in flock, 18. (It is really 17¼.)

Average number of eggs per bird, 184¼.

Total cost of food consumed, \$32.22.

Average cost of food per bird, \$1.79.

Total profit, \$62.21.

Average profit per bird, \$3.49½.

We knew the flock was doing good, steady laying, and knew the year's account would show up well; it is even better than we expected. The price of eggs has been high, but in spite of the high price of food the total profit per head is greater than we have ever made before. The best previous record was \$3.12 and a fraction.

There are a lot of things in this year's egg account which it would be profitable to study in detail, but we have only space for a few of them. First, is the grand all-the-year-laying. There's where the profit lies. As we have so persistently preached, it is the early laying pullets, kept steadily laying throughout the year, that pay the fat profits. And they are "fat profits," no one will dispute that. These figures speak for themselves. A net profit of \$3.49½ per pullet, from eggs alone, is "fat profits."

Every cent's worth of food they have eaten is accounted for in the figures given, excepting the table waste from our small family. We have two in the family much of the time, but have considerable company and one or another of the boys is now and then home for over night or over Sunday. Our family at table hardly averages three, but call it that, it is small, and there isn't a great addition to the hen's food from such a small family. It is certainly negligible so far as the amount thrown to the hens is concerned.

We started the year with twenty White Plymouth Rock pullets in the flock (the year beginning Oct. 1). One pullet died from an egg broken inside her and the eternal injury resulting the last of December. We ate one the last of January, one in March and another in April, so that on May 1 there were but sixteen in the flock. Through May and June there were four or five sitting or brooding chickens, and at one time in June there were but eleven left in the laying pen. The small egg yield in those two months is chiefly due to that fact.

We have frequently had occasion to call attention to the fact that one or two months' good egg yield is of small moment. It is natural for hens that haven't laid much of any through the fall and winter to do great laying in March and April, but look at the price of eggs then. It is the high prices of November and December that pay the creamy profits. We got 282 eggs in November, and they were worth \$12.22. We got 384 eggs in March (over a hundred more eggs than in November), and they were worth but \$8.00. We got 321 eggs in April, 39 more eggs than we got in November, and they were worth \$5.84, as compared with the \$12.22 (over twice as much) of November.

Now, as we look at it, there is the key to good profits. Just let the difference between November prices and those of March and April soak into the mind, and you will see that it is the late fall eggs that is the key to good profits. Indeed, if we take care to get eggs in November and December the balance of the year will take care of itself. The hens will just keep on laying if we get them started right. Ours certainly did, as the account shows. All that we did was to keep the pullets steadily growing (and we only fed them once a week, as we have so frequently told in these columns), and after they were moved into the laying house we took but the simplest care of them, throwing a feed of grains into the scratching litter twice a day and having the dry mash in the hopper before them all the time.

And look at the laying they did in return. Clear up to the time they were shipped away, the second day of October, and Mr. Farnsworth reports that they laid two eggs the next day after their arrival. If not, why not? That is a question that we put up to you. We did nothing to our birds that anyone cannot do to theirs, and very many "try" a great deal harder than we did, and ours laid eggs.

So many people expect their hens to stop laying soon after the summer comes, and it is a not uncommon practice to sell off the hens to cut down the feed bills. Look at how ours kept right on laying through June, July, August and September. Why do your hens stop laying, neighbor?

Did your hens pay you a net profit

SMITH'S LAYING STRAIN OF ROCKS. Barred and White Plymouth Rocks of quality. Young and old stock at all times. **CHAS. E. SMITH.** Mayetta, E. 2, Kan.

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130 for 366-inch; 132 for 372-inch; 134 for 378-inch; 136 for 384-inch; 138 for 390-inch; 140 for 396-inch; 142 for 402-inch; 144 for 408-inch; 146 for 414-inch; 148 for 420-inch; 150 for 426-inch; 152 for 432-inch; 154 for 438-inch; 156 for 444-inch; 158 for 450-inch; 160 for 456-inch; 162 for 462-inch; 164 for 468-inch; 166 for 474-inch; 168 for 480-inch; 170 for 486-inch; 172 for 492-inch; 174 for 498-inch; 176 for 504-inch; 178 for 510-inch; 180 for 516-inch; 182 for 522-inch; 184 for 528-inch; 186 for 534-inch; 188 for 540-inch; 190 for 546-inch; 192 for 552-inch; 194 for 558-inch; 196 for 564-inch; 198 for 570-inch; 200 for 576-inch; 202 for 582-inch; 204 for 588-inch; 206 for 594-inch; 208 for 600-inch; 210 for 606-inch; 212 for 612-inch; 214 for 618-inch; 216 for 624-inch; 218 for 630-inch; 220 for 636-inch; 222 for 642-inch; 224 for 648-inch; 226 for 654-inch; 228 for 660-inch; 230 for 666-inch; 232 for 672-inch; 234 for 678-inch; 236 for 684-inch; 238 for 690-inch; 240 for 696-inch; 242 for 702-inch; 244 for 708-inch; 246 for 714-inch; 248 for 720-inch; 250 for 726-inch; 252 for 732-inch; 254 for 738-inch; 256 for 744-inch; 258 for 750-inch; 260 for 756-inch; 262 for 762-inch; 264 for 768-inch; 266 for 774-inch; 268 for 780-inch; 270 for 786-inch; 272 for 792-inch; 274 for 798-inch; 276 for 804-inch; 278 for 810-inch; 280 for 816-inch; 282 for 822-inch; 284 for 828-inch; 286 for 834-inch; 288 for 840-inch; 290 for 846-inch; 292 for 852-inch; 294 for 858-inch; 296 for 864-inch; 298 for 870-inch; 300 for 876-inch; 302 for 882-inch; 304 for 888-inch; 306 for 894-inch; 308 for 900-inch; 310 for 906-inch; 312 for 912-inch; 314 for 918-inch; 316 for 924-inch; 318 for 930-inch; 320 for 936-inch; 322 for 942-inch; 324 for 948-inch; 326 for 954-inch; 328 for 960-inch; 330 for 966-inch; 332 for 972-inch; 334 for 978-inch; 336 for 984-inch; 338 for 990-inch; 340 for 996-inch; 342 for 1002-inch; 344 for 1008-inch; 346 for 1014-inch; 348 for 1020-inch; 350 for 1026-inch; 352 for 1032-inch; 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460 for 1356-inch; 462 for 1362-inch; 464 for 1368-inch; 466 for 1374-inch; 468 for 1380-inch; 470 for 1386-inch; 472 for 1392-inch; 474 for 1398-inch; 476 for 1404-inch; 478 for 1410-inch; 480 for 1416-inch; 482 for 1422-inch; 484 for 1428-inch; 486 for 1434-inch; 488 for 1440-inch; 490 for 1446-inch; 492 for 1452-inch; 494 for 1458-inch; 496 for 1464-inch; 498 for 1470-inch; 500 for 1476-inch; 502 for 1482-inch; 504 for 1488-inch; 506 for 1494-inch; 508 for 1500-inch; 510 for 1506-inch; 512 for 1512-inch; 514 for 1518-inch; 516 for 1524-inch; 518 for 1530-inch; 520 for 1536-inch; 522 for 1542-inch; 524 for 1548-inch; 526 for 1554-inch; 528 for 1560-inch; 530 for 1566-inch; 532 for 1572-inch; 534 for 1578-inch; 536 for 1584-inch; 538 for 1590-inch; 540 for 1596-inch; 542 for 1602-inch; 544 for 1608-inch; 546 for 1614-inch; 548 for 1620-inch; 550 for 1626-inch; 552 for 1632-inch; 554 for 1638-inch; 556 for 1644-inch; 558 for 1650-inch; 560 for 1656-inch; 562 for 1662-inch; 564 for 1668-inch; 566 for 1674-inch; 568 for 1680-inch; 570 for 1686-inch; 572 for 1692-inch; 574 for 1698-inch; 576 for 1704-inch; 578 for 1710-inch; 580 for 1716-inch; 582 for 1722-inch; 584 for 1728-inch; 586 for 1734-inch; 588 for 1740-inch; 590 for 1746-inch; 592 for 1752-inch; 594 for 1758-inch; 596 for 1764-inch; 598 for 1770-inch; 600 for 1776-inch; 602 for 1782-inch; 604 for 1788-inch; 606 for 1794-inch; 608 for 1800-inch; 610 for 1806-inch; 612 for 1812-inch; 614 for 1818-inch; 616 for 1824-inch; 618 for 1830-inch; 620 for 1836-inch; 622 for 1842-inch; 624 for 1848-inch; 626 for 1854-inch; 628 for 1860-inch; 630 for 1866-inch; 632 for 1872-inch; 634 for 1878-inch; 636 for 1884-inch; 638 for 1890-inch; 640 for 1896-inch; 642 for 1902-inch; 644 for 1908-inch; 646 for 1914-inch; 648 for 1920-inch; 650 for 1926-inch; 652 for 1932-inch; 654 for 1938-inch; 656 for 1944-inch; 658 for 1950-inch; 660 for 1956-inch; 662 for 1962-inch; 664 for 1968-inch; 666 for 1974-inch; 668 for 1980-inch; 670 for 1986-inch; 672 for 1992-inch; 674 for 1998-inch; 676 for 2004-inch; 678 for 2010-inch; 680 for 2016-inch; 682 for 2022-inch; 684 for 2028-inch; 686 for 2034-inch; 688 for 2040-inch; 690 for 2046-inch; 692 for 2052-inch; 694 for 2058-inch; 696 for 2064-inch; 698 for 2070-inch; 700 for 2076-inch; 702 for 2082-inch; 704 for 2088-inch; 706 for 2094-inch; 708 for 2100-inch; 710 for 2106-inch; 712 for 2112-inch; 714 for 2118-inch; 716 for 2124-inch; 718 for 2130-inch; 720 for 2136-inch; 722 for 2142-inch; 724 for 2148-inch; 726 for 2154-inch; 728 for 2160-inch; 730 for 2166-inch; 732 for 2172-inch; 734 for 2178-inch; 736 for 2184-inch; 738 for 2190-inch; 740 for 2196-inch; 742 for 2202-inch; 744 for 2208-inch; 746 for 2214-inch; 748 for 2220-inch; 750 for 2226-inch; 752 for 2232-inch; 754 for 2238-inch; 756 for 2244-inch; 758 for 2250-inch; 760 for 2256-inch; 762 for 2262-inch; 764 for 2268-inch; 766 for 2274-inch; 768 for 2280-inch; 770 for 2286-inch; 772 for 2292-inch; 774 for 2298-inch; 776 for 2304-inch; 778 for 2310-inch; 780 for 2316-inch; 782 for 2322-inch; 784 for 2328-inch; 786 for 2334-inch; 788 for 2340-inch; 790 for 2346-inch; 792 for 2352-inch; 794 for 2358-inch; 796 for 2364-inch; 798 for 2370-inch; 800 for 2376-inch; 802 for 2382-inch; 804 for 2388-inch; 806 for 2394-inch; 808 for 2400-inch; 810 for 2406-inch; 812 for 2412-inch; 814 for 2418-inch; 816 for 2424-inch; 818 for 2430-inch; 820 for 2436-inch; 822 for 2442-inch; 824 for 2448-inch; 826 for 2454-inch; 828 for 2460-inch; 830 for 2466-inch; 832 for 2472-inch; 834 for 2478-inch; 836 for 2484-inch; 838 for 2490-inch; 840 for 2496-inch; 842 for 2502-inch; 844 for 2508-inch; 846 for 2514-inch; 848 for 2520-inch; 850 for 2526-inch; 852 for 2532-inch; 854 for 2538-inch; 856 for 2544-inch; 858 for 2550-inch; 860 for 2556-inch; 862 for 2562-inch; 864 for 2568-inch; 866 for 2574-inch; 868 for 2580-inch; 870 for 2586-inch; 872 for 2592-inch; 874 for 2598-inch; 876 for 2604-inch; 878 for 2610-inch; 880 for 2616-inch; 882 for 2622-inch; 884 for 2628-inch; 886 for 2634-inch; 888 for 2640-inch; 890 for 2646-inch; 892 for 2652-inch; 894 for 2658-inch; 896 for 2664-inch; 898 for 2670-inch; 900 for 2676-inch; 902 for 2682-inch; 904 for 2688-inch; 906 for 2694-inch; 908 for 2700-inch; 910 for 2706-inch; 912 for 2712-inch; 914 for 2718-inch; 916 for 2724-inch; 918 for 2730-inch; 920 for 2736-inch; 922 for 2742-inch; 924 for 2748-inch; 926 for 2754-inch; 928 for 2760-inch; 930 for 2766-inch; 932 for 2772-inch; 934 for 2778-inch; 936 for 2784-inch; 938 for 2790-inch; 940 for 2796-inch; 942 for 2802-inch; 944 for 2808-inch; 946 for 2814-inch; 948 for 2820-inch; 950 for 2826-inch; 952 for 2832-inch; 954 for 2838-inch; 956 for 2844-inch; 958 for 2850-inch; 960 for 2856-inch; 962 for 2862-inch; 964 for 2868-inch; 966 for 2874-inch; 968 for 2880-inch; 970 for 2886-inch; 972 for 2892-inch; 974 for 2898-inch; 976 for 2904-inch; 978 for 2910-inch; 980 for 2916-inch; 982 for 2922-inch; 984 for 2928-inch; 986 for 2934-inch; 988 for 2940-inch; 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At from \$3.00 to \$5.00 per acre when you can buy land from \$8.00 to \$15.00 per acre that has produced 20 bushels of No. 1 wheat from land that was broken the previous winter. Same land has produced 30 bushels of good corn on spring breaking. On old land as much as 50 bushels of corn per acre. Over \$80.00 per acre realized from crop of potatoes on 15.00 land. \$50.00 per acre from crop of broom corn raised on new breaking. Alfalfa successfully raised. I have thousands of acres for sale in Lincoln county, Colorado. Hugo is the county seat. This is the finest body of good agricultural land in America now for sale at low prices. Excellent markets. The best of water at a depth of from 10 to 50 feet.

DO YOU KNOW OF ANY SAFER INVESTMENT

or one that will bring greater returns on the money invested than the lands I offer? For further particulars call on or write

A. S. Mitchell, The Land Man,
Hugo, - - - Colorado

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Colorado is strictly in the limelight. Now is the time to buy for the certain rise in prices. We quote:

4,600 acres, fair ranch improvements; running streams; shallow water for domestic use or irrigation by pumping; level land; excellent soil; at only \$8 per acre; half cash. Better investigate this if you want a big buy.

3,400 acres, sub-irrigated; water shallow and easily raised to the surface for ditch irrigation, and plenty of it; level land and good soil; only 25 miles from Denver, \$15 per acre.

1,280 acres, nice level land; 2 1/2 miles from main line railroad station; \$8.50 an acre; easy terms. This will sell for double in two years.

320 acres, six miles from Denver, and 160 acres four miles from Denver, at \$15 an acre. Better investigate these.

160 acres, four miles out; level, sandy loam; fenced one side; a great big bargain at \$15 per acre; won't last long.

170-acre improved valley farm, \$6,500.

470-acre improved mountain farm, \$3,000.

Three fruit farms in the justly celebrated Paonia section of Delta county, Colorado; sure crops of the finest fruit raised anywhere in the world; frost does not bother; water rights A-1; fair improvements. One man owns all these three places, is getting old and wants to sell, and in order to do so makes prices just one-half less than neighboring places are selling for. Eighty acres, 1,000 four-year-old Jonathan apple trees; 700 Elberta peaches, apricots, cherries; besides some old orchard in full bearing; berries, grapes, currants, gooseberries; 18 acres alfalfa; 18 acres grain land; oak grove around house; running spring that supplies kitchen and milk-house; price, \$10,000; half cash; balance, easy. Eighty acres, 350 Elberta peaches and 125 Jonathan apples, 3 years old; 487 winter variety full-bearing apple orchard; 3 acres alfalfa; price, \$6,000. One hundred and sixty acres ranch, 1,500 apple trees—mostly Jonathans, over one thousand Elberta peaches, various other kinds of fruit and berries, alfalfa, etc.; 2 sets farm improvements; some live stock and farm implements with this place; price, \$15,000, which is less than \$100 per acre. Unimproved land, under water, in this section is worth \$150 to \$200. If you want a fruit farm investigate these quickly. Write or call on

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405 QUINCY BUILDING

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320 a. Homesteads Choice farm and ranch land bargains in Washington Co. Write or see Sigel Johnson, Akron, Colo.

IRRIGATED FARMS.

Prowers county, Colorado, offers the best opportunities to the homeseeker of moderate means. Write for information and prices of farms.

J. B. TRAXLER, LAMAR, COLO.

320 ACRES DEEDED LAND.

Perfect title; under one of the largest storage irrigation projects in Colorado, near good town, land is very smooth, and soil of great depth. Price \$40.50 per acre, with good water right. Easy terms.

BRILL & WHITE.

Lamar, Colo. Civil and Irrigation Eng'rs.

WE SELL THE BEST IRRIGATED LANDS.

\$40 to \$80 an acre up according to improvements, within 2 to 4 miles of shipping point, these prices include perpetual irrigation water rights deeded with the land, good title to both land and water or no sale. For further particulars write or see

THE GEO. A. WATSON LAND CO., Lamar, (Established 1886) Colo.

ROCKY FORD BARGAIN.

160 acres irrigated farm, 2 miles from Rocky Ford, good soil, easily cultivated, all in crop, 40 acres alfalfa, new 5-room house, complete outbuildings, R. F. D., telephone. Price, \$135 per acre. Good terms. Write or see

THE ROCKY FORD REALTY CO., 208 S. Main St., Rocky Ford, Colo.

WHERE THE GOOD CROPS GROW.

220 acres, 9 miles northwest of Yuma, all level, good soil and no waste land. Price only \$12.50 per acre. This is only one of the many attractive bargains we have and offer in choice, smooth rich and productive farm lands in Yuma county, the Queen of eastern Colorado. Where large crops of corn and small grains grow and where scientific farming is an established success, without irrigation. Come let us show you or write for information to

J. L. Miller & Co., Yuma, Colo.

TWO GREAT LAND BARGAINS IN YUMA COUNTY, COLO.

Famous for corn and wheat yields—320 acres, 2 mi. from Wray, Colo.; fair improvements, 225 a. cultivated, bal. pasture, \$25 per a. 160 a. 5 miles from Vernon, Colo., 80 a. cultivated. Sell or trade, at \$20 per acre.

Other attractive bargains in choice farms and tracts of land, ranches, etc. Write for information concerning opportunities for investment, where the country's greatest yields of wheat are recorded.

YUMA COUNTY REAL ESTATE CO., Wray, Colorado.

IRRIGATED LANDS in the famous South Platte Valley of Colorado. Fine 160 under the old ditch Price \$160.00 per acre. Owner will guarantee \$15.00 per acre cash rent. Fine 160, all in alfalfa, \$100.00 per acre. Will rent for \$10.00. Fine one-half section at \$75.00 per acre. We have a number of good quarters from \$30.00 to \$40.00. We have some fine propositions for exchange, for business blocks or general merchandise. We also have some fine tracts of cheap land, ranging in price from \$10.00 to \$20.00 per acre for colonizing. Raise fine crops under the Campbell system of farming. Write us for prices and literature.

CASTLE & WYCKOFF LAND CO.,

Fort Morgan, Colorado.

DO YOU WANT A HOME?

Buy now in Washington county, Colo. Where choice land, with best of soil can be had; where good farmers raise from 20 to 45 bu wheat per acre, and oats, barley, corn, spetz potatoes and alfalfa grow abundantly on up land, without irrigation; in a county rapidly settling and being improved by good thrifty farmers. We have many tracts of choice, smooth, fertile farm lands, with healthful climate and abundance of good water, at prices ranging from \$8 to \$15 per acre. If you are looking for good investments, write or see

VANDERHOOF & MacDONALD, Otis, Colo.

Colorado Irrigated Land

22,000 acres of irrigated government land in south eastern Colorado has recently been opened for entry under the provisions of the Carey act. The State of Colorado has contracted with the Two Buttes Irrigation & Reservoir Company to construct the Irrigation land, which is located in Baca and Prowers counties, close to Rocky Ford and other priority and title to land comes direct from the state.

Price of land 50 cents per acre;
Perpetual water right \$35 per acre.

payable \$5 cash, balance in ten annual payments. The tract is nearer any other Kansas City and Mississippi Valley markets than any other Carey Act project. Land free from brush and stone and soil will average 60 feet in depth. Altitude 4,050 feet; climate best in state; rainfall 16 inches; crops, all grains, alfalfa, sugar beets, vegetables, and fruit. No alkali. Local markets for everything. No agents employed and no commissions paid. Farmers wanted; not speculators. For particulars write,

THE TWO BUTTES IRRIGATION & RESERVOIR CO.,

Lamar, Colorado.

Big Crops

GROWN ON EASTERN COLORADO LAND

1500 farmers settled in Cheyenne county recently. The county is fast settling up. The investor should buy now. The homeseeker should secure a home while LAND CAN BE BOUGHT AT

\$10 to \$15 an Acre on Easy Terms.

Modern School Facilities. High School and Manual Training.

Cheyenne Wells, the county seat of Cheyenne county, is keeping pace with the development of the county. Just completed a \$30,000 court house and a \$15,000 high school without bonding the county.

Telephone System. Rural Free Mail Delivery.

A County Agricultural Society was formed last spring and a very successful fair was held this fall.

Come and see the crops grown on this cheap land.

A trip to Eastern Colorado is always pleasant, especially so in winter. Delightful weather, pure water.

Land is selling rapidly and prices will advance fast. For further information write

The Cheyenne County Land Co.,

CHEYENNE WELLS,

COLORADO.

CHOICEST COLORADO LANDS

AUGUST MUNTZING, Real Estate Broker AKRON, COLO.

Buys and sells the best and cheapest Colorado lands. After 22 years in the business, owns 40,000 acres of the very best, some of which, both improved and raw, is being offered at prices that are always the lowest, and on terms to suit purchasers.

PAYS RAILROAD FARES AND HOTEL BILLS

for all who purchase land from him and carefully guards the interests of those who entrust their business with him. Has a number of deeded quarters adjoining.

160 AND 320 ACRE HOMESTEAD RELINQUISHMENTS.

which are offered far below actual values. For full particulars, maps, plats and literature, write

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Why do you rent? Why give the best years of your life working for others? Own your own farm—you can do it on payments less than the rents you are now giving.

BE INDEPENDENT—DO IT NOW.

We have plenty of choice, smooth, fertile lands, such as are now producing from 25 to 45 bushels of wheat per acre and yield abundantly of corn, alfalfa, oats, potatoes and other crops, we can sell you at from \$10 to \$25 per acre on good terms.

Write us at once for information as to the splendid opportunities for investment in lands, both irrigated and irrigable, or choice farming uplands.

THE BEST OF NORTHEASTERN COLORADO.

Act now and get the benefit of the rapid rise in values. Some good homestead lands subject to filing.

THE WESTERN LAND CO.

Sterling,

Colorado.

Kiowa County, Colo., Land.

1,200 acres of choice wheat land, offered in quarters and half sections. On line of Mo. Pac. R. R., close to three good towns.

Prices range from \$5.00 per acre upward.

Write for terms and descriptions.

ALBERT E. KING, - - McPherson, Kansas

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A. H. Greisa, Lawrence, before
the Kansas State Horticultural
Society.

When I began experimenting in this line, there was little fruit of known value in the state. My first work dates back to 1868 when I planted grape seeds hoping to get some kind better, and later than the Concord. But in three years' planting, none came to any good. Then the apple had some of my attention, and scions were cut from promising seedling trees and grafted into the limbs of bearing trees so as to make them come into bearing sooner. But the trouble then was in the trees blighting, the graft first, then the blight followed down the length of the stem, till the whole tree died. The Janet was now being outdone by the Missouri Pippin and other kinds till we had all the kinds needed unless some good advance was made in quality and keeping.

At this time I changed places and had to make all new beginnings. In experimenting it was the same—plant seeds of choice fruit and wait for them to grow. I did this with the cherry and pear, but nothing! nothing! The first real advance made was in raspberries when I introduced the Kansas. I had planted seeds by the pint and quart, but the young plants most all showed their inherent weakness in some way and were destroyed as soon as found, but the Kansas showed such remarkable vigor for a young plant that I gave it the right to remain and fruit where it grew. It was of such size, color and quality, that I failed to see all of its good qualities the first year, and the new set plants showed the same strong growth; it was beyond worth planting, worth naming, worth introducing. It was named the Kansas and it has been the kind that has helped the small fruit industry. From New York a grape grower wrote me that many were digging out their grapes and planting the ground to Kansas raspberries. From northeast Kansas a grower told me that it was the first raspberry worth growing. No doubt you all know more or less of it.

Then another that has come in bearing is the Lawrence. The next was a red kind named in Lawrence markets the Jewell. It has a bright red color, is large, and stands up well in the market. It is cross bred as is shown in that it makes tips and sprouts from the roots. The later is the most common way of reproducing itself. It is not, as you would say, hardy in that some winters the tops are killed; then it comes up with a new growth on which it produces its best fruit. I dropped it as the Cardinal cane at that time. This Cardinal grew with great vigor, was hardy and very productive and also was of red or purple color if let remain on the vines. Since the introduction of this plant many people have had red raspberries in the west who were entire strangers to them before. It makes the best canned fruit and in such quantities that most any one can have it if not too utterly negligent. The only fault found by the critics of this fruit is that the berries do not always stay of red color on the plant, but that is not as serious as not to have any. Many fruit growers like it for it makes plants freely when in good condition. It grows to large size, and can be trimmed to suitable form to make room for the new growth of the coming summer. One fruit grower made a standing offer to pay \$50 for a better kind.

In strawberries, I introduced the Mele, a better kind than the Crescent beside which I grew it as a test. It was twice as productive, more firm yet not enough so for a good market berry, but for home use in the eastern part of the state, where people grow strawberries for home use, it has no superior. It stands the drought well, makes plants freely, and its fruit is of uniform size,—not the largest,—bright red color. It has been considerably grown in states East as well as West.

Of the other fruits the apricot received attention when the Russian sorts were first offered. They were more hardy than our kinds such as the Early Golden, Moorpark and others, but smaller in size. Among them I found the Superb of such qualities that I began its propagation and found plenty

to grow it in preference to the old kind. It is large, has beautiful red and golden color, and is the most refreshing fruit to eat one finds. Unfortunately it does not endure spring frosts, and so often misses a crop.

One of the coming fruits will be the plum. I have a new sort, cross bred, that has merits all its own, it is very late, the latest of any I know. It is productive and the spring frosts do not seem to destroy the fruit. It has a bright red color, shaded with a white bloom. The quality is good. It has a small seed and small sized fruits, but produced in such abundance that one is never at a loss to find them. The tree seems most hardy, is slow growing, but upright, and its fruit ripens the last of September to the middle of October. It is named the Parrot for its color, and other reasons. It is most excellent for canning, marmalade and jelly.

A new pear not of my origin, but of my introduction, will be offered as soon as a stock of trees can be grown. It is large, late, ripe just before the Keiffer, but is of far better quality. It never has any of the hard gritty parts of the Keiffer, in fact none of its faults, but all its merits intensified. It is a cross of the Keiffer and the Duchess, but none of the Duchess weakness is shown in the new pear. I have named it the Douglas as it is from that county, by one of its most honored farmers and fruit growers. He grew it from seed sown in a row in the orchard. It has had no pet care, but it has produced from its first year in bearing to the present time. It failed only in 1907 when all other fruit failed. I saw the fruit first in 1902 and every year since save the one mentioned above. It is a most prolific and hardy tree; the fruit is ripe just before the Keiffer, nearly as large, bright yellow, smooth, pear shaped; it should be used when brightest in color and mellow, when it will compare with any we have. We have no other pear that ripens at the same time. It is worth growing, if you want pears to eat, pears to sell, pears to grow in abundance, plant the Douglas.

Kansas was once considered a treeless prairie. Lewis and Clark, in their early report, soon after it became a part of the United States, said it was so void of timber that people could not live there more than 10 or 15 years. But trees can be grown in great numbers and varieties to supply all our wants. Among the real trees of today the Catalpa Speciosa is the best tree, yet when tried in the balance with others, it is not the best for size or beauty or value. I found another catalpa that is a dwarf variety; it grows low on the ground and makes a most beautiful compact tree or shrub. It was sold to me as a flowering dwarf shrub, but the flowers have not been in evidence, the beauty of the tree is in the shape, color and abundant foliage. To see it one wishes they may see more of it, and regrets that it is so low as not to be seen better. Working on this thought

originated the idea of budding or grafting it on the other kinds to give height, and so I did. When I had the first six trees I saw the plan was a success, and made more of them. The tree does not need trimming to keep it in shape; one need cut such limbs only as start below the bud, also if by accident it gets partly broken at the top, cut the unbroken limbs all back, and let them make a new top from the old budding. It is a tree hardy in any part of Kansas, also east and west of it; it is grown on the shores of the Atlantic and Pacific oceans. It will not make a large tree, nor will it do well in close contact with others, as the top will then grow sideways. In the open, with a chance to do its best, it makes a most beautiful tree, with its leaves staying on later than most deciduous trees and is again early in leaf.

Getting Rid of Gophers.

In spite of all that has been written on this subject the past few years inquiries are still coming in asking how this pest can be destroyed. Where gophers exist in only small numbers they may be trapped but by poisoning is the easiest way to exterminate large numbers. Gophers may be poisoned by the use of poisoned grain, potatoes, apples, or sweet potatoes. Poisoned corn will be found very convenient and the United States Department of Agriculture gives the following direction for its preparation:

"Dissolve an ounce of strychnia sulphate in a pint of boiling water. Add a pint of thick sugar syrup, and stir thoroughly. The syrup is usually scented by adding a few drops of oil of anise, but this is not essential. If preserved in a closed vessel, the syrup will keep indefinitely. The above quantity is sufficient to poison a half bushel of shelled corn or other grain (corn recommended). The grain is steeped in hot water and allowed to soak over night. It is then drained and soaked for several hours in the poisoned syrup. Before using, corn meal may be added to take up the excess moisture."

Swelling on Knee.

Please tell me what to do for my yearling colt. I think the horse was kicked by another horse which caused the swelling on the knee. The horse does not seem to be lame.—W. L. Steffen, Clay Center, Kan.

Ans.—Take biniodide of mercury three drams, Russian cantharides one ounce, and hogs' lard one ounce and a half. Mix. Clip off the hair and rub in the blister with the hand for 10 minutes. Repeat it every 10 days for three or four applications.

Mare Thin in Flesh.

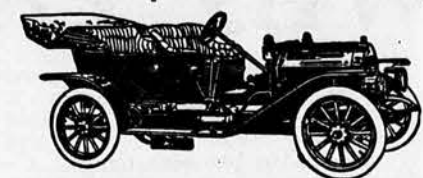
I have a mare 14 years old that is very thin in flesh. She eats plenty and eats regular, but is weak. I feed her plenty of wild hay, corn, chop and oats. Could you recommend a condition powder for her?—George Rand, Logan, Kan.

Ans.—Take nux vomica powder four ounces, sulphate of iron two ounces, hyposulphite of soda four ounces, Gentian powder three ounces, Fenugreek seed powder four ounces. Mix and divide into 24 powders. Give a handful of flaxseed meal and a teacupful of sorghum molasses in feed twice a day.



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"The stream of emigrants from the United States to Canada will continue."

Senator Doiliver recently paid a visit to Western Canada, and says: "There is a land hunger in the hearts of English speaking people; this will account for the removal of so many Iowa farmers to Canada. Our people are pleased with its government and the excellent administration of law, and they are coming to you in tens of thousands, and they are still coming."

Iowa contributed largely to the Canada their home during 1909. Field crop returns alone during year added to the wealth of the country close to

\$170,000,000.00

Grain raising, mixed farming, cattle growing and dairying are all profitable. Free Homesteads of 160 acres are to be had in the very best districts; 160 acres pre-emption at \$2.00 per acre within certain areas. Schools and churches in every settlement, climate unexcelled, soil the richest, wood, water and building lumber plentiful.

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800 ACRE BARGAIN IN NESS COUNTY, KANSAS.

Only 1 1/2 miles from Ness City, all in cultivation and will all be sown to wheat and 1-4 crop goes to purchaser. Price for a short time \$25 per acre. Look this up, a genuine bargain. Let us send you our land list. **KIRBERG & MILLER,** Ness City, Kan.

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200 acres adjoining Horton, one of the best locations in eastern Kansas. \$20 per acre. This is a real bargain. Write for complete description.
MCCORMACK & FRIEND, Horton, Kansas.

A 240 ACRE BARGAIN.

Anderson county, Kansas. 7-room house, telephone, R. F. D., 1/2 mile from Kincaid, good orchard, abundance of good water. All tillable, all fenced and cross fenced. Price \$50 per acre.
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640 acres, 11 miles from town in famous Cheyenne Valley, perfectly smooth, choice land. This section will sell for \$20.00 per acre within 12 months. Get busy if you want it at \$13.00 per acre. Cash.
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with our farms. We have farms of all sizes, improvements to suit. Some we can sell on small cash payment. For a special bargain we offer 120 acres 2 miles from Altamont, 4-room house, fair barn for 6 head, good water, well fenced, in fine neighborhood, 65 acres farm land, 55 acres pasture. Price for quick sale \$3,800. **NEW-HOUSE & SON,** Altamont, Kansas.

ARE YOU LOOKING FOR A HOME?

No farmer should think of buying a home before seeing a copy of THE FARM AND REAL ESTATE JOURNAL. It contains the largest list of farm lands, city property and stocks of goods of any paper published west of Chicago. It reaches 50,000 readers each issue, 85 per cent of whom are farmers. Every one who has any property they wish to advertise will find this journal one of the best advertising mediums published. Advertising rates 2c per word each insertion. Send 75c and we will mail you the Journal for one year, or for 10c in silver or stamps we will send it for two months on trial and stop it at the end of the two months unless you renew your subscription. **FARM AND REAL ESTATE JOURNAL,** Traer, Iowa.

DOES THIS SUIT YOU?

200 acres, Cherokee Co., Kan., 12 miles west of Joplin, splendid roads; 75 acres in pasture and grass, 5 acres in orchard, yard and stock lots, 80 acres in cultivation; 40 acres sown to grass last spring; hedge and wire fence; every foot tillable, no rock or waste land; lays fine; good bearing orchard; good 6-room house, cellar, smoke and chicken houses, corn cribs, hog sheds, barn 24x48. An ideal home in good community and a rich country. The price is only \$50 per acre; half cash, balance on liberal terms if desired. The owner has made enough money to retire.
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Banner wheat and corn county of the state. Write for selected list.
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Choice wheat and ranch lands. Write for price list and country map.
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440 acres, 11 mi. from Winfield, 5 miles from Townsend. 160 acres cultivated, balance blue stem pasture, living water, good buildings, orchard; alfalfa, prairie hay, fine grain and stock farm. Price \$13,500, good terms.
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HOMESEEKERS

Send for a copy of the southeastern Kansas Homeseeker, the best land journal published. It's free to those wanting homes or investments. We make a specialty of lands on small payments and easy terms. Address **THE ALLEN COUNTY INVESTMENT CO.,** Longton, Kan.

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\$4,000 will buy a quarter section of fine smooth land 1/2 mile from center of Ness City, all fenced and in cultivation. 50 acres in wheat. Other good corn, alfalfa, and wheat land at \$15 to \$35 per acre. Write for information.
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Five thousand acres, two hundred and fifty in cultivation, ten room house, large barn, good out buildings, living water. Fenced and cross fenced. \$20 per acre.
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Will buy 80 acres in Anderson county, Kansas, three miles from Mont Ida, three and one-half miles from Welda and six miles from Colony. All second bottom land, no overburden. A good 4-room cottage. Will need a little repair. Part down and terms on balance. We have land ranging in price from \$20 to \$60 per acre. Write **ROBERT C. SIMON,** Garnett, Kan.

KANSAS LAND

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can sell you Saline and Dickinson county farms for \$30 to \$95 per acre. Also cheap farms in Caddo Co., Okla.
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land. 430 acres creek bottom under cultivation, 4 miles from Washington, 1 mile to school, 2 sets of improvements, good water. Price \$55 per acre. **W. J. GORDON,** Washington, Kan.

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Montgomery county is second in population and 5th in wealth in Kansas. Write for list of choice farm bargains and prices.
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SPLENDID FARM IN WILSON Co.

Within a few miles of city, 142 acres of first class land, 3 sets of improvements, consisting of frame house and large cattle barn, new brick house and large barn, part in cultivation, balance alfalfa and clover, never failing water. Come and see this farm or write for particulars. Can be bought for less than actual value. Price \$12,500.
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Six room house. Eighty acres of valley land, balance good mow land and good pasture and orchard for family use. Price \$4,000. And I have several other good 80-acre and 160-acre and so on up to 640 acres, and several large ranches. **WM. FORBES,** Fall River, Kan.

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Nice little 80 acres, 6 miles out, \$2,400. Fine 120 acres, 4 miles out, fair improvements, mostly smooth, black soil at 5,000. A dandy half section, 5 miles out, 10 miles from Salina, half in cultivation, nearly all could be farmed, black loam, lies fine, plenty good water, 2 windmills, lots of fencing, fair improvements. A bargain at 40 per acre. We have others. Come or write
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Kansas farm of 300 acres, adjoining a flourishing railroad town, forty miles west of St. Joseph, Mo. The soil, naturally rich, has been made more fertile by twenty years of judicious crop rotation, and by the liberal application of manure; well watered, fine walnut timber, finest blue grass pastures, alfalfa, timothy and clover meadows; finest corn and wheat land; well fenced; hay, cattle and horse barn for a large amount of live stock; large silo, water tanks, granary, fine mill, etc. A model stock or grain farm, ready for use. An excellent opportunity. For complete information address K 225, care Kansas Farmer Topeka, Kan.

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80 acres, 30 under cultivation. Balance fine blue stem pasture; 14 of alfalfa; living water; timber; fruit of all kinds; good improvements; 1 1/2 miles from Manhattan, a town of 8000 people and location of the K. S. A. C. A bargain. Price \$6,500.00. Good terms. Address,
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Some Are Getting It; Some Are Not. Are you one that is not? You can get a slice from \$10 to \$20 per acre in the wheat belt, where they have fine soil, fine climate and plenty of water if you will write **TEED & ORBISON,** Jetmore, Kan., for their list of farm lands. They have something good.

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225 acres first bottom adjacent to city limits of Salina. Improvements, first class, consisting of 8 room house, large barn, splendid orchard, all necessary outbuildings. Fine home, best land in Kansas, absolutely O. K. Only 10 minutes ride from Salina O. R. Price and terms right. For particulars write.
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640 acres finely improved all tillable, new fencing, 250 acres in cultivation, 160 acres of meadow balance pasture, 8-room house, barn 54x66 all white pine, must be seen to be appreciated, a snap at \$40 per acre must be sold, don't wait to write, come at once and look this over.
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A REAL SNAP.

120 acres Atchison County, Kansas, land. All under plow and smooth; 90 acres in wheat; 30 for corn; unimproved; 5 miles to town; easy terms; \$55 per acre.
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160 acres, 5 miles Sterling, new 7-room house, barn 32x40, 20 acres alfalfa, all good corn, wheat and alfalfa land, 80 acres in wheat goes. Price \$15,000, good terms. Other bargains.
W. W. BARRETT, Sterling, Kansas.

EASTERN KANSAS PASTURE LAND FOR SALE.

Consisting of 480 a. all fine soil, well watered and fenced with four wire fence, in good repair. Located 4 miles Onaga, Kan. About one-third would make excellent farm land, balance the very best of pasture. For quick sale at \$25 per a. with terms.
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KANSAS LAND

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county, Kansas, lands. Bargains in improved farms at prices ranging from \$45 to \$80 per acre. Write for big list.
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160 acres, good six room house, about 80 acres bottom, never failing water, 13 acres alfalfa, 60 acres corn, close to school and church. Price \$7,500. Terms if desired.
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We are showing lands in the Lost Mountain section of Canada at prices ranging from \$10 to \$20. Low excursion rates twice a month. Write for full information.
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A 30 DAY BARGAIN.

42 acres, adjoins Baldwin, the home of Baker University, 409 bearing apple trees, balance good farm land. \$4,200 if sold in the next 30 days. Write.
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200 ACRES IN Marshall County, Kan.

three-fourths mile from town, 100 acres in second bottom land, 160 acres in cultivation, balance pasture, 7-room house, cellar, small barn, cattle shed, hog house, orchard, well and windmill. A bargain at \$90 per acre. Good terms. **SUMMERFIELD REALTY CO.,** Summerfield, Kan.

REPUBLIC COUNTY LAND.

25 farms in this county for sale, ranging in prices from \$50 to \$75 per acre. Choice corn, wheat and alfalfa land bargains. Write for information, or call on
J. G. HELWICK, Belleville, Kansas.

EASTERN KANSAS FARM BARGAIN.

166 a., 3 1/2 miles from town, 75 a. cultivation, 2 a. orchard, balance native grass, 5-room house, good cellar, barn for 8 horses with loft, other outbuildings, good water, close to school, R. F. D. and phone. Farm on main traveled road. Price \$45 per acre. For particulars write **J. C. RAPP,** Osage City, Kansas.

44,000 ACRES

Just put on the market in Texas close to the Simmons property, lays fine and a black sandy loam. We will sell the entire tract for \$10 per acre. A fine colonization proposition for someone who can handle this tract.

160 acres, 2 miles from a good town in McPherson county, Kansas, well improved, 100 acres under cultivation. Price \$5,500. Fifteen quarters in Hodgeman county, fine for a ranch. Price \$7.50 per acre.
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Of all kinds direct from owners of farms; ranches, mdse., hardware, hotels, livery barns. Send for our book of trades or cash list.

BERSIE REAL ESTATE AGENCY,

Eldorado, Kansas.

BUY A CHEAP FARM.

480 acres of good corn land, northwest of Burton, Kan. 8-room house, barn 30x40, basement 20x40, cow sheds and other buildings, 3 wind pumps, orchard, groves, fenced and cross fenced, all good land; a splendid stock farm, only \$27.50 per acre. 160 acres south of Hutchinson, 3 miles of Darlow, 7-room house, stable, 10 acres alfalfa, 7 acres orchard, near school, \$11,000.
ROSE & SON, 55 Sherman, East, Hutchinson, Kan.

BEST FARM IN KANSAS.

560 acres bottom valley land, all smooth, fine black sandy loam, no waste land, small orchard, 20 acres fine alfalfa land, new 10-room house, hot and cold water, lighted with acetylene gas, bath and toilet, 500-barrel cistern, sewer system, R. F. D., telephone, 5 1/2 miles to two railroad towns. Price \$65 per acre. For further particulars write
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160 a. located 6 miles east of Independence, 2 miles from street car line. 50 a. in cult., balance in meadow and pasture, two good springs, 6-room house and barn for 6 horses, good school and church just across the road. Only \$35.00. Terms if desired.

ROSS DEFENBAUGH,

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BARGAIN.

160 acres, 100 acres in cultivation, 10 acres hog light, balance grass; timber for wood and posts; 7 room house; barn 20x40; wagon, implement and cattle sheds; corn cribs; well and cistern; nice shade; 6 1/2 miles from Climax; school 1/2 mile; R. F. D. Price \$30 per acre, worth \$40; can carry \$2,500.
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BOURBON COUNTY FARM BARGAINS.

160 acres, 4 miles north of Fort Scott, Kan. 65 acres in cultivation. 40 acres wild and tame meadow. 55 acres pasture, practically all tillable, good 5 room house, barn, abundance of water, near school and R. F. D., telephone. Small orchard and grove. Price \$50 per acre. We have others. Write for list.
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240 acres, 1 1/2 miles from shipping station, 5 miles from good town, on R. F. D. and telephones, 140 acres under cultivation, 100 acres in pasture, land in extra fine condition. Large house, large cattle barn, 40x52, large horse barn 40x50, all new. Fine young orchard, 2 acres of timber. Lots and all fenced in best condition. Price \$50 per acre.
T. F. COLLINS, Harris, Kansas.

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Let me know your wants. Choice bargains and money makers. Make a specialty of exchanges in land and merchandise. What kind of a proposition have you got? Let me hear from you.
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WHY NOT BUY LAND of the owner and save from \$5 to \$10 on the acre? Land of all descriptions from \$3.50 per acre up. Send for circular and come and see us. **G. N. DAVIS & CO.,** Cimarron, Gray Co., Kan.

BEST FARM IN JACKSON COUNTY
for the money. 297 acres, 200 under plow. 225 acres alfalfa, rest pasture, \$10,000 worth of improvements, half mile from town. Price \$80.00 per acre.
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Good soil as any in the state \$10 to \$15 per acre, well improved land \$15 to \$25 per acre. Partly rough at \$6 to \$8 per acre. Come before the new railroad gets here or write
J. G. COLLINS, Ness City, Kan.

LAND BARGAIN.

560 acre improved grain and stock ranch at a bargain. Located 5 miles from Colby, Kan. A snap for some one. For particulars address
STEVENS & RUBY, Stockton, Kansas.

SHARON VALLEY ALFALFA FARMS.

Choice corn and alfalfa farms for sale in Barber county, Kansas. Crop failures unknown. Write for particulars and list. Address
WILLIAM PALMER, Medicine Lodge, Kansas.

QUICK BARGAIN.

320 near station on Santa Fe, all fine tillable upland, fair set of improvements, well worth the price, \$40.
120 near church, school and store, \$5,000. Write or call and see us.
H. L. DWELLE & CO., 528 Commercial St., Emporia, Kan.

THE BEST TOWN TO LIVE IN.

If you would like to live in the most beautiful city in the West, with unsurpassed education, 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 prices, address the Secretary of the Commercial Club, Topeka, Kan.

160 acre farm, good improvements, house worth \$4,500; best orchard, 1 1/2 miles from good town, high school. Smooth rich corn and alfalfa land, corn is making 50 and 60 bushels this year. Good terms. Price \$94 an acre. Write to
V. J. BOSCH, Marion, Kansas.

NESS COUNTY LAND.

320 acres 10 miles from Ness City, 100 acres in cultivation, 4 room frame house, barn, well and windmill, some good alfalfa land, place is all fenced, land lays good and in good locality. Price \$16.00 per acre; \$2,000 cash, three to five years time on balance.
LOHNES & CASON, Ness City, Kansas.

SCHUTTE & SHINEY, the Rush county

Kan., real estate hustlers; 30 years in the same old place. Good farmers raised from 26 to 47 1/2 bushels of wheat per acre here last season. We can sell this land at from \$20 to \$35 per acre. Good improved ranch land, 1/2 good farm land, at \$18 per acre. Good bottom land not over 5 miles from market at \$25 to \$35 per acre. Well improved and running water, plenty of timber. See us, or write us at La Crosse, Kan.

SOLOMON VALLEY LAND.

We have farms for sale in Ottawa and adjoining counties, good upland improved, at from \$25 to \$60 per acre. Bottom land improved at from \$60 to \$125 per acre. You have not seen the best till you see the Solomon Valley.
A. E. ROBINSON LAND CO., Minneapolis, Kansas.

Sumner Co. Kansas Land for Sale

Wheat, oats, corn, alfalfa and hogs. All kinds of fruit and berries do fine. Abundance of water. Fine climate. Farmers get rich here; so will you. Prices \$30 and up. Write us, information free. List your stock of merchandise for exchange.
H. H. STEWART & SONS, Wellington, Kansas.

BARGAINS IN ANDERSON COUNTY.

187 acre farm in Anderson Co., Kan. 100 acres of choice creek bottom land in cultivation, 45 timothy and clover 25 timber, balance pasture, 7-room house, stable 16x24, corn crib, granary, 1 mile to school, rural mail, price \$27.50 per acre.
360 acres, Anderson county, Kan., 4 miles from Welda and Colony. 200 acres in cultivation, balance meadow and pasture, nice 7-room house, good barn, fine orchard, rural mail, telephone, price \$35 per acre. This is a splendid stock farm. Let us show them to you.
SPOHN BROS., Garnett, Kan.

HERE IS THE BIGGEST SNAP OUT.

160 acres, 3 1/2 miles northeast of Fredonia, Kan. Good 1 1/2 story farm house with 5 rooms. Good barn 24 by 30. Land well fenced with hedge and wire. Two acres orchard. 35 acres in cultivation. 70 acres pasture. Balance is meadow, part of which is tame grass. Land is well watered by two branches, 3 wells and one cistern. Land slightly rolling and one of the best bargains in Wilson county at \$35 per acre. It is a splendid home and nicely located. Write me about this.
C. E. CANTRELL, Fredonia, Kansas.

EASTERN KANSAS FARM BARGAINS

160 acres Dickinson county, near Solomon and Abilene, guaranteed perfectly smooth rich land, 7-room house, barn 28 by 48, 82 a. wheat, one-third to purchaser, \$12,000; 160 a. 17 mi Topeka, 5 mi. town, 40 a. clover, all in cult., good 6-room house, barn 48 by 60, extra fine farm, only \$9,000; 80 a. 11 miles Topeka, 75 a. in cult., no waste land, new 5-room house, small barn, spring water, \$5,000. Write for list stating what you want, as we make specialty of selling farms worth the money.
WINGETT LAND CO., Stormont Bldg., 109 West 6th. A. J. WHITE, Farm Salesman.



THE ABOVE CUT

Shows you the photograph taken of some of our PERCHERON and BELGIAN STALLIONS now in our stables. These are the low-down, heavy-boned, thick-quartered kind with lots of quality. 100 head now in our stables consisting of Percherons, Shires and Belgians. All our horses were selected from the best breeders in the OLD COUNTRY. We invite inspection. Write for our new catalog.

WATSON, WOODS BROS. & KELLY CO.,

Lincoln, Neb.



L. R. Willey & Sons, Elmdale, Kan.

IMPORTERS AND BREEDERS OF

Percherons, French Draft, Shires and Coaches

We have just landed 25 more stallions of the ton kind on our ranch. And just one word with you, Mr. Buyer, if you want a first-class stallion or mare either imported or American bred and will come and inspect our horses, if you don't think you have found the best bunch of horses in the state of Kansas and our prices the lowest considering quality, you are getting, we will pay your expenses here and back to your city. All of our horses are bought and personally selected by us and we can save you big money; you to be the judge. Write for our prices and terms before buying elsewhere.

125 PERCHERON 125

Imported, Home Bred Stallions and Mares

Mammoth Jacks and Jennets

My brood mares are breeders. My ton stallions weigh 2,000 lbs. If you want something really first class in a drafter, with extra heavy bone, you will find it at my barns. My prices and guarantee will please you.

O. P. HENDERSHOT, Hebron, Neb.

ROBISON'S PERCHERONS



—FOR SALE NOW—

Several good young stallions and mares.

J. G. ROBISON, Towanda, Kansas

HOLLAND STOCK FARM

IMPORTERS AND BREEDERS OF

Percheron and German Coach Stallions and Mares

100 head as good as grows and the best lot of stallions and mares west of the Mississippi. All in excellent condition and will be sold at exceptionally low prices if you wish quality and finish in imported or American-bred stallion or mare or young registered stock produced from the most select herd of imported mares in America. We will supply you for less money than others. Mares are all acclimated and bred. Come and see for yourself. Don't fail to see our consignment of 10 head of imported Percheron stallions and mares at the Elmdale Fair and Live Stock Assn.'s sale, Elmdale, Okla., December 11 to 18. The best Percheron stallions and mares. The best German Coach stallions and mares.

CHAS. HOLLAND, Proprietor.

Springfield, Missouri.



Imported Percheron Mares and Stallions

For sale, several nicely matched teams of two and three year old imported Percheron mares, bred, black and grays. Several extra good two and three year old imported stallions. We handle only the best. Come and see us.

J. A. FEE & SONS, STAFFORD, KAN.

PERCHERONS, SHIRES SADDLES and JACKS

28 registered jacks and jennet, 12 registered Percheron stallions and mares, 1 Imp. English stallion, 1 comb. harness and saddle stallion. Good stuff and at prices that will move them.

FRED POOS, Kansas.

PERCHERON HORSES, HOLSTEIN-FRIESIAN CATTLE.

Up-to-date Poland China hogs. Write your wants.

H. N. HOLDEMAN, Kansas.

SPRING VALLEY FARM

—Headquarters For—
Big Stylish Mammoth Jacks. Some extra good ones of serviceable age for immediate sale. Prices consistent with quality.

I. T. SUTER, Palmyria, Mo.

JACKS FOR SALE

WE have at all times a good supply of Jacks from 14½ to 16 hands high. Buy one this fall and save money. Thirty head to select from. All Guaranteed.

PETTY BROS., SEDALIA, MISSOURI

STALLIONS AND JACKS.
One 4 year old Belgian stallion.
One Percheron stallion.
One Standard bred stallion.
One eight-year-old extra good black jack, mealy points, guaranteed all right and a good breeder. All these stallions are registered and will be sold at a bargain if sold soon. Will trade for good land. Come and see me.

L. R. HEDGECOCK, Ohio, Kan.

FAIRVIEW JACK AND JENNET FARM

Registered Mammoth Jacks and Jennets for sale cheap, at all times quality considered. They have big bones, big heads and ears, and breed big mules. They are Missouri jacks—the best that grow—14½ to 16 hands high. A big lot to select from. Everything guaranteed as represented. Established 1892.

J. C. HUCKSTEP, Proprietor, EOLIA, MO.

75 HEAD JACKS AND JENNETS

All ages up to seven years old. They have big bones, big heads and ears, and breed big mules. They are Missouri jacks—the best that grow—14½ to 16 hands high. A big lot to select from. Everything guaranteed as represented. Established 1892.

PHIL WALKER, KANSAS.

SHEPHERD PONIES FOR SALE

20 imported stallions and a few bred mares. We have recently returned from Scotland with the finest importation of ponies ever brought to Nebraska. Write for private sale catalog. **CLARK BROS., Auburn, Neb.**

I HAVE THE LARGEST JACKS IN THE WORLD.

In both imported and home bred. I have sold over seven hundred jacks from my farm here and they have sired and are siring the best mules in the United States. My prices are lower than any other man on earth for good first-class jacks. Let me show you before you buy.

W. L. DeCLOW, Cedar Rapids Jack Farm, Cedar Rapids, Ia.

DUNHAMS' PERCHERONS

Fourth large importation within the year arrives November 23rd. which, added to our present stock, offers intending purchasers the finest collection in America. If you want the best horses, horses with bone, quality, size, action and best breeding stallions or mares; if you want fair and liberal treatment; if you want lowest prices consistent with good merchandise, visit Oaklawn. Catalog shows the place and the horses.

W. S., J. B. & B. Dunham, W yno. Ill.

Draft Stallions and Mares

Imported and Home Bred Registered Percherons, Belgians and Shires.



We have over 200 young stallions and mares. All will make ton horses and we will guarantee satisfaction in quality and price. 60 per cent guarantee on stallions and mares guaranteed breeders. Come and see. Send for catalog.

NORTH & ROBINSON, Grand Island, Neb.,



Percheron Stallions

50 head for sale of the ton size and show quality, from yearlings to five years old, prices from \$300 to \$1000. All stock registered and guaranteed of the best breeding. Every horse sold sound. Also have a few matched pairs of 2-year-old fillies priced \$300 and up. Come and see me.

J. W. BARNHART, Butler, Mo.

Spread of Foot and Mouth Disease.

The specific cause of foot and mouth disease exists in some form in the liquid contained in the blisters that occur in the mouth, and on other parts of the affected animal. The saliva that flows so profusely over the blistered tongue, palate and lips is well impregnated with the virus and is the principal means of contagion to neighboring animals, being carried through contaminated food and water.

The virus is no doubt also carried from animal to animal on the hands, feet and clothing of the attendants and from farm to farm by the same means. Manure and litter from an infected barn is also a source of contagion. Dogs and cats in their night prowls about the neighborhood may easily carry the virus on their feet or coats and cause outbreaks in herds that are thought to be well guarded. Milk from infected cows is also contaminated and conveys the virus to the calves and pigs and sometimes to the persons who drink it.

The litter in railroad cars that have carried infected cattle may give rise to an outbreak many miles from the primary seat of the disease.

The period that intervenes between the time of exposure of a susceptible animal to the virus and the appearance of the first symptoms, varies from twelve hours to five or six days. In the greater number of cases the first symptoms show on the third or fourth day after exposure to the disease.

Alfalfa Hay for Brood Mares.

To show the importance of alfalfa hay in a system of feeding, the practice of the farmers around North Platte, Neb., which is the center of a large alfalfa producing section, may

35 JACKS & JENNETS 35

Few good Percheron and saddle stallions. Jacks 14½ to 16 hands and the very largest that can be found. 40 miles K. C. on U. P. and Santa Fe.

Long distance phone

AL E. SMITH, Lawrence, Kan.

For Sale

37 Missouri Mammoth Jacks and Jennets, 3 stallions and Hereford cattle. **J. T. Watson, New London, Mo.**



be mentioned. The alfalfa hay is ground or fed whole with corn in the proportion of about five pounds of alfalfa to one pound of corn. This is fed to the brood sows during the winter, and they come through in excellent condition on very cheap feed. In many sections alfalfa hay is worth about \$5 a ton on the farm. One ton of alfalfa and about eight bushels of corn will keep three brood sows 130 days, or nearly the whole winter. The hogs so kept farrow pigs that are remarkable for their vigor and size.

The pig that will weigh from 200 to 325 pounds seems to cover the extremes of weight for which the demand is best. The farmer is looking for the pig that he can produce at the cheapest price, one that can convert the largest amount of plant food into pork, with a portion of a grain ration to keep the flesh hardened, and then, perhaps, finish off with four to six weeks' heavy corn feeding, and do this at the least cost. The packer has placed his stamp of approval on the light hog as shown by the higher price paid for those coming within the extremes of weight above.

HOME CIRCLE



Home Uses for Salt.

Salt sprinkled on pantry shelves will prevent ants.

Salt will remove ink from carpet if used immediately.

Put salt in the water when you wish to cool a dish quickly.

Place salt in oven under baking tins in order to prevent contents from scorching.

To beat eggs quickly add a pinch of salt. This also applies when whipping cream.

As a cleanser, salt is also of use. Sprinkled dry over a dull carpet it will freshen the colors. China and glass rinsed in salt water will brighten if washed only in a clear bath, while mirrors and window glass if polished with damp salt on tissue paper will shine as they do from no other treatment.

Tested Fruit Cake Recipes.

To many young and inexperienced housewives the making of fruit cake is a bugaboo. Below are a few simple, tested recipes which will be worth your while to try. The fruits and cake never fail and I am sure that after a trial you will keep the recipes in a special place in your cook book. I prepare the raisins, currants, citron, etc., the evening before baking. I use equal parts of each ingredient, with the exception of milk, baking powder and citron, and mix them into a large mixing pan, ready for a quick entrance into the oven immediately after breakfast. Use large half-pint coffee cups for measuring. Paper and grease your largest baking pan. Your batter for the fruit cake must be very stiff, spread it in three layers, with citron alternating. Bake in a slow oven three and one-half or four hours. Always ice fruit cakes twice, as the fruit stains through the first coating. Test by inserting a clean, smooth broom straw. If it comes out clear, the cake is done. Now for the recipes:

BLACK FRUIT CAKE—Four eggs, 1 cupful each of butter, milk and molasses, 2 cupfuls of sugar, 4 cupfuls of flour, 3 teaspoonfuls of baking powder, 3 cupfuls each of seeded raisins and currants, 1½ cupfuls of citron sliced thin, 1 tablespoonful each of allspice, cinnamon and cloves, and 1 nutmeg. I sometimes add a cupful of crushed walnut meats and ½ cupful of sweet pear pickle.

SAILOR'S CAKE—Two cupfuls of brown sugar, 2 cupfuls of flour, 1 cupful of sour milk, ½ cupful of butter, ½ cupful of chocolate or cocoa, 3 eggs, 1 teaspoonful of soda. Bake in four layers.

ICING AND FILLING—Two cupfuls of white sugar, ¼ of a cupful of milk, butter the size of an egg. Boil, and when cool flavor with vanilla.—Ex.

Bennie's Mistake.

The tin peddler's old red cart jolted slowly up to the door. Bennie came down from the wagon house loft two steps at a time, to be on hand when that wonderful drawer was pulled out from behind, for wonderful, indeed, were the treasures that drawer contained. There were knives, jew's-harps and pocket combs. There were smart blue, red and green pencils.

Bennie stood looking into the drawer with open-eyed admiration. Suddenly an idea occurred to him. He would slyly take out one of those pencils and put it in his pocket. Then before the pedler went away he would take it out and hand it to him. Would he not be surprised to see how cleverly it had been done, right under his nose, and he not know anything about it? A minute later the pencil was in Bennie's pocket, and Bennie was absorbed in some new wonders the peddler was showing—so absorbed that he forgot all about the pencil until the old red cart had turned down the road and was out of sight. Then Bennie was frightened and very penitently told his father about the pencil. Old Charlie, the horse, had just been har-

nessed to carry some grain to the mill. Bennie had never seen just such a look as was on his father's face as he said, hurriedly, "Jump into the wagon—quick—quick!" and old Charlie had never before felt the reins handled as they were then.

How they raced down the road! A man coming up the road turned his team into the gutter to let them pass. Old Charlie must overtake the red cart before it reached the next house! And the good old horse did overtake it just in time.

"My little boy has something to say to you, sir," said his father to the peddler, who was a stranger on that road.

Then Bennie shamefacedly told his story.

"Well," said the peddler, "I did see you when you took the pencil—out of the corner of my eye—but I didn't let on. Yes"—to Bennie's father—"I s'pose I should have mentioned it at the next house, and said he was a sly boy. But I see how it was now."

Bennie's father knew what to say to a little boy who had made a mistake, and this is what he said: "You can't play with fire, Bennie, without running a big risk of burning your fingers." And Bennie knew just what was meant. He did not need another lesson.—Webb Donnell in *Youth's Companion*.

of the glands of which they are composed; they decay and give a bad odor to the breath. These deposits can be seen when you examine the tonsils with a hand-glass, and they can be pressed out by means of a toothpick, the point of which should not be too sharp. They can also be removed by the use of an antiseptic gargle for the throat. For the teeth to give a bad odor to the mouth they must be in a very advanced state of decay, or must indeed be very badly neglected. The breath is rendered very offensive by certain edibles, notably cheese and onions. The combination of beer and cheese is one that will make all but the partaker suffer, when in close proximity to him or her. It is a pity that onions make such a disagreeable condition of the breath, as they are very healthful if thoroughly cooked. Sometimes the use of pastilles or charcoal tablets will sweeten the breath so that the odor will not be perceived.

The breath may be rendered foul by the condition of the nose, occasioned by catarrh, which should be corrected. If the inflammation of the nose has continued for a long time, so that it attacks the bones, the odor is one of the most penetrating and nauseating imaginable. Since the more general use of antiseptic sprays this odor is not so often met with, as by the use of these it can be kept down. The saturated solution of boric acid is excellent for these troubles of the mouth and nose. One should have a good spray and spray the nose, mouth and throat thoroughly night and morning, as much as one would brush the teeth.—*The Ladies' World* for December.

CHRISTMAS SWEETS.

At this time of the year all house-keepers are grateful for tried and

to prevent sugar from adhering. Heat gradually to the boiling point, and let boil, with but little stirring, until syrup will thread when dropped from tip of spoon or tines of silver fork. our syrup gradually, while beating constantly, onto the beaten white of an egg, and continue the beating until of right consistency to spread, then add one teaspoonful of lemon juice. Spread evenly on cakes with back of spoon.

RAISIN CUP CAKES.

First cream carefully one-half of a cupful of butter, and add gradually, while beating constantly, one cupful of sugar and continue the beating three minutes; then add two whole eggs and one egg yolk well beaten. Mix and sift two cupfuls of flour with three teaspoonfuls (level measurements of course) of baking powder, and add alternately with one-half of a cupful of milk to first mixture; then add one cupful of raisins, seeded, cut in pieces and dredged with one tablespoonful of flour. Beat vigorously and fill buttered and floured individual tins two-thirds full of the mixture. Sprinkle tops with blanched and shredded ordan almonds and bake in a moderate oven 20 to 25 minutes.

CHRISTMAS FRUIT CAKE.

A delicious cake: Cream one pound of butter, and add gradually, while beating constantly, one pound of light brown sugar. Separate the yolks from the whites of nine eggs. Beat the yolks until thick and lemon colored, and the whites until stiff and dry and add to first mixture; then add two tablespoonfuls of milk, three pounds of currants, two pounds of raisins seeded and cut in pieces, one pound of citron thinly sliced and cut in strips, one-half of a pound of almonds blanched and shredded and one pound of flour, mixed and sifted with two tablespoonfuls of mace; two teaspoonfuls of cinnamon, one teaspoonful of soda, and one-half of a teaspoonful of cloves. Put mixture in deep buttered pans (bread pans are desirable), cover with buttered paper and steam three hours; then bake one and one-half hours in a slow oven. Rich fruit cake is always more satisfactory if some of the cooking is accomplished by steaming. This cake is so rich it may be kept for a long time.

FEDORA FIGS.

Steam best quality bag figs until soft. Cool and make an incision in each lengthwise and stuff with one-half of a marshmallow and an English walnut meat, broken in pieces. Close and serve in individual paper cases.

PHILADELPHIA CARAMELS.

For this confection put four tablespoonfuls of butter into kettle, and when melted add two cupfuls of Porto Rico molasses, one cupful of brown sugar, and one-third of a cupful of milk. Stir until mixed, bring to the boiling point, and add four and one-half squares of unsweetened chocolate, stirring constantly until chocolate is melted. Boil until, when tried in cold water, a firm ball may be formed in the fingers. Remove from fire, add two teaspoonfuls of vanilla and one cupful of English walnut meats broken in pieces. Turn into a buttered pan, cool slightly, and mark in small squares. When nearly cold cut into cubes.

BURNT ALMOND BRITTLE.

Blanch the best quality of ordan almonds and chop; there should be one cupful. Put in a pan and bake until delicately and evenly browned, stirring occasionally taking great care that they do not burn; then sprinkle with one-third of a teaspoonful of salt. Put two cupfuls of fine granulated sugar in a hot iron frying pan, and stir constantly until melted to a syrup, taking care to keep sugar from sides of pan. Add nut meats, and pour at once into two slightly buttered, warmed tin square cake tins; then mark into small squares with a sharp knife, and when cold it may be easily broken into squares. If sugar is not removed from range as soon as melted it will caramelize, which is not desirable.

\$80 A MONTH

\$60 expense allowance at start to put out merchandise and grocery catalogues; mail order house. American Home Supply Co., Desk W 4, Chicago, Ill.

45 SHROPSHIRE EWES 45

Imported and home bred, all bred to Imp. Clover Hill Lordship. Will also sell this buck, 3 Imp. ewes, \$100. Others \$15 each.

FRANK McCLELLAND, Maple Hill, Kan.



JANUARY 4, 1910.

THE "KNOW HOW" IN FARMING.

TEN WEEKS.

FARMING and DAIRY SHORT COURSES KANSAS STATE AGRICULTURAL COLLEGE

MANHATTAN.

Today the "know-how" is of more value to the farmer than ever before. The Agricultural College believes in giving the young farmer many chances to get this know-how and to get a zeal for the best in farming.

A Short Course in Farming.

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Open to men 18 years of age and over with good English education. No entrance examinations. Send for Illustrated Pamphlet. Address

PRES. H. J. WATERS, Manhattan, Kan.

JANUARY 4, 1910.

TEN WEEKS.

Box F.

Winter College Term opens Jan. 4.

To Sweeten the Breath.

A bad breath is inexcusable. A number of conditions, which I will consider can give a bad breath but in the first place I would say that no one should breathe into another's face so that the condition of the breath is made known. It is entirely unnecessary to do so. The breath is something that should never be given or taken. Children should be taught this as soon as they can understand anything. When close to another in conversation turn the head a little one side, or stand back so that the current of air coming from the mouth will not strike the face. A little practice will show how easily this can be accomplished. In the next place, you can tell for yourself whether your breath is sweet or not by sending it up toward the nose so that you can smell it. The most common cause for a bad breath is indigestion, especially a nervous indigestion. The food remains in the stomach without being digested, and decays, giving rise to noxious vapors, which make a malodorous breath. Constipation is another great cause of bad breath, and should be corrected either by a laxative diet and eating fruit or by the use of some aperient. A fourth of a teaspoonful of bicarbonate of soda, taken in a half glassful of water before each meal, will help correct the kind of indigestion that gives a bad breath. The bicarbonate of soda granules, that you can obtain at any drug-gists, are good for this purpose, and are excellent for the teeth, as they dissolve in the mouth. Charcoal tablets are also good, one taken after meals, in the same way.

The condition of the teeth and mouth will give rise to a foul breath. Cheese-like substances gather in the tonsils, caused by the over-secretion

good recipes. The following recipes were given by Fannie Merritt Farmer in the December issue of the *Woman's Home Companion* and are worthy of a trial.

CHOCOLATE NUT STICKS.

First mix carefully together one cupful of fine granulated sugar, one-fourth of a cupful of melted butter, one unbeaten egg, two squares unsweetened chocolate (melted), three-fourths of a teaspoonful of vanilla, one-half of a cupful of flour and one-half of a cupful of English walnut meats cut in pieces. Line a seven-inch square pan with paraffin paper and spread mixture evenly in pan. Bake in a slow oven. As soon as removed from oven turn from pan, and remove paper; then cut cake in strips, using a long sharp knife. If these directions are not followed the paper will cling to cake when it will be impossible to cut it in shapely pieces.

VICTORIA CAKES.

For these, cream one-fourth of a pound of butter, and add gradually, while beating constantly, one-half of a pound of fine granulated sugar and continue the beating for two minutes; then add the grated rind of one lemon, three-fourths of a tablespoonful of lemon juice and the yolks of four eggs beaten until thick and lemon colored. Mix and sift five ounces of flour with one-fourth of a teaspoonful of salt and one-fourth of a teaspoonful of soda (scant). Beat thoroughly and add the whites of four eggs beaten until stiff. Fill buttered and floured individual tins two-thirds full of mixture and bake 20 to 25 minutes in a moderate oven. Remove from pans and frost tops with White Mountain cream: Put one cupful of sugar and one-third of a cupful of boiling water in a saucepan, and stir



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No Painting

AMALITE costs less than the "smooth surfaced" roofings at the beginning, and its comparative cost grows less every year because you never have to spend any money for paint.

Amalite has a real mineral surface which gives protection without painting or attention of any kind. The man who buys Amalite makes no mistake. Sample and booklet on request.

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Winter Reading

Send us your name on a postal card and we will mail you a free book which gives the facts about cement—tells how to use it and gives many practical descriptions of important work you can do yourself. It also explains why

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goes 20 per cent farther than "standard" ground cement—why it saves you 20 per cent of the cement you use. Send for this book—get your name on our mailing list and receive all of the interesting free matter we are glad to send to all who want to learn to use the best cement—Ash Grove Superfine.

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Free Cement Book



Remington .22 RIFLE

Solid Breech Hammerless
like all Remingtons. Adapted to all small game shooting because it shoots equally well without adjustment .22 short, long and long rifle cartridges.

Takes apart easily by turning thumbscrew on side. You can look through the barrel and clean it from the breech, thus insuring lifetime wear. The barrel of an ordinary .22 rifle which cannot be cleaned from the breech soon rusts out. It is the only Solid Breech Hammerless .22 Repeater made which has the convenient tube magazine. The difference between the modern Remington and other .22 rifles is amazing.

Put on the market Oct. 1, 1909
If your dealer hasn't one, write us for literature.

THE REMINGTON ARMS COMPANY
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Agency, 315 Broadway, New York City

See our great Christmas offer on page 2.

Halderman's Polands.
John C. Halderman, of Burchard, Neb., has bears and gilts for sale by Gold Metal, Hadley Boy, Kiever Boy and other big bears. Write him.

Singer's Polands.
W. C. Singer, of Hiawatha, Kan., has a few truly big type Poland China bears left that will please. Write at once and mention Kansas Farmer.

Goethe's Durocs.
T. E. Goethe, of Leonardville, Kan., has one of the finest and best bred Duroc Jersey herds in the West. He always has stock for sale. Write him now and mention seeing his advertisement in Kansas Farmer.

Duroc Herd Boars.
Chapin & Nordstrom, of Green, Kan., have some real herd boars left. Sons of King of Cols 2nd and G. C.'s Col. and out of the great old sows that have helped to make the Chapin herd famous. Bargain prices for a short time.

Lynch O. I. C. Pairs.
Why not buy a pair or trio of registered O. I. C. pigs from W. H. Lynch of Reading, Kan.? Better feed these than to feed scrubs and you will be astonished to know how cheap Mr. Lynch will price them. Write at once and mention Kansas Farmer.

Rhode Island Pullets.
Delos Chapin, one of the most enthusiastic and successful breeders of Single Comb Rhode Island Reds, has for sale 75 beautiful pullets that he is pricing low in order to sell them soon on account of not having room to keep them through the winter. Write Mr. Chapin at Green, Kan., and mention Kansas Farmer.

Big Type Boars.
If you are still looking for a big type boar write J. H. Harter, Westmoreland, Kan. He has them by a grandson of Expansion. Others by the great boar, Mogul's Monarch. Mr. Harter has one of the best sow herds in Kansas and is a gentleman. Write him if in need of his kind.

W. M. Putman Writes.
In a recent communication W. M. Putman & Sons the veteran Duroc Jersey breeders located at Tucumseh, Neb., states that his herd is in fine condition and the offering of bred sows for their Jan. 11 sale will be the best in their history as breeders. There will be a number of quite noted sows sold, among them daughters of Ohio Chief, Froud Advance, Valley Chief, etc. This will be one of the sales that breeders should remember.

Vanhoefer Stock Farms Buy a Herd Boar.
H. B. Vanhoefer, of the Vanhoefer Stock Farms, of Eldon, Mo., recently purchased the Poland China boar, Parnell, of Dietrich & Spaulding of Ottawa, Kan. Parnell is a boar that we always liked. He is not only a show hog but a breeder. Mr. Vanhoefer will hold a sale Jan. 21 and sell a lot of valuable sows bred to Parnell. Watch Kansas Farmer for further mention of this sale. Send your name in early for a catalog and kindly mention Kansas Farmer.

Breed Sow Sale Jan. 20, 1910.
Roy Johnston, of South Mound, Kan., will sell, Jan. 20, 1910, a high class lot of brood sows of the big type Polands. It has been conceded by all the field men that Roy Johnston has 25 of the largest sows on his farm of any breeder in the state. He is selling in this sale the mother of the seven months' litter that is the heaviest on record. She is bred back to the same hog. This valuable sow should be an attraction in any sale and he a good buy for any breeder. Get your name on the list for a catalog.

Aberdeen Angus Cows.
The best place to buy something good, well bred and useful in the way of Aberdeen Angus cows and heifers is at Holton, Kan. McAdam Bros. of that place have an advertisement in this issue calling attention to some that they are anxious to dispose of in order to reduce the size of their herd. They are prepared to sell these at prices that are very low. Any farmer can use them at the money and they are dandies. Write at once and mention Kansas Farmer.

Amcoats' Polands.
S. B. Amcoats, big type Poland China breeder of Clay Center, Kan., is all sold out on early bears, but has some choice ones just a little younger and smaller that will be all right for January breeding. He is offering these at reasonable prices. Also choice gilts to be shipped when safe in pig to his magnificent young Expansion boar. You can buy a gilt in this way at much less cost than at a winter bred sow sale. If interested write at once and deal with a breeder that consults your own interest as well as his own.

Percherons and Jacks.
Those of our readers who are in the market for Jacks, Jennets, Percheron mares, stallions or saddle horses should write at once to Fred Poos of Potter, Kan. Mr. Poos is an old time breeder and has a lot of the best stuff the writer ever looked at. His herd Jack is one of the very largest and best of the breed, weighing over 1,200 pounds. Perhaps of all the stock he is offering nothing is of greater interest to the average Kansas farmer than the 10 fine young Percheron mares. All of this stock is first class and represents the natural accumulation of the herds and is now in first hands. Write at once and mention Kansas Farmer.

The Kansas State Bee Keepers' Association.
The annual meeting of the Kansas State Bee Keepers' Association is called for Dec. 27 at 8 o'clock p. m. in the parlors of the Fifth Avenue Hotel, at Topeka. Other sessions will be held on the afternoon and evening of Dec. 28. A good program is promised and everybody is invited to be present, whether a member of the association or not. In this connection the secretary of the

Rough on Rats in Out Buildings.
In setting Rough on Rats in out buildings after mixing it well with any food decided upon, separate into small bits, place on several pieces of boards, put these here and there under the floors. Close up all openings large enough for Dogs, Cats or Chickens to enter, but leave some small openings for Rats to get in and out. One 25c box of Rough on Rats, being all poison, will make enough mixture to clear out in one or two nights setting, hundreds of Rats and Mice. 15c., 25c., 75c., at Druggists. E. S. Wells, Jersey City, N. J.



From Factory to User

The Perfection is guaranteed to be the best cleaner, separator and grader on the market. Mr. F. D. Coburn, secretary of the Kansas State Board of Agriculture, says of this machine: "It is nearer perfection than anything of the kind I have ever seen, and far more so than I had supposed possible. I couldn't have believed it without seeing it." Heretofore the jobber has handled this machine. We now propose to sell it direct to the user, thus cutting out the profits of the middleman. Write us for particulars.

The Jensen Mfg. Co., Topeka, Kan.

TOO LATE TO CLASSIFY

WASHINGTON COUNTY BARGAINS.
Choice, smooth, rich soil. I own 40,000 acres of the best and am offering both improved and raw land at lowest prices, with terms to suit purchaser. Some 160 and 320 acre homestead relinquishments adjoining lands offered for sale. For information, plats and literature write

AUGUST MUNTZING, Colorado.

ALFALFA FARMS, DUNDY COUNTY.

160 acres creek bottom, running water, rich soil; 100 acres will grow alfalfa, 6 mi. to town, house, cave, ice house, barn, sheds, \$25.00 per acre.
160 acre valley farm, black soil, 2 mi. Benkelman new house, barn sheds, well, under fence, 80 acres will grow alfalfa; irrigation ditch on land; \$30.00 per acre.
320 acres improved, divide farm, \$20.00 per acre.

R. D. DRULINER, Nebraska.

LAND BARGAINS.

We undersell all others in low priced lands in Eastern Colorado, with small cash payment down. These lands adjoin lands now being farmed. Stock ranches a specialty. If you are interested write for free description circular.

HENRY M. CHASE LAND CO., Colorado.

45 BUSHEL WHEAT LAND \$25 PER ACRE.

We own and control 20,000 acres of Cheyenne county, Nebraska's, choicest farm land, now on the market. The heaviest crop yielding county in Nebraska for ten years. Alfalfa also a leading crop. Write for folders and full particulars. Agents wanted everywhere. Write for our proposition at once. Railroad fares refunded if things not as represented.

FUNDINGSLAND & SEVERSON, Nebraska.

TEXAS STRAWBERRIES

are ripe now. TEXAS CATTLE are grazing on green pastures. TEXAS FARMERS are planting crops, not burning and eating up last summer's profits. Come down and buy a Texas farm. We have the bargains. Write for lists TODAY.

A. C. SWANSON & CO., Houston, Texas.

EUREKA

160 acres 4 1/2 miles of Spearville, 5 room house, barn, cow stable, sheds, orchard, well, windmill, tank, etc.; 100 a. in cult., 60 a. pasture, rich soil, good school, 1/2 mile, price \$4,500.00; terms. Address

STINSON & WEYAND, Kansas.

Shawnee Bee Keepers' Association desires to announce that that body will hold a session on the evening of Dec. 28 at the same hotel. It is understood that a number of important matters will come before associations for consideration, and that one of the most important of these will be a preparation for a suitable exhibit to be made at the State Fair to be held at Topeka next fall. O. A. Keene, Topeka, is secretary of the Kansas state association and J. F. Lucas, Topeka, is secretary of the Shawnee association.

Shropshire Ewes.
This issue of Kansas Farmer contains the advertisement of Mr. Frank McClelland, breeder of registered Shropshire sheep. Mr. McClelland is located at Maple Hill, Kan., and owns one of the finest herds to be found anywhere. The flock is headed at this time by the great imported buck Clover Hill Lordship 278158, bred by Thos. A. Buttar of Scotland. The ewes are from the good herds of Geo. Allen and C. H. Ballinger. Mr. McClelland established his herd about two years ago with stock from the herds we have mentioned. Mr. McClelland believes in buying the best and giving stock the best of care. In order to reduce the flock he is offering for immediate sale 45 extra choice imported and home bred ewes, all of them in lamb to the imported buck. He is making very attractive prices on these, offering the choice of the imported ones at \$100 for three and the home raised ones at \$15 each. The buck that we have already mentioned will be priced, as he is not needed in the herd longer. When asking questions about the sheep kindly mention Kansas Farmer.

State Farmers' Institute, Manhattan, Dec. 27-Jan. 1.

A good indication of the growth of the institute idea among Kansas farmers is to be had from the Big State Farmers' Institute held at the Agricultural College every winter. Three years ago the attendance was only 142, and last year it was about 1,200, with 500 boys and girls, prize winners, sent by various institute committees, all expenses paid. That was the largest attendance of that kind at any state farmers' meeting ever held anywhere. Some institute committees and commercial clubs sent as many as 25 boys up there and paid all the expense for five days and considered it a good investment. At the county and local institutes boys' contests for the best ten ears of corn and the girls' contests for the best

RANCH PROPOSITION.
1,760 acres smooth land, 9 1/2 miles Dighton, small improvements, 600 acres cultivated, a bargain at \$10.50 per acre; might give some terms.

WARREN V. YOUNG, Kansas.

BARGAINS IN OUR BEST—\$40 TO \$45 PER ACRE.

For bargains come to Labette Co. Most sales in state now being made; back numbers of this paper give some of our bargains. Here are 3 of our best quarters.
No. 1 lays fine, rich, no waste, lots of tame grass, 40 alfalfa land, fine large house and barn, gas fuel 1/4 to school, \$45.
No. 2 lays right, good house and outbuildings, young orchard, rich dark loam soil, not a foot of waste. A peach for \$40 a.
No. 3 just like 2 only a little better house and fine tame grass pasture now supporting stock; 2 and 3 belong to two old soldier brothers and were never offered for sale before.

No. 3 priced at \$42.50; either will bring \$50 in a year.
DONAHUE & WALLINGFORD, Kansas.

FOR SALE OR TRADE.

Will sell or trade for Kansas land my 340 acre improved rice farm, 5 miles from El Campo, Texas. Address

JOE PETERS, Texas.

BARGAINS IN ALFALFA FARMS.

160 acres, 6 miles from Eldorado, Butler Co., Kan., R. F. D. and telephone, 90 acres first class corn and alfalfa land, 40 acres alfalfa fenced hog tight, 10 acres timber, balance pasture, good orchard, good well and wind mill, house, barn and outbuildings are good and new. Price \$75 per acre. 320 acres joining above, similar land, 60 acres alfalfa, improvements first class and new. Price \$85 per acre.

L. L. KISEK, Kansas.

WICHITA'S GOOD THINGS TO BUY.
This is 30 acres, eight miles out from this 50,000 city, and has 16 acres of bottom land now set to alfalfa and balance is good upland and in a community where the land is regularly about \$100 per acre. Good six room house, barn 16x24 and shed 16x32. All in cultivation but 18 acres. This is a good farm and well situated and below the price of land about it. Party wants to leave the locality.

Also 146 acres, 5 miles out of town, and has 50 acres in fruit, six acres in grapes and small piece in alfalfa; land is a good all round farm for the situation here close to town as it has some good truck land on it and that is so profitable here close to the city. Fruit land set in trees is worth \$250 per acre and this amount of fruit would make this farm a cheap place. The place can be bought for the very low price of \$125 per acre, and can't be bettered in this locality. Good house and barn and fence.

I. B. CASE & CO., Wichita, Kan.

McPIERSON COUNTY BARGAINS.

80 acre good farm, 5 1/2 miles from Lindsay, 55 acres cultivated, balance in pasture and meadow, good corn land, small house, barn and other buildings. Possession any time. Price \$4,500; terms. 240 acres 4 miles from town, 130 acres cultivated, balance pasture and meadow, good water, 2 story house, barn, granary; other buildings, orchard. Price \$9,500. Write for particulars and list.

JOSEPH A. BRANDT, Kansas.

TWO FARMS MUST SELL.

40 a. near Garnett, Kan., good land, improvements and water, R. F. D. and telephone, 1/2 mi. to school.
120 a. close to Ottawa, Kan., fine land, 7 room house, natural gas, good barn, etc., 40 a. hog tight, good water, close to school and church, R. F. D. and telephone. We have a large list of farms for sale cheap. If you want a farm clip this ad and come. Car fare refunded to purchaser.

MANFIELD LAND CO., Ottawa, Kan.

GOOD STOCK AND GRAIN FARM.

320 acres, 100 acres in cultivation, balance good grass, all but 50 acres of this can be plowed and put to crop. Improved with good 5 room house, barn, hen house, crib, etc., all in good repair. Located 5 miles from good R. R. town and 33 miles from Wichita in Butler county, Kansas. Price \$30.00 per acre. This is from \$10.00 to \$20.00 per acre less than other land in vicinity is selling for on account of it being owned by an eastern party. See the Nelson Real Estate and Inv. Co., 13 N. Main St., Wichita, Kan. Send for list of other farms.

BARGAIN.

400 acres near Hutchinson, Kan., very best in Reno county, \$67.50 per acre. Imp. worth over \$6,000; best of wheat, corn and alfalfa land, easily worth \$100 an acre; good terms.

MCDERMED & GETTER, Kansas.

REPUBLIC COUNTY LAND.

Good farms of all sizes, good property in good thriving town. Stock of general merchandise for sale or trade. Good little farm of 64 a., 1 mile to town, some timber, living water, fine farm for men that don't want to farm much.

F. J. GEORGE, Kansas.

Wayne, Kansas.

loaf of bread, and the committee sends the winners (as far as the money holds out) to the state meeting. There the boys have instruction in corn and stock judging and the girls have instruction in cooking and sewing. The boys take their best ten ears of corn and compete for state prizes, and the girls on some day of the institute bake wheat and corn bread and contest for valuable prizes. About \$800 will be paid out in prizes for the various contests, including those of the Corn Breeders' Association. This year the college is preparing for at least 600 boys and girls and a thousand farmers and their wives. It will be a great week, and the attendance ought to run into the thousands. Several big state organizations meet there that week—Corn Breeders, Dairy Farmers, Creamery Owners, Draft Horse Breeders, Sheep Breeders, Swine Breeders, Millers' Association, and the County Surveyors and County Engineers will hold a meeting there too; also all county institute presidents. The morning hours will be devoted to corn and stock judging, dairy and creamery work, a poultry class, and to

See our great Christmas offer on page 2.

KANSAS LAND

\$3,000 CASH,

Balance by owner, buys good 160 acre farm 8 miles from Arkansas City, Kan. 320 fine bottom farm at \$55 acre. 160 all hog tight, good farm at \$50 acre. 240 most all Walnut river bottom, don't overflow, fine farm at \$60 acre. Ask for our 30 page land list.

WM. GODBY CO.,

Arkansas City, Kansas.

OTTAWA COUNTY FARM BARGAINS. 320 acres, 1/2 mile out, 35 or 40 acres creek bottom, 170 acres in cult., 6 or 8 acres alfalfa, balance pasture, part of which could be farmed; good 6 room house, fair barn, good granary, well with good water, nice young orchard, living water in pasture, fenced and cross fenced, over 100 acres in wheat, 1-3 goes. A bargain at \$40 per acre. Nice 80 acre farm, 4 miles out, unimproved, all in cult., lies nice, cheap at \$2,800. 160 acres, improved, 6 1/2 miles out, at \$4,800. We have others. Come or write.

SHEPARD & HOSKINS,

Bennington, Kansas.

CATALPA SPECIOSA GUARANTEED.

To be pure seed gathered under our direction. Examined by the U. S. Agricultural Department and found to be pure. Copy of their letter and catalpa facts in illustrated booklet mailed free. Write for same.

THE WINFIELD NURSERY CO.,

Winfield, Kansas.

SEED CORN.

Plant Young's Yellow Dent seed corn, the best on earth. Won Missouri gold medal at National Corn Show, Omaha, 1908. Guaranteed 90 per cent germination under all conditions, or will fill order again free of charge. Price, \$2 per bushel. Sample ears 50 cents each. Sample free. Choice Poland China fall pigs, \$25 each. One Jersey bull calf for sale.

ROBT. L. YOUNG,

R. F. D. E. St. Joseph, Mo.

PURE HONEY.

Extracted in cans of 60 lbs. net amber \$7.80, white \$9. Comb honey in one lb. sections. Send for price list. Nothing but genuine bees' honey. Reference, Kansas Farmer. The Arkansas Valley Apiaries.

CHEEK & WALLINGER,

Los Animas, Colorado.

SALE OF UNCLAIMED FREIGHT.

Notice is hereby given, that on Monday the 20th day of December, 1909, at 10 o'clock A. M., there will be sold at public auction, for cash, at the east door of the freight depot of The Chicago, Rock Island and Pacific Railway Company, in the city of Topeka, Shawnee County, Kansas, one carload of ties, shipped from Forsythe Junction, Missouri, to Topeka, Kansas in car 31216 Frisco, by W. K. Folks, of Lawrence, Kansas, on or about January 8th, 1909, said ties now being stored in the freight yards of the said Railway Company at Topeka, Kansas, and having been unclaimed for more than six months, and that the proceeds of said sale will be applied to the payment of freight charges, demurrage, storage, and other charges due on said ties.

THE CHICAGO, ROCK ISLAND AND PACIFIC RAILWAY COMPANY.

THE STRAY LIST

Sherman County.—Wilson Peters, Clerk. HORSE—Taken up, July 19, 1909, by W. G. Bateman in Grant tp., one sorrel horse, x on left shoulder; valued at \$75.

Woodson County.—John E. Barrett, Clerk. HEIFER—Taken up, Oct. 1, 1909, by I. T. Summers, in Vernon, Kan., one roan heifer, "F" on right hip; valued at \$20.

Graham County, W. W. Goodow, Clerk. MARE—Taken up, October 2, 1909, by J. A. Crabtree, Hill City, one iron gray mare, weight about 800 lbs., slit in right ear, valued at \$60.

Stafford County.—J. B. Kay, Clerk. CATTLE—Taken up, November 9, 1909, by George Lightner, in Cleveland tp., one red yearling heifer, ears have been frozen. Value \$10.00.

One red steer, short yearling, no marks or brands; value \$5.00.

Greenwood County.—W. O. Blackburn, Clerk. STEER—Taken up, November 8, 1909, by W. P. Kirk, in South Salem tp., one red 4-year-old steer, branded on left thigh; valued at \$40.

OHIO IMPROVED CHESTERS

75 O. I. C. FIGS.

Herd headed by Jackson Chief 2, No. 12285, and Kerr Garnett 2, No. 25438. Boars and gilts not akin for sale. Write or come and see them.

W. H. LYNCH,

Reading, Kansas.

cooking and sewing. The afternoons will be given over to meetings of the various associations, and the evenings will be general for everybody. The list of lectures includes some of the most noted agricultural authorities in the country—Hon. W. M. Hays, Assistant Secretary of Agriculture; Hon. L. W. Page, Chief of Bureau of Public Roads; Prof. C. P. Hartley, Department of Agriculture; Hon. B. H. Rahl, Dairy Division, all of Washington, D. C.; Dr. J. H. Pettitt, University of Illinois; Prof. Thomas Cooper, University of Minnesota; Hon. E. C. Bishop, State Superintendent of Public Schools, Nebraska; Prof. F. W. Howe, Assistant in Agricultural Education, Department of Agriculture, Washington; Hon. W. E. Skinner, Denver, Colo.; A. J. Glover, editor Hoard's Dairyman, and others; altogether a great program for the farmers and stock men of Kansas. The work will begin at 2 o'clock on Monday, Dec. 27, 1909, and end at 11 o'clock Saturday morning, January 1, 1910.

Choice Wheat Land Five Dollars Per Acre and Upward.

For \$5 per acre and upward you can buy choice wheat land in Kiowa county, Colorado. This is offered in quarter and half sections. On line of Missouri Pacific railroad, close to three good towns. For terms and descriptions write Albert E. King, McPherson, Kan.

Holsteins Sell Dec. 20, 1909.

Ira Romig, living near Topeka, Kan., will sell 40 head of Holsteins Monday, Dec. 20, consisting of about 20 extra good milk cows and 15 young heifers that will be fresh early in the spring. This will be an excellent opportunity to buy high class dairy cows. About 20 head will be registered and the balance are high grades. Look up ad on another page and arrange to attend this sale.

Jacks and Stallions.

With this issue of Kansas Farmer J. P. and M. H. Malone, of Chase, Kan., start an advertisement for their jacks and stallions. They are offering an extra good 5-year-old, ton Percheron stallion, sound and right at a bargain price. They have had this horse three years and are selling him for no fault. He is sold on an absolute guarantee. Look up their ad on another page and write for prices.

Wayside Stock Farm.

The Wayside Stock Farm, the home of the big bone and big litter kind of Poland Chinas, will offer 75 head on Jan. 19, that will be a credit to any sale. H. O. Sheldon will make a closing out sale and sell all of the Wayside herd. There will be 35 sows bred for early farrow. There will be 50 head of July and August pigs that are a great bunch. Mr. Sheldon thinks the best bunch he ever raised. Most of these are sired by D's You Tell and Columbia Expansion 2nd. There are a number of extra good boars in this offering that will make good herd headers. D's You Tell has proven a great breeder, both of quality and large litters. There will be a few sows bred to Sheldon's Hadley. Remember that this entire herd will be sold Jan. 19, at the Wayside Farm, near Wichita, Kan. Write to H. O. Sheldon for catalog. Watch Kansas Farmer for further mention of this sale.

Large Auto Firm Opens Fifth Branch

With characteristic business sagacity the Times Square Automobile Company of New York, which is the largest firm in the world dealing in new and second hand automobiles, has secured one of the best locations in the automobile district of Philadelphia, where will be opened their fifth branch house. This company now has distributing depots at New York, Chicago, St. Louis and Kansas City. The new Philadelphia branch will be at 238-240 North Broad street, which is the site of the Pioneer Packard agency in the Quaker City. These new show rooms and repair shops have some 2,000 square feet of floor space which will be fitted up with the most approved machinery and auto appliances and promises to be one of the handsomest motor car marts in Philadelphia. An immense stock of new and thoroughly overhauled used cars will be carried in stock in this new distributing depot.

Berkshires at Bargain Prices.

We wish to call our readers' attention to the well known Berkshire herd owned by Manwaring Bros., of Lawrence, Kan. The Berkshire hogs being offered by Manwaring Bros. are the kind that good farmers are seeking. They are bred along lines that have produced some of the most famous Berkshires in the United States. The boars for sale are the big, long rooky kind that make large hogs and possess good feeding and quick maturing qualities. Manwarings are among the oldest breeders of Berks in the state and their reputation for square dealing has never been in jeopardy. Their prices are low and they guarantee to satisfy. We are certain that you can deal with them and get what you want at very reasonable prices. Give them a trial order, and if you are not pleased return them the hog and get your money back. They sell everything on an absolute guarantee and sell only the best. Kindly mention the Kansas Farmer when writing.

The United States Land Agency

Is a new organization organized by John H. Wood of Hays City, Kan., who for many years has sold and made a success of the land business. Recently Mr. Wood has secured the control of several small land agencies that controlled thousands of acres of cheap lands. He has consolidated these small agencies in to one large agency and is prepared to handle these lands in large or small tracts. It is the intention of Mr. Wood to establish a branch of this company in every state in the United States. Every agent in charge will be in full uniform, and his responsibility vouched for; besides, he will be familiar with the lands in his respective district. They also make a specialty of colonizing. The general offices of this new enterprise is in Kansas City, Mo. Branch offices are located at Hays City, Kan., and Arcadia, Mo. On another page of this issue you will find a more complete announcement containing coupon. If interested detach coupon and write either office for further information.

A Spreader for All Farmers.

We want to call our readers' attention to the advertisement of the Chase Manufacturing Company on another page of this issue of Kansas Farmer. Here is a spreader that every farmer in America can afford to buy. It will save you the wagon box, trucks and all for other uses on your farm. The Grinnell Detachable Spreader is a combined manure spreader and farm wagon. It is a machine that is certainly worth investigating. We have been advising our readers for years to invest in a manure spreader. We believe it to be a necessary machine for every farm. Now, we are glad to call your attention to this advertisement which describes a new machine. The Grinnell Spreader is

KANSAS LAND

KANSAS LAND

ARE YOU INTERESTED IN FARM BARGAINS?

We have thousands of idle acres in the rich and resourceful west that can be bought at a low price and on easy terms. You ought to know all about a country before visiting it, and you ought to visit it before buying. Decide upon the locality you are most interested in and write to us for books and information on that locality. We do not care where you want to go.

WE HAVE LAND IN ALL PARTS OF THE UNITED STATES

to sell and we present to you only the facts about our lands and the locality in which they lie. We are colonizing agents, and handle large tracts for colonizing all nationalities of people. Now for full particulars, for railroad fare, for freight rates and for the route to take, write us. Our information is absolutely free.

WE ARE THE ONLY UNIFORMED LAND AGENCY IN THE WORLD.

Homeseekers' rates on first and third Tuesday of each month.

THE UNITED STATES LAND AGENCY

John H. Wood, Manager.

BRANCH OFFICES—Hays City, Kan.; Arcadia, Mo.

General Office, Kansas City, Mo.

FILL OUT AND MAIL TODAY.

Name.....

Town.....

State.....

The United States Land Agency,

Kansas City, Mo.; Hays City, Kan., or Arcadia, Mo.

DICKINSON COUNTY BARGAINS

240 a well improved farm, 4 miles from town, 100 a. fine creek bottom land, balance slope, 20 a. hardwood timber on one end of farm, living water, 50 a. fine pasture, 12 a. alfalfa, balance plow land. This farm lays fine, is well arranged for grain and stock and is the cheapest farm in the county at \$60.00 an acre. Write today for our booklet, "Idyls of Kansas," and a new land list, and mention this paper.

FORD & SMELTZ, Enterprise, Kan.

CLAY COUNTY FARMS.

If you want a choice farm or stock ranch at prices ranging from \$25 to \$75 per acre, call on or address

ERNEST PINKERTON, "THE PIONEER LAND MAN,"

Clay Center, Kansas.

SPLENDID IMPROVED FARM.

\$8,000 will buy 78 1/2 acres of good second bottom land, 60 acres in cultivation, good new 5 room house, cellar has sand and rock floor, good out buildings, close to railroad, school and church. On R. F. D., telephone and gas line. Perfect title, no incumbrance. Rents for \$400 the year. Write.

1007 Massachusetts St., Lawrence, Kan.

LEROY N. WALLING.

I WANT TO OFFER AS A SPECIAL BARGAIN

a farm 15 miles from Colby, smooth as a floor, good black loam soil, 100 acres in cultivation and seeded to winter wheat. Rural delivery running by the farm every day. All the 100 acres of wheat to go with farm. We think this one of the best bargains in the county today. And anyone wanting a quarter section in a good live neighborhood will find a bargain by getting in touch with the owner.

Colby, Kansas.

FOR SALE TO PLAT.

55 acres adjoining Wichita City limits, that will sell for \$100 a lot; 8 2-3 lots to the acre. This will be \$875 per acre. We will sell it for \$125 per acre for the next 20 days, and 2,600 acre well improved ranch in Meade Co., per acre \$16.00.

J. F. BELLEW & CO.,

110 Main St., Wichita, Kansas.

Cement STOCK TANKS

Send for our FREE BULLETIN on how A. L. Saylor made a Stock Tank, Feeding Floor and Hog Dipping Tank on his Kansas farm with

Sunflower Portland Cement

A dependable cement of great strength and uniformity. Makes an artificial stone superior to anything turned out in

Nature's laboratory. Write for Bulletins

United Kansas Portland Cement Co.

829 Commerce Building, Kansas City, Mo.

COLORADO LAND

Colorado Lands and Sunshine

If you are looking for a home, investment or health, where the climate is perfect, where there is best class of people, churches, schools and no saloons, where there are thousands of acres of choice land coming under irrigation and selling very cheap, you will do well to write us for new printed matter on Morgan county, Colo. Address

THE B. W. JACKSON REALTY CO.,

Fort Morgan, Colorado.

A FARM THAT WILL PLEASE.

160 acre farm, 6 miles north of Cheyenne Wells the county seat of Cheyenne county. New two room house, barn 14x24, soft water. 50 foot well with windmill, 100 barrel cement tank, 50 acres well fenced, 45 acres in cultivation. 20 acres in wheat, 4 acres alfalfa, balance stubble ground for spring crop, clear of incumbrance. Price \$16 per acre. Easy terms. Address the owner.

L. S. WILSON,

Cheyenne Wells, Colo.

See our great Christmas offer on page 2.

NEBRASKA LAND

\$11,500.00 BUYS

One of Nebraska's richest farms of 16 a., 5 miles from Fairbury, 6-room house, barn 67x78, 80 a. cultivated, 35 a. alfalfa. We have many other bargains.

NIDER & HENRICHS,

Fairbury, Neb.

I SELL DIRT.

I have for sale one of the best improved ranches in Southwest Nebraska, containing three sets of improvements. The ranch contains 4760 acres of fine land, 2500 of which is fine alfalfa land. I also have for sale good farms from 160 acres up, write me.

S. STEINMANN,

Wauweta, Nebraska.

PUBLIC SALE!

DR. W. M. SHIRLEY, Hiawatha, Kan., Sells About 30 Head Registered Jerseys

TUESDAY DEC. 21, 1909

This is one of the best herds in the West. A good many of the cows are fresh and have AUTHENTICATED FAT and MILK RECORDS.

—The Home of—

ANNIE FOGIS 2d 148121, made 559 pounds butter in one year.
PINKIE OF ST. LAMBERT 184162, made 22 lbs 10 oz. butter in seven days.
LIZZIE SALES 192833, made 479 pounds butter in one year.
NETA COOMASSIE 148494, made 463 pounds butter in one year.
JEANIE COOMASSIE 206421, made 362 pounds butter in one year with first calf, and a host of other good ones.

Owing to our short time for advertising we feel that there will be many bargains. Come to the sale.

Catalogues ready and mailed on request to
B. G. SETTLES, Sale Manager, Palmyra, Mo.

WINCHESTER

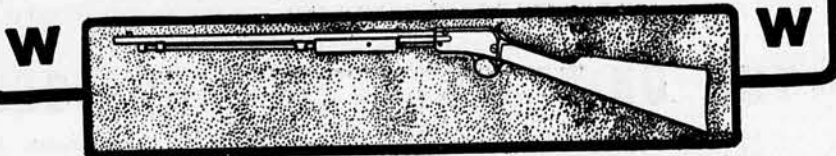
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Handling Short, Long and Long Rifle Cartridges

The Winchester Model 1906 handles, without any readjustment, either of these three cartridges, which makes it equally well adapted for target or small game shooting. It takes down easily and packs in a small compass. The list price is only \$10.50 and it retails for less. It is the best value in a rifle ever offered.

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WITH FEED OF ALL KINDS.

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Otto Weiss Alfalfa Stock and Poultry Foods, sold in 30 states. Cotton and Linseed Oil Meal, Oyster Shell, Swift's Digestor Tankage, or anything else you want in the feed line. Send for Circulars and Prices.

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WICHITA, KANSAS

Mitchell County Breeders' Association

C. B. Kern, President.

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Nothing but first class animals offered for sale for breeding purposes

SHORTHORN CATTLE.

SHORTHORN CATTLE—50 head registered cattle. Herd headed by Royal Goods 283825, by Select Goods, by Choice Goods. Young bulls ready for service, for sale. **MEALL BROS.**, Cawker City, Kan.

SCOTCH AND SCOTCH TOPPED SHORTHORNS. 40 head. Herd headed by Popular Knight, by Gallant Knight. Some choice bull calves of fancy breeding for sale. **JOHN STROM**, Cawker City, Kan.

ELMVALE STOCK FARM. Shorthorn cattle. Herd headed by the Scotch bull, Highland Laddy 243179, by Brave Knight by Gallant Knight dam Daisy Bell by Imp. Lord Haddo. Young stock for sale. For information address Frank P. Cooke, Beloit, Kan.

DUKE OF DUNDEE 283852, by Archer 205740, dam by Gallant Knight is at the head of my herd. 6 cows by Rose Duke and some by Scotchman. Inspection invited. **CHAS. S. McCLEARY**, Beloit, Kan.

UPLAND HERD OF SHORTHORNS. Headed by the Scotch Duchess of Glaston. 1 red bull Dreadnaught. 1 red bull 20 months old out of a Lord Mayor dam for sale. **GEO. W. BEEMIS**, Cawker City, Kan.

LOCUST GROVE SHORTHORNS. Herd headed by the pure Scotch bull Goster's Model 287340. Three Scotch topped yearling bulls for sale. Also a few cows with calves at side. **ELMER C. CRETZ**, Beloit, Kan.

A YOUNG HERD OF UP-TO-DATE BREEDING. Everything recorded. Our herd bull Alfonso by Magnet has produced us some great calves this season. **BRINEY & BRINEY**, Beloit, Kan.

BOOKDELL STOCK FARM. Shorthorn cattle. Poland China hogs. Silver Laced Wyandottes. **E. E. BOOKER & SON**, Beloit, Kan.

JENNINGS' SHORTHORNS. Some young bulls for sale by Senator by Hedgewood. Also a few got by Spartan Viscount. Prices right. 3 miles north of Simpson, Kan. **S. G. JENNINGS**, Simpson, Kan.

FOR SALE—A few young Shorthorn cows and some young bulls ready for service. Best of breeding. Write for information and prices. **VINTON A. FLYMAT**, Barnard, Kan.

HEREFORD CATTLE.

HEREFORD BULL CALVES for sale. Berkshire bears for sale. Spring farrow. Will trade 2 or 3 for gilts. Boars by Commander out of dam by Speculation; grand dam, Alice Majestic, champion sow at Kansas City Royal. **W. B. & J. M. Redgers**, Beloit, Kan.

50 HEREFORD CATTLE comprising the H. B. Woodburg herd. Some famous cows in this herd. 3 young bulls of serviceable age for sale. 4 miles from Tipton, Kan. 8 from Cawker City. **JOHN SCHMIDT & SONS**, Tipton, Kan.

100 HEAD OF HEREFORDS. The home of Caster 289475, the winner in every big show he was ever in. A few choice young heifers and cows for sale. **F. L. BROWN & Co.**, Sylvan Grove, Kan.

ANGUS CATTLE.

ABERDEEN-ANGUS CATTLE. A young but fashionably bred herd. Some fine spring calves to price later. **BOY C. BERT**, Beloit, Kan.

ANGUS CATTLE, the feed yard and show yard type. Young bulls for sale this winter. Inspection invited. **HARRY BARNES**, Beloit, Kan.

PERCHERON HORSES.

REGISTERED PERCHERONS. The home of Vidoue (Imp.) 40403, also the brood mare Risette (Imp.) 51115. Inspection invited. Farm adjoins town. **E. N. WOODBURY**, Cawker City, Kan.

REGISTERED PERCHERON HORSES. In stud. Imported Rabelais 42629 by Cosaque by Theidus, who sired Calipso and Casino. Visitors welcome. **C. J. JOHNSON**, Solomon Rapids, Kan.

THE HOME OF JACQUE W. 41659 by Tlatrey, dam Imported Risette. Inspection invited. **RALPH G. McKINNIE**, Glen Elder, Kan.

COLEDALE STOCK FARM. The home of three first prize winners at the International. Nothing but the best in this herd. Come and see us. **FRANK A. COLE**, Barnard, Kan.

GRANITE CREEK STOCK FARM. Percheron and Standard-bred horses. Make known your wants to **M. A. SMITH**, Supt., Cawker City, Kansas.

COACH HORSES.

LAWNDALE STOCK FARM. Oldenburg German Coach horses. International prize winning stock. A tried stallion for sale. Inspection invited. **JOSEPH WEAR & SONS**, Barnard, Kan.

POLAND CHINAS.

EUREKA HERD POLANDS. Durocs. I breed both and have a nice lot of serviceable boars of both breeds for sale and a few choice gilts. Priced right. **W. E. SALES**, Simpson, Kan.

LEBAN CREEK STOCK FARM. Poland Chinas. 100 spring pigs both sexes, for sale at private treaty. Also a few yearling sows bred for October farrow. **LOGAN & GREGORY**, Beloit, Kan.

DUROC JERSEYS.

GOLDEN RULE STOCK FARM. Gilt edged Duroc Jerseys. 40 spring pigs, both sexes for sale at private treaty. Farm adjoins town. **LEON CARTER**, Asherville, Kan.

ALFALFA STOCK FARM. The home of the best in Duroc Jerseys. Choice boars, fall sows, in fact, most anything you want. **PEARL H. PAGETT**, Beloit, Kan.

HAMPSHIRE HOGS.

40 spring pigs, both sexes, for sale. Write for prices. **A. B. DOYLE**, Beloit, Kan.

OHIO IMPROVED CHESTERS.

O. I. C. SWINE tracing to the famous Kerr families and the Big Mary family. Pigs of both sexes for sale. Write to **T. C. WRENCH**, Beloit, Kan.

AUCTIONEERS.

COL. H. H. VANAMBURG, General and Live Stock Auctioneer. Phone 424. **BELOIT, KAN.**

COL. F. L. SMITH, General and Live Stock Auctioneer. Phone 642. **BELOIT, KAN.**

different from all other wagon-box spreaders, as it saves you the wagon box, as well as the trucks. It is standard wagon box size and a machine that two horses can handle easily. The gearing on the machine is mainly fastened to a gearing cage which can be detached from the spreader box by one man, so that when you are through using the machine as a spreader you can convert it into a regular farm wagon for other uses on the farm. This certainly brings the spreader proposition within reach of all farmers. Just write to the Chase Manufacturing Company, 99 Broad Street, Grinnell, Ia., for their catalog, fully describing this exceptional machine.

The Shawnee County Horticultural Society met Thursday afternoon in the state horticultural rooms, with Mr. Crow in the chair and a moderate attendance. The principal topic of discussion was how to hold a state fair that would be successful as former fairs had been. Major Anderson made some statements relative to the efforts being made to organize a state fair association. It was decided that if a fair in Topeka were to be successful, agriculture, horticulture, industrial arts and other interests of the people should be given as much of a show as horse racing and a better show than gambling is to have. Reports on the condition of the fruit crop in the county were made by the various members present, showing everything at present to be satisfactory. The following officers were elected for the ensuing year: President, O. F. Whitney; vice president, W. H. Barnes; secretary-treasurer, A. B. Smith. Delegates to the state horticultural meeting to be held in Topeka Dec. 28 to 30, N. I. Dalton, J. F. True; alternates, Mrs. C. A. Cline, Miss Lucy Popenoe. The following program was offered for the meeting to be held in Topeka Thursday, Jan. 6, 1910, and accepted: "What can Orchard and Tree Fruit Growers Do in Winter?" B. F. Van Orsdal; "What Can Small-Fruit Growers Do in Winter?" O. F. Whitney; "What Can the Vegetable Grower Do in Winter?" F. P. Rude; "What Can We Do for Lawns and Flower Gardens in Winter?" W. A. Harshbarger and A. T. Daniels; "What Can We Do in Winter for the Benefit of Ornamental Trees, Shade Trees and Shrubbery?" W. H. Barnes.

The C. S. Nevius Shorthorn Sale. C. S. Nevius, of Chiles, Kan., always raises good Shorthorns and good Poland Chinas. When he announces a sale of either breed it at once awakens interest among the farmers and breeders. In response to his advertising efforts a large number of young breeders were present and the sale proved to be a snappy one. Mr. Nevius has made a number of sales and generally puts his animals in first class condition. This time they did not seem to need any special fitting and were sold right off the pasture. Of course cows bred to Searchlight and calves were the features of the sale. Roy Johnston, who has been a swine breeder for some time past, has undertaken larger operations by getting into the Shorthorn field and was a large buyer. Dr. O. O. Wolf, of Ottawa, who is a member of the State Board of Agriculture and formerly owner with his father of one of the best Shorthorn herds, is again buying some good things. While the prices offered were not exceptional, they were considered good and satisfactory to Mr. Nevius. There is profit in raising good cattle at these figures if they can be marketed promptly. The sales were as follows:

BULLS.
Royal Chief, 21 months, sire Royal Wanderer, J. W. Pelphrey, Chanute, Kan. \$107.50
Henrietta's Prince, 2 years, sire Prince Pavonia, S. E. Case, Olathe, Kan. 85.00
Prince Josephine, 14 months, sire Prince Pavonia, R. M. Donham, Morse, Kan. 67.50
Prince Charming, 13 months, sire Prince Pavonia, John Downs, Waststaff, Kan. 52.50
Sir Leon, 1 year, sire Lord Banff 2d, J. N. Grimes, Wagstaff, Kan. 55.00
Roger, 11 months, sire Victor Lad, C. W. Staley, Bucyrus, Kan. 52.50

FEMALES.
Princess Charming, 2 years, sire Prince Pavonia, H. F. Pelphrey, Humboldt, Kan. 200.00
Princess Violet 2d, 4 years, sire Prince Pavonia, O. O. Wolf, Ottawa, Kan. 195.00
Princess Agatha, 21 months, sire Prince Pavonia, H. F. Pelphrey, 135.00
Glenwood Elizabeth, 3 years, sire Lord Banff 2d, Roy Johnston, South Mound, Kan. 110.00
Philetia Bright Eyes, 4 years, sire Lord Thistle, J. W. Pelphrey, 115.00
Miss Annie 3d, 6 years, sire Lord Mayor, F. E. Dively, Enid, Okla. 120.00
Sweet Annie, 19 months, sire Lord Norfolk, J. F. Stodder, Burden, Kan. 70.00
Princess Marigold, 23 months, sire Prince Violet 3d, R. W. Walters, Fairmount, Okla. 90.00
Anoka Rose, 2 years, sire Victor, Anoka, Roy Johnston, 135.00
Red Rose 2d, 2 years, sire Blythe Conqueror, J. W. Pelphrey & Son, 125.00
Dictator's Rose, 3 years, sire Dictator Roy Johnston, 100.00
Knight's Rose, 3 years, sire Happy Knight, I. R. Berkeley, Louisburg, Kan. 80.00
Susan 11th, 6 years, sire Gallant Knight, I. R. Berkeley, 95.00
Princess Rose, 2 years, sire Prince Pavonia, Roy Johnston, 100.00
Idlewild Ruby, 6 years, sire Lord Lancaster, J. F. Stodder, 120.00
Ruth 5th, 2 years, sire Idlewild Baron, J. W. Pelphrey & Son, 655.00
Hilda, 3 years, sire Lovely Charm, J. W. Pelphrey & Son, 82.50
Emma Girl, 21 months, sire Proud Orion, C. J. Woods, Chiles, Kan. 50.00
5th Norwood Rose, 9 years, sire Sir Charming 1st, I. R. Berkeley, 67.50
Jean, 3 years, sire Proud Orion, Roy Johnston, 92.50
Fanny Mayton, 3 years, sire Harmonious, J. W. Pelphrey & Son, 77.50
Lacie Gibson, 6 years, sire Edgewood Victor, Roy Johnston, 85.00
Mattie Manson, 9 years, sire Steuben Knight, Roy Johnston, 100.00
Lady Archer, 2 years, sire George Archer, H. F. Pelphrey, 5.00
Violet Lustre, 2 years, sire Prince Violet 3d, I. R. Berkeley, 100.00
Solon's Wild Eyes, 3 years, sire Solon, Dr. O. O. Wolf, 60.00
Victor's Margaret 2d, 5 years, sire Victor of Wildwood, I. R. Berkeley, 75.00
Gloster's Mary, 3 years, sire Gloster, Roy Johnston, 100.00
Josie, 8 years, sire St. Valentine Roy Johnston, 87.50

SUMMARY.
8 bulls \$450.00; average \$56.25
51 females 2,023.50; average 39.87
57 head 2,473.50; average 43.40

Quick Money on Hide

Shipments sent to us. Topeka's railroad facilities are unequalled for quick unloading of local shipments—all shipments are delivered to us same day railroad unloads them—we handle and remit for all shipments same day they are delivered—therefore you get your money quick—no delay—YOU want your money quick! So ship to us!

**JAMES C. SMITH
HIDE COMPANY**

TOPEKA

KANSAS

HIDES

Write for shipping tags. Post card is sufficient.

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We are paying the highest prices ever known for Furs of all kinds from all sections of North America. We have the largest Fur market in the world and we will gladly send you our price list free if you will send us your name and address. A postal will do. **MYERS, BOYD CO.**, 304 Main Street, St. Louis, Mo.

SHIP YOUR HIDES & FURS

direct to Biggs & Koch and you will get the highest prices and save all commissions. A square deal and quick returns. Full weights and honest grading. One hide, one skin or a car load. No matter whether you are a trader or trapper, farmer or dealer we can do you good and make you money. It will pay you to write us for price list and FREE shipping tags. Fur shipments held separate on request, and your furs back for our returns are not O. K. "Trappers Guide" free to shippers. Write today for catalogue of Trappers Supplies. **BIGGS & KOCH**, 937 Liberty St., Kansas City, Mo. Largest hide and fur house in Southwest. Estab. 1882.

LET US TAN YOUR HIDE.

Mr. Stockman, what difference does it make to you when you send your hides away to be tanned and made up into coats, robes and rugs, whether the distance is less or more, so long as "Crosby pays the freight" both ways when three or more cow, steer or horse hides are sent in one shipment? Why not send them to the oldest and largest establishment of the kind, where you will be sure of good results? In that way you can get better and cheaper fur goods than you can buy. Figure on it and get our illustrated catalog, which gives prices and a lot of other useful information. Address **The Crosby Fur Company, Rochester, N. Y.**

See our great Christmas offer on page 2.

L. M. PENWELL

Funeral Director and Licensed Embalmer.

511 Quinoy. Topeka, Kan.

Hide and Fur Market

For week ending December 11.

Hides.

	No. 1	No. 2
Green Salt Cured	12 1/2c	11 1/2c
Green Salt Cured, Side Brands		10 1/2c
40 lbs. up		10 1/2c
Green Salt Cured, Side Brands		9 1/2c
40 lbs. down		9 1/2c
Green Salt Cured Bulls and Stags	11 1/2c	10 1/2c
Green Salt Cured, Glue		6c
Green Salt Cured Deacons	25c	50c
Skunk	15c	20c
Tallow	5 1/2c	4 1/2c
Bees Wax	25c	15c
Horse Hides	2.50@3.25	1.50@2.25
Panels and No. 3		7c
Dry Horse, half price of Green.		
Green Salt Sheep Pelts	25c@31.00	
Green Uncured Hides 1 1/2c less than same grade cured. Green Half Cured, 1/2c less than cured.		

Dry Hides.

Dry Flint, Butchers' Heavy	17c
Dry Flint, Fallen Heavy	16c
Dry Flint, Light, under 16 pounds	17c@18c
Dry Flint, Culls	10c
Dry Salt, Heavy (18 lbs. and up)	14c
Dry Salt, Light (under 18 lbs.)	10c
Dry Sheep Pelts	10c@12c

Furs.

Raccoon, large, prime	\$1.00@1.30
Raccoon, medium	.85@1.00
Raccoon, small and No. 2	.50@.75
Skunk, black prime	1.75@2.50
Skunk, short	1.25@1.75
Skunk, narrow stripe	.85@1.25
Skunk, broad	.25@.50
Mink, large, dark, No. 1	4.50@5.00
Mink, medium, No. 1	3.00@3.50
Mink, small and No. 2	1.75@2.25
Opussum, large cased No. 1	.35@.50
Opussum, medium	.25@.40
Opussum, small	.10@.15
Muskrat, winter	
Muskrat, fall	.25@.30
Kits	
Civet	.25@.45
House ats	.05@.10
Fox, gray	.60@1.00
Fox, red, prime	3.50@4.00
Wolf, prime mountain	3.00@3.50
Wolf, prairie	1.00@1.25
Wild Cat	.25@.50
Beaver, large, each	5.00@6.00
Beaver, medium	.50@1.00
Beaver, small	1.50@2.00
Badger, No. 1	.50@.75
Others worthless	
Unprime furs at value.	

NEBRASKA LAND

CLAY COUNTY FARMS.

If you want a choice farm or stock ranch at prices ranging from \$25 to \$75 per acre, call on or address

ERNEST PINKERTON.

"THE PIONEER LAND MAN."

Clay Center, Nebraska.

COME TO NORMAN, OKLAHOMA.

The educational center of Oklahoma State University and best system of schools in the new state. Fine farming lands at reasonable prices. Good water. Write for list and prices.

MONNET & ZINK, Norman, Okla.

FINE NEBRASKA FARM.

\$20 acres, 3 miles from Chester, with good improvements, good or hard and good neighborhood. Land all around it selling from \$75 to \$100 per acre. Price \$65 per acre for quick buyer. Other bargains in smaller tracts. For further information call on or address

R. L. WILSON, Chester, Neb.

DON'T MISS THESE LAND BARGAINS.

\$20 acres, choice farm, Hayes Co., Neb., 7 1/2 miles from Fallsdale, smooth, best of soil; 200 acres to wheat; 1-3 rental; good 4-room house, well, windmill, etc. A perfect beauty, in fine neighborhood. For quick sale, \$35 per acre. 1,200 acre ranch, Lincoln Co., Neb., 5 miles from Wallace; 450 acres good bottom alfalfa and corn land; balance good pasture, timber and living water, \$20 per acre. For other good land bargains see or write us. SMITH BROS., Fallsdale, Neb.

ALFALFA LANDS.

All lands in Webster county, Neb., will grow the finest alfalfa, three and four crops every year. We want to send you illustrated matter regarding this beautiful, prosperous country. We have a snap for a quick sale on a half section with 85 acres alfalfa now growing, 135 a. cultivated; finely improved. Write for particulars. Red Cloud Real Estate Co., Red Cloud, Neb.

TWO SPLENDID FARM BARGAINS.

400 acre farm in Red Willow county, Neb., 2 1/2 miles from McCook, good 8 room house, good barn and other good improvements; 160 acres choice valley alfalfa land, 55 acres now growing, 100 acres bottom and 40 acres upland cultivated, a balance pasture; well watered, some timber and abundance of choice fruit trees, bearing. Actual value of land over \$20,000, but because to non-resident, who will take \$18,000 if sold soon—only \$40 per acre. Act quick; don't miss this.

560 acres 12 miles from McCook, 7 miles from Troyer, Kan.; 400 acres choice, smooth farm land, balance good pasture, half cultivated, slight improvements. A splendid bargain at \$15 per acre.

For other snaps in farm and ranch lands write or see

ACKERMAN & STEPHENS, Neb.

FOR GERMAN LUTHERANS AND OTHERS

\$20 a. smooth rich soil, 3 miles to station, Dundee Co., Neb., Ger-Lutheran settlement, 1/2 mile to church and school. "Choice of choicest." Splendid prosperous neighborhood; price, \$9,600. 160 a., same neighborhood, 10 miles S. W. Wauneta, Neb., 120 a. cultivated, 35 a. grass, 5 a. grove; school on land, fair improvements, a beauty, price \$5,250. 477 1/2 a. farm, same neighborhood, 400 a. cultivated, well improved, a magnificent farm, only \$14,000. Other tracts at bargain prices. See or write for list to E. F. WILEY & SON, Wauneta, Neb.

CHASE COUNTY, NEBRASKA.

Farms and Ranches for Sale.

Ranches from \$5 to \$12.50, good level arm land from \$15 to \$30 per acre, where wheat makes from 15 to 40 bushels per acre and corn from 20 to 50, hog cholera known, the undersigned has lived here 2 years and can prove the above statement to be facts. We have the lands for sale and automobiles with which to show it. All inquiries answered. Mention this paper and call on or address

BONNER & JOHNSTON, Neb.

Imperial,

262 1/2 acre farm, in Franklin Co., Neb., 1/2 mi. from Bloomington, Calist. About 100 acres choice bottom, alfalfa and corn land, 60 acres good pasture, fair improvements, fine spring, never failing water, from hill, 30 feet above level of house and barn and 45 feet above level of balance of farm land. One of the most ideal farms and best bargains to be found. Price only \$16,000. Choice 1280 a. ranch, well improved. Several quarter section and larger and smaller farms that are bargains. For information see or write

Wm. Anderson, Franklin, Neb.

OKLAHOMA LAND

OKLAHOMA FARMS.

Best county for corn, wheat, oats, alfalfa and tame grass. 80 acres \$3,500. 160 acres fair improvements, \$4,000. Write for list of bargains.

VOGELE & WOOD, Newkirk, Okla.

CORN, OATS, WHEAT

And alfalfa and all staple crops grow to perfection here in the garden spot of Oklahoma. Prices reasonable. Write for list and descriptive literature.

C. E. POCHTEL,

Newkirk, Okla.

FOR SALE—160 acres valley land, 10 miles southwest of Vinita, Okla. This land is level, smooth, bottom land, and will grow anything. It is located just a few miles from the Chelso oil fields, and it is only a matter of time, when the land will be developed. Price \$40 per acre. Mullen & Brecker, Room 15, Turner Bldg., Wichita, Kan.

SALE.

We own and control over 50,000 acres of choice farm lands in Eastern Oklahoma, the garden spot of the new state, that will produce successfully corn, wheat, oats, timothy, clover and alfalfa. Low prices, easy payments. Perfect titles. Few farms for trade. Agents wanted. Write

COMMONWEALTH LAND CO.,

Vinita, Oklahoma.

Never Drench Cattle.

Perhaps the best way of demonstrating the danger of drenching cattle is to advise the reader to throw back his head as far as possible and attempt to swallow. This you will find to be a difficult task and you will find it much more difficult and almost impossible to swallow with mouth open. It is for this reason that drenching cattle is a dangerous practice. However, if a cow's head be raised as high as possible and her mouth kept open by the drenching bottle or horn, a portion of the liquid is very apt to pass down the wind pipe into the lungs, sometimes causing instant death by smothering, at other times causing death to follow in a few days from congestion or inflammation of the lungs.

Water Horses Before Feeding.

Horses should be watered before feeding, and never given large quantities of water after a meal, for the simple reason that the water will wash the food out of the stomach before stomach digestion has taken place and the food will not be well prepared for absorption; and besides it is sometimes the cause of colic.

John Splan, the great trainer, writes: "As to water, I think that a horse should have all that he wants at all times. A man says: 'Why, will you give your horse water before a race?' Yes, before the race, in the race and after the race, and any other time that he wants to drink." When I say give your horse all the water he wants before the race, I do not mean that you shall tie him in a warm stall where he cannot get a drink for five or six hours on a hot day, and then take him to the pump and give him all that he wants. What I mean is to give him water often and, in that way, he will take only a small quantity at a time.

Bit of Swine and Cattle History.

The three animals most widely spread over the earth are the cow, horse and pig. These animals did not spread through their own efforts, but were developed by man and gradually rendered adaptable to practically every place where man himself can live.

Cattle entered America simultaneously with its discovery, for Columbus introduced Spanish steers and cows in 1493. In 1525 they were introduced into Mexico, which offered ideal conditions for them. From Mexico they spread to Texas, where the new conditions of range and feeding developed a race of cattle that became known as Texas cattle; these animals are typical of range bred cattle of America now.

The pig had its origin in India, and its first conquest was that of eastern Asia and the archipelagoes of the eastern seas. China fell an early victim to the love of the pig. Records show that the cultivation of the grunting porker was a high art in that land as long ago as 3,000 years before Christ. One of the greatest of the Chinese feast days is known by the name of "Pig."

The Koran forbids the use of pork, just as the Mosaic law does; hence the pig is not raised in the countries where the Mohammedan law rules. But in all other parts of the world the porker is as popular as the cow or horse; and there are as many varieties of pigs, due to local causes and to different ways of breeding in different countries, as there are varieties of horses and cattle.

Sorghum for Hogs.

Although the alfalfa acreage has been increasing at a terrific rate, it is nevertheless a fact that in some sections of Kansas and Oklahoma the plant is very little used either for pasture or hay. Farmers in these sections have an idea that it is not adapted to their soil and because some neighbor in a half hearted way made one trial for a stand and failed, they are sure it will not grow in their section. In these localities sorghum pasture for hogs is used extensively and next to alfalfa provides as good summer pasture as is obtainable.

Sorghum is used quite extensively in the drier upland regions for summer pasture. It is valuable on account of the great amount of feed furnished, pasturing from 20 to 30 head of hogs per acre. It comes in as a summer pasture when other pastures are short on account of hot dry weather. It is sown in May and furnishes pasture during July, August and September, or even later.

OKLAHOMA LAND

A SNAP

160 acres, 5 miles of Ponca City; 114 acres in cultivation. \$6,000 if sold in 30 days.

TRUMBLY & BARRETT,

Ponca, City, Oklahoma.

"SNAPS" IN GRANT CO., OKLA.

160 a. 7 1/2 miles of county seat, 6 1/2 miles of railroad town, 110 a. in cultivation, balance pasture and meadow, 30 a. wheat with farm, 5 room house and shed barn, granary, good water, 1 1/2 miles of school, good soil, R. F. D.

Price, \$5,000 for 30 days.

BATTEN REALTY CO.,

Medford, Oklahoma.

KANSAS LAND

A FEW SNAPS IN ABSOLUTELY LEVEL LAND.

320 a., perfectly level, 200 a. in wheat, 4 miles from two towns.....\$29.00 a.
488 a., very fine, not a foot of waste.....\$12.50 a.
160 a., 12 miles out, very fine.....\$11.00 a.
These are special bargains. Write me. H. D. HUGHES, McDonald, Kansas.

\$20 PER ACRE.

320 acres of perfectly level land. 160 acres in cultivation, good improvements, close to school, on telephone line and Rural Route. Terms on \$3,000.00 if desired. If interested please write for full complete description.

EDWIN LYMAN, McDONALD, KANSAS.

A RARE SNAP.

160 acres adjoining town, all in cultivation, good house, barn, granary, good orchard of all kinds of fruit, fenced and cross fenced. This is one of our best bargains, and if you are interested do not delay. (First come first served.)

HUNTER REALTY COMPANY (Est. 1893).

Enid, Okla.

FARMS IN THE FAMOUS WASHITA VALLEY.

110 acres fine river bottom. All in cultivation. A few nice pecan trees, no gumbo, sandy loam. Produce 60 bushels of corn to the acre. Finest alfalfa land, barn, but no house. Incumbent \$2,000; long time if sold quick. Price \$50.00 per acre. Write

GUARANTEE LAND & LOAN CO.,

Wynwood, Okla.

FOR SALE AT RIVERSIDE STOCK FARM.

5 Percheron Stallions from 2 to 5 years old, 5 Percheron mares from 15 months old to 5 years old. All colors good. All registered and breeding guaranteed. A fine young registered Shorthorn Herd with Royal Gloucester at the head, a pure Scotch bred bull. I will trade this herd on a good farm.

Come and see my stock or write.

O. L. THISLER & SONS,

Kan.

Chapman,

LAND

Sumner County's rich mellow soil will soon be as famous for the production of Corn and Alfalfa as it is for wheat which will send the prices soaring. Better get in on the ground floor and get a good farm while the prices are yet comparatively low. We will be pleased at any time to show you field after field of Alfalfa that cuts from 5 to 7 tons per acre. Write me now for my list of land at \$25 to \$50 per acre. Owner's price my price.

WM. HEMBROW

Immigration Agent Rock Island Lines.

Caldwell, Kan.

ZIMMERMAN IRRIGATED LANDS.

Advance \$10 Per Acre December 1, 1909.

Forty acres in alfalfa will afford an annual income of \$2,000 per year, and more than double that amount in fruits or early vegetables. Thirty dollars down will secure you a contract for 40 acres and the balance in 10 or 20 payments, without taxes or interest, if fully paid before 1913; when a warranty deed and deed for perpetual water rights will be given.

Write for particulars about the best investment in irrigated lands in America, to the General Selling Agents.

THE HEATH COMPANY.

Topeka, Kan.

109 West Seventh St.,

PINEAPPLE CITY, MEXICO.

Excursion Dec. 7.

Almost one half of the 12,000 acres we advertised in this page last week is sold. If you want in on the ground floor on this proposition make your arrangements to be with us on the Dec. 7th excursion, write for our illustrated booklet, it tells the whole story.

THE MEXICO IMMIGRATION LAND & FIBER CO.,

201 S. Main St.

Wichita, Kan.

LIVE AGENT WANTED

In your locality, to assist in selling corn, wheat and alfalfa land. We own thousands of acres in Pawnee, and adjoining counties. Write us for a proposition on our own ranches.

FRIZELL & ELY, Larned, Kan.

SEDGWICK CO. FARM BARGAIN.

For Sale: 480 acre farm, level dark soil, 300 a. in cultivation, 180 a. in pasture. Good 11 room house, large barn 32x56 ft., also good tenant house and barn, close to good market town and 18 miles of Wichita. Price only \$24,000. \$8,000 cash will handle this, balance at 6 per cent interest 5 years.

BEATTY REALTY CO.,

Opposite Post Office, Wichita, Kan.

A HOME.

For you at a bargain price, 320 acres fine level land. For particulars write to

WINN REALTY CO.

Kansas.

Jetmore,

HELLO FARMERS!

Have you read my list of GREENWOOD CO. FARMS? The best corn, alfalfa, clover, cattle and hog country in the west. Fine blue stem pastures. Write for list and prices to

F. D. STOUGHTON, Madison, Kan.

OKLAHOMA LAND

800 BUSHELS CORN GOES

with \$10 acres of the very best land for stock and grain farm in Craig county, near Vinita, Oklahoma. 160 acres in cultivation; balance hay and pasture. Price \$25 per acre. For further particulars, write

LEFORCE & BADGETT,

Vinita, Oklahoma.

MISSOURI LAND

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

WILLIAM BOWEN,

Houston,

Missouri.

KANSAS LAND

320 a., perfectly level, 200 a. in wheat, 4 miles from two towns.....\$29.00 a.
488 a., very fine, not a foot of waste.....\$12.50 a.
160 a., 12 miles out, very fine.....\$11.00 a.
These are special bargains. Write me. H. D. HUGHES, McDonald, Kansas.

\$20 PER ACRE.

320 acres of perfectly level land. 160 acres in cultivation, good improvements, close to school, on telephone line and Rural Route. Terms on \$3,000.00 if desired. If interested please write for full complete description.

EDWIN LYMAN, McDONALD, KANSAS.

A RARE SNAP.

160 acres adjoining town, all in cultivation, good house, barn, granary, good orchard of all kinds of fruit, fenced and cross fenced. This is one of our best bargains, and if you are interested do not delay. (First come first served.)

HUNTER REALTY COMPANY (Est. 1893).

Enid, Okla.

FARMS IN THE FAMOUS WASHITA VALLEY.

110 acres fine river bottom. All in cultivation. A few nice pecan trees, no gumbo, sandy loam. Produce 60 bushels of corn to the acre. Finest alfalfa land, barn, but no house. Incumbent \$2,000; long time if sold quick. Price \$50.00 per acre. Write

GUARANTEE LAND & LOAN CO.,

Wynwood, Okla.

FOR SALE AT RIVERSIDE STOCK FARM.

5 Percheron Stallions from 2 to 5 years old, 5 Percheron mares from 15 months old to 5 years old. All colors good. All registered and breeding guaranteed. A fine young registered Shorthorn Herd with Royal Gloucester at the head, a pure Scotch bred bull. I will trade this herd on a good farm.

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For you at a bargain price, 320 acres fine level land. For particulars write to

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F. D. STOUGHTON, Madison, Kan.

ROOKS COUNTY LAND

One Hundred Farms for sale.

Write for lists.

C. M. DEWEY, -:- Stockton, Kan.

Buy Western Kansas Land.

Should you want to buy any Western Kansas land for speculation or for a home, don't fail to write me. I am selling land throughout all counties in western Kansas. I am myself farming, extensively, on the kind of land I offer for sale. I can sell you land that will make you money. Write me at once for prices. Address

EUGENE WILLIAMS,

Minneapolis,

Kansas.

LITTLE KANSAS LAND

Several thousand acres good agricultural prairie land near R. R. town; price \$17.00 to \$27.50 per acre, owing to location and improvements. Write for list and prices to

G. T. REINHARDT,

Rocky Mountain,

Texas.

Lincoff Jersey Cattle

Established 1878. Registered in A. J. C. C.
Any animal for sale.
R. J. LINCOFF, HOLTON, KANSAS.

SHORTHORN CATTLE

FOR SALE.
12 bulls, 12 to 18 months; 20 cows and
heifers for sale.
SHAW BROS., Glade, Kan.

FOR SALE.

10 choice young bulls from 8 to 12 months
old, part straight Scotch.
Choice yearling and short two-year-old
heifers.
Good colors, bright red, priced right.
C. W. TAYLOR, Pearl, Kan.
Address Mail R. F. D. 2, Enterprise, Kan.

ALFALFA LEAF SHORTHORNS.
Special offering of four bulls. One by
Archer 205749 out of a Victoria cow. Three
by Nonpareil Star, one a Victoria, one Imp.
Edelweiss and one Christmas Gift. Also a
few choice heifers of equal quality and
breeding.
JOHN REGIER, Whitewater, Kan.

**RENO HERD SHORT-
HORN CATTLE**
Bulls in service, Forest Knight 226084 and
Victor Archer 264156. Breeding stock for
sale.
Stewart & Downe, Hutchinson, Ka

Evergreen Home Farm.

Milking Shorthorn Cattle, Bred Hornless.
Berkshire Hogs, Oxford Down Sheep.
Bourbon Red Turkeys.
LATHROP, MISSOURI.

JEWEL SHORTHORNS

A young herd of up-to-date breeding.
Also Percheron and Standard bred horses.
In stud, the Percheron stallion Marquis De
Vierre, (Imp.). Also the Standard bred
stallion, Red Seth 31185. Farm adjoins
town. Come and see us.
W. T. LOWE, Kansas.

GREENDALE STOCK FARM

25 YOUNG BULLS by Imp. Arditham
Mystery and Best of All for sale at bed
rock prices. Can also offer some good Berk-
shire swine and Shropshire rams. Corre-
spondence solicited.
COL. ED. GREEN, Prop., Kansas.
Florence, Kansas.

25 SHORTHORN COWS AND HEIFERS.
All are bred or have calf at side. A few
Good Young Bulls that I am sure will suit.
Everything nicely bred and in good condi-
tion. Moderate prices.
D. H. FORBES & SONS, Topeka, Kan.
R. F. D. No. 8. Bell Phone 31.

Prospect Farm Shorthorns

The oldest Shorthorn breeders in Kansas.
The largest herd of Cruickshanks in Kan-
sas. Herd headed by Violet Prince 145647
and Orange Commander 220590. Young
stock of both sexes and some cows for sale.
Quality and prices right.
H. W. McAFEE, Topeka, Kan.
Bell Phone 59-2.

Spring Hill Shorthorns

**300 Head Scotch and
Bates Pedigrees**
C. G. COCHRAN & SONS,
PLAINVILLE, KANSAS.

HUMBOLDT NATIONAL STOCK FARM

Shorthorn cattle, large type Poland
China hogs, 10 spring boars priced right.
Write me your wants. I meet parties at
train. We can do business. Come and see
me.
H. F. PEPHREY & SON, Kansas.
Humboldt, Kansas.

TENNEHOLM SHORTHORNS
SHROPSHIRE and LANGSHANS.
Four good red bulls 8 to 12 months old.
Sired by Good Scotch bulls and out of Wild
Eves and Kirklevington cows. Dams are
good milkers. Females for sale also.
E. S. MYERS, Kansas.
Chanute, Kansas.

Center Grove Stock Farm
Scotch Shorthorn cattle and 20 bred sows
and a few good spring boars of large type
Poland China hogs. Write me what you
want. No trouble to answer letters. Bell
phone.
J. W. Pephrey & Son, R. D. 6, Chanute, Ka.

SCOTCH TOPPED BULLS.
We have for sale some choice last spring
bull calves sired by our herd bull Pleasant
Hill Master, one of the best sons of Master
of the Grove. Will make reasonable prices
on these.
O. A. TILLER, Pawnee, Nebraska.

GUERNSEY CATTLE

REGISTERED GUERNSEY CATTLE.
Herd headed by Eminence of Berchwood,
whose ancestors have butter fat records of
668 pounds to 714 pounds per year. Herd
tuberculin tested. Write for prices.
FREDERICK HOUGHTON, Kansas.
Galva, Kansas.

Sorghum is less palatable and nu-
tritious than many other forage crops
adapted to this region. For this rea-
son many do not like it as a pasture
crop. Hogs do not thrive as well on
it as on alfalfa and require more
grain to keep them growing nicely.

The special value of sorghum lies in
the fact that it furnishes a great
abundance of pasture in dry hot
weather when alfalfa makes little
growth. After it is well started, say 2
feet high, it will furnish fairly good
pasture for 30 hogs to the acre for a
few weeks, and a good crop will carry
25 head of 100-pound hogs nearly all
summer.

Most Contagious Malady.

Foot and mouth disease is re-
garded as the most contagious malady
that affects the domesticated animals.
This does not mean that it is the
most fatal. Indeed, the mortality is
light, rarely exceeding one or two
per cent of the number attacked, pro-
vided the sick animals receive atten-
tion in the matter of food and water,
the death rate is high. The mortality
in the large range herds of Russia is
reported to have been 70 per cent in
some outbreaks. As the grazing dis-
tricts of the United States of the west
and southwest present similar condi-
tions, a like heavy mortality would
result were this disease to gain ad-
mission to them. The range cattle are
required to "rustle" for their living,
traveling miles daily to secure food
and water. With this disease upon
them, they would die of starvation on
account of their inability to travel
far in search of grass or inability to
crop it when found.

Notwithstanding the low death rate
under good conditions, the financial
losses from other causes are very
great, in fact much larger than from
any other contagious disease. It is
this fact that makes this malady so
unwelcome. The contagion spreads
with the greatest facility from place

to place and usually attacks from a
fourth to a half of the herds of the
invaded district in spite of local quar-
antine measures. And when a stable
becomes infected no susceptible ani-
mal therein escapes the disease. If
this was an "immunizing" disease,
that is, if one attack would prevent
further attacks, the matter would not
be serious; but the history of Euro-
pean outbreaks shows that "an ani-
mal may have three or four attacks in
a few months' period."

Horses—Market, Classes and Grades.

Few breeders can follow their horses
or mules to market and so become
familiar with actual market demands.
So the breeder may never know how
well he has succeeded in producing a
marketable horse that will command
a high price.

To form an intelligent estimate of
the value of horses or mules, there-
fore, it is necessary to have a thor-
ough understanding of the market re-
quirements and a correct understand-
ing of the market classes and grades.

The principal factors that determine
the market value of horses or mules
are: Soundness, conformation, qual-
ity, condition, action, age, color, edu-
cation and general appearance.

Horses or mules of general type are
grouped into classes, for convenience
and a definite understanding. The
classes of horses are divided into sub-
classes embodying those of a similar
type but slightly different in size,
weight, action or the use to which
they are put. Mules are not divided
into subclasses.

The market classes are: Draft
horses, chunks, wagon horses, road
horses, saddle horses, mining mules,
cotton mules, sugar mules, farm
mules and draft mules.

Draft horses are broad, massive,
rugged and compactly built with great
weight and strength. They stand
from 15-3 to 17-3 hands high in good
flesh weigh from 1,600 to 2,200 pounds
or more. The class is subdivided into
light draft, heavy draft and loggers.

Chunks are short-legged, broad;
heavy-set horses, the name of the
class being indicative of their confor-
mation. The subclasses are eastern
or export, farm and southern. The
class varies in weight from 800
pounds, the lightest of the southern,
to 1,550 pounds, the heaviest of the
eastern. They stand from 15 to 15-3
hands high.

Wagon horses are those used prin-
cipally where business requires quick
delivery. They must have good ac-
tion, a clean set of limbs, good feet
and bone with an abundance of qual-
ity, be closely coupled, compactly
built and have a deep broad chest in-
dicative of constitution and stamina.
In this class are express, delivery
wagon, artillery and fire horses. They
stand from 15 to 17-2 hands high and
weigh from 1,050 for the light weights
of artillery horses to 1,700 pounds for
heavy fire horses.

Carriage horses, sometimes spoken
of as "heavy harness horses," are
full made, round bodied and smoothly
turned with an unusual amount of
quality, and must possess to a marked
degree high action, with a fair amount
of speed. They should have a long,
well arched neck, small, neat head, a
short, well muscled back, long, level
croup, and well developed thighs and
quarters. The class is comprised of
coach, cob, park and cab horses. They
range in height from 14-1 to 16-1 hands
and weigh from 900 to 1,250 pounds.

Road horses are more lithe in build
and angular in form than those of the
carriage class. They are sometimes
spoken of as drivers or "light harness
horses" and are usually driven to light
weight vehicles. A considerable
speed is desired of some of the indi-
viduals of this class, which is com-
posed of runabout and roadsters.
They range in height from 14-3 to
16 hands and weigh from 900 to 1,150
pounds.

Saddle horses perform their work
under the saddle, the requirements for
which are sureness of foot, ease of
carriage to the rider, good manners
and ease of control. In order to be
sure of foot they must have an oblique
shoulder, high thin withers and a
properly set pastern with an abun-
dant of energy. The above qualities
together with a short, strong back will
give strength for carrying weight and
also an easy gait. The minimum
height is 14-4 hands for a polo pony
and the maximum 16-1 hands for
hunters. The weight varies from 800
to 1,250 pounds.

RED POLLED CATTLE

COBURN HERD OF RED POLLS.
Choice young stock of both sexes for
sale; also a few cows.
GEO. GROENMILLER & SON,
Pomona, Kansas.

AULD RED POLLS.
Herd established 7 years. Choice breed-
ing and individuality. 3 young bulls for
sale.
AULD BROS., Kan.
Frankfort, Kan.

FOSTER'S RED POLLS.
7 choice young bulls and a few good
females for sale. My prices are right. Come
and see my herd.
C. E. FOSTER, Eldorado, Kan.

POLLED DURHAM CATTLE

POLLED DURHAMS.
Young bulls. Cows and heifers bred to
Boon Hero, the Double Standard champion.
Prices reasonable. Write for terms.
C. J. WOODS, Kansas.
Chiles, Kansas.

BELVEDERE X2712-195058

son of the \$1,500 Grand Victor X1685 150264
heads my herd of Double Standard Polled
Durhams. A few extra good blocky, thick-
fleshed young bulls for sale. Inspection in-
vited. Farm adjoins town.
D. C. VAN NICE, Kansas.
Richland, Kansas.

HOLSTEIN CATTLE

EAST SIDE DAIRY HOLSTEINS
Offers Arcula Fobes De Kol, born March
31, 1908, sire Hengerveld Sir Fobes, his dam
Genesee Hengerveld over 32 lb. Aro, his sire
Jessie Fobes Tritonia Duke, whose dam has
over 24 lb. Aro. Dam, Lady Arcula Aro
12,998 lbs. butter 7 days as Junior 2 yr. old,
her dam Arcula 2d, over 19 lbs. Aro. Ex-
tra good individual, well marked. Price
reasonable to prevent winter stabling. F. J.
SEARIE, Oskaloosa, Kan.

HOLSTEIN BULLS

at bargain prices for 30 days. Bulls of
serviceable age \$75 and up. Bulls 5 to
12 months \$50 and up. Bull calves 1 to
5 months \$30 and up. A few remain to
spare.
"ROCK BROOK FARM,"
Sta. B., Omaha, Neb.
Henry C. Glissman, Prop.

HEREFORD CATTLE**Jacks and Hereford Cattle.**

Stocks for sale at all times. Write us
what you want.
YATES BROS., Fauett, Mo.

BEAU BRUMMEL

10th 167719
Modern Herefords. Herd bulls,
Beau Brummel 10th 167719, Beau
Beauty 192235—and Protocol 2d 91715.
Robert H. Hazlett, Hazford Place, El-
dorado, Kansas.

GALLOWAY CATTLE

SMOKY HILL RANCH
Galloway Herd, headed by Pat Ryan of Red
Cloud 20038, Starlight 2d of Tarbreoch 24478
and Valarius 29088. Bulls and heifers for
sale from my herd of 180 registered Gallo-
ways.
E. J. GUILBERT, Kansas.
Gill, Kansas.

Twelve Galloway Bull Calves

9 to 12 months old, all extra good ones,
good bone and coat of hair, most of them
sired by "Imported Randolph." Will sell
very cheap if taken within 30 days owing
to lack of feed.
S. M. CROFT & SONS, Kansas.
Bluff City, Kansas.

ANGUS CATTLE**Aberdeen-Angus Heifers**

Choice heifers in age yearlings past and
two year olds. Excellent individuals sired by
the show bull Mayor of Oakland. Good blood
lines, low prices.
McADAM BROS., Kansas.
Holt, Kansas.

ANGUS BULLS.

Sons of Champion No. 4 (our show bull) a
son of Imp. Prince 110—cost \$9,100—and out
of the \$3,500 champion cow, Queen Mother,
7th of Drummergue, and RUTGER MIKADO
82395, whose dam took first prize at the
Kansas State Fair last year, and from the
best families of the breed. Also a num-
ber of females open or bred and some with
calves at foot.

SHROPSHIRE SHEEP.

A few high class Canadian bred ewes
with lambs at foot, sired by our Imported
English show ram. The best you can buy
anywhere. Write us your wants or come
and see us.
SUTTON FARM, Lawrence, Kan.

AUCTIONEERS

COL. ESSIE CRAVEN, NORTH BRANCH KAN.
Live Stock and General Auctioneer. Ask
about him.

COL. JOHN D. SNYDER, Winfield, Kan.,
LIVE STOCK AUCTIONEER.
Sales made everywhere. Write or wire me
for dates. Prices reasonable.

W. C. Curphey,
LIVE STOCK AUCTIONEER.
Write, phone or wire for dates.
Abilene, Kansas.

LAFE BURGER,
Live Stock Auctioneer.
Write or wire me for date.
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Residence Phones, Office Phones
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W. WEIDMIR,
Experienced Live Stock Auctioneer.
Terms reasonable. Big tent free. Write
or wire me for date. Cameron, Mo.

Jas. W. Sparks

Live Stock Auctioneer. Marshall, Mo.
Twenty years selling all breeds.

J. H. Noorman

Live Stock and general
farms sale auctioneer.
Satisfaction guaranteed.
Long distance phone
connection.
SOLOMON, KANSAS

LIVE AND LET LIVE

is my motto. Reasonable charges and good
service. Choice of dates if you write early.

JAS. T. McCULLOCH

CLAY CENTER, KANSAS.

R. L. HARRIMAN

AUCTIONEER
PEDIGREED LIVE STOCK
Write me for dates. BUNCETON, MO.

LEARN AUCTIONEERING.
Trained, competent men make big money
with no capital invested. You can be inde-
pendent. Others are Jones National School
of Auctioneering teaches you how. (Over
500 graduates in the U. S. and Canada.)
Mid-winter term opens January 8, closes
February 11. Write today for free catalog.

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