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SELECTING SEED CORN

There is no more important factor concerned in the production of large yields of corn than the proper selection and care of the seed. The matter of selecting seed ears of desirable quality is just as important to the farmer who is growing his own seed as is the selection of animals for breeding purposes. The varieties of corn which we have have been developed by careful selection; but too often there is little or no attention given to this matter by our farmers.

If a man can spare the time, the best method of selecting seed corn is to allow it to become thoroughly ripened on the stalk and then select it from the field before the corn is picked. There is considerable advantage to be gained in being able to examine the stalk from which an ear of corn comes. In this way a man can select ears only from those stalks which have the normal amount of room and which have ears at the proper height. Frequently good ears as we pick them from the cribs are simply due to the fact that the stalk on which they grew was the only one in the hill and therefore had a much better chance than the average. What we want is a good ear produced on stalks which have only an average chance, and which are good because of some hereditary cause. Such ears will be more productive than those selected from isolated stalks.

The next best way to select seed corn is to select the good ears as the corn is being picked and throw these in a box on the wagon separate from the main load. This is the common method of those who give reasonable care in seed corn selection. But in whatever way these selections are made, a considerably larger amount of corn should be thus selected than is necessary for seed, so it will then be possible to reselect before storing them for the winter.

This selected corn should be spread in a thin layer on some convenient floor space and allowed to dry out quickly. Some men provide rough racks in which to store this corn to favor its rapid drying. Cold weather has little effect on dry corn. If the corn is not thoroughly dry when heavy freezing comes, it is almost invariably injured in germination and the strength of germination of corn has a great deal more to do with the yield than is commonly supposed.

There are a number of ways in which corn can be stored so as to keep it dry and of strong germination during the winter, such as hanging up by the husks or on wires or storing in racks as has been mentioned. Where a man has an attic or vacant room in the house, it is frequently a good plan to use that for seed corn storage.

The method of artificially drying seed corn is not of much importance in Missouri where the falls are usually long, but if storage place can be found where the temperature does not run much below freezing, this is desirable. The important point in the whole matter of storage is to get the corn dry quickly and keep it dry. If this is done, the germination is almost sure to be good.

Every farmer should be a good judge of corn. Many men who are good judges of live stock give little thought to the matter of judging between the different ears of corn. It would pay every man who grows his

When, How and its Storage--Characteristics of Good Corn. Professor Miller, Missouri Experiment Station.

own seed to give enough attention to the study of ears of corn that he will be able to select them intelligently.

The more important characters of a good ear of corn may be summarized as follows: The shape of an ear should be as nearly cylindrical as possible; that is, it should not taper decidedly. Such ears give a more uniform size of kernel and usually give a greater weight of shelled corn to the cob.

The proper size of an ear of corn is largely a matter of variety and conditions. For rich Missouri bottoms and uplands, much larger ears should be selected than for average lands. In general an ear of corn should be around 10 inches in length and about 7½ inches in circumference, measured at a point one-third the distance from butt to tip. Some early varieties run considerably under these measurements and some of the rich land varieties considerably over but this is standard. It does not usu-

ally pay to select the very largest ears one can find, as they do not reproduce themselves uniformly. An ear of good size, but not extremely large for the variety, is best.

An ear should be compact in the arrangements of the kernels, with straight rows and with just as little lost space between the kernels as possible. The butt of the ear of corn should be well rounded out with kernels, evenly arranged around a cup-shaped cavity, about one inch across in medium sized varieties. If the butt is large the ears will break off too hard in husking. If the attachment to the stalk is under a half inch in diameter the ears are apt to blow off badly. Coarse, irregular kernels at the butt with spaces between are to be avoided.

The tip of an ear of corn should be well filled out evenly to the end of the cob, with deep, regular kernels and, if possible, healed over. Ordinarily, however, a perfectly covered tip

means a short ear, and if too much attention is given to the covering of the tips in selecting corn there is a tendency to cause the ear to grow too short.

The size of the cob and the depth of the kernels should be medium. Too large a cob is wasteful, while a very small cob is usually found in varieties of rather small size. Such cobs usually bear deep kernels and both the depth of kernels and size of cob may be over done. The cob bears the same relation to the production of corn as does bone in the beef animal—it may be too fine or too coarse. Very deep kernels usually have poor germs; they shell off hardly and are apt to be loose on the cob. A medium deep kernel on a medium sized cob seems to give better results in the experiments thus far conducted.

The germ, or heart, of a kernel of corn should be large, smooth and fresh in appearance. When broken open it should show a fresh oily character, not discolored. Good germs in an ear of corn are exceedingly important.

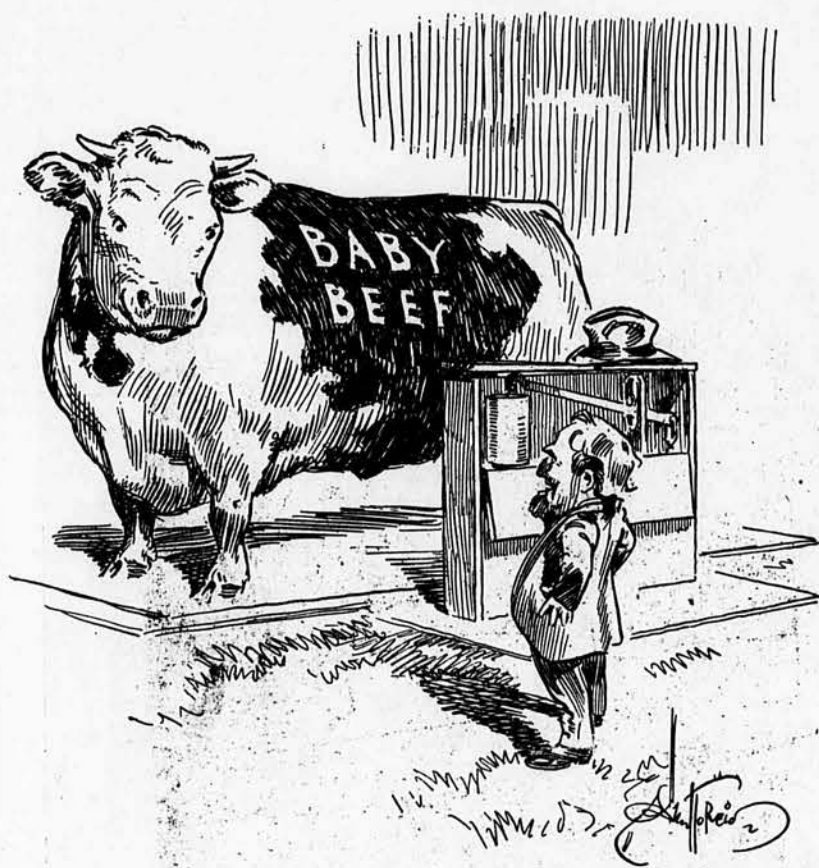
HOGS AND HIGH PRICED CORN.

Kansas Feeders Can Always Do as Well as Illinois Feeders if They Will—Arthur J. Bill.

Now when apparently most farmers have gone out of the hog business—literally stampeded by the high priced corn—even disposing of the valuable brood sows and neglecting the spring crop of pigs, it is worth while to look into the outcome of the bunches of hogs that have been fattened by the regular live stock men who are thoroughly and thoughtfully committed to the business as a wise and profitable system sure to work out right in the average of a series of years. Mr. S. B. Mason, McLean county (Illinois), is such a farmer, and he has just sold eighty-six pigs, averaging 195 pounds, that brought him \$1,198.78 at the local railroad station. He got \$7.12½ per hundredweight, or \$13.89 per pig, net cash.

There were ninety pigs in the bunch and they weighed 10,980 pounds, or 122 pounds per head, when he began feeding them March 22. April 20 it was necessary to take out four sows that weighed 665 pounds. All the corn was bought to feed these pigs, 349 bushels at 61½ cents and 203 bushels at 70 cents. The hogs were not fed with cattle, and at no time were they given a full feed of corn. They were fed on blue grass and woods pasture after the grass was big enough, and weighed at home 17,045 pounds when sold June 11. The sale weight at the station was 16,825 pounds. The home weights show a gain of 6,065 pounds. These hogs were weighed May 10 and May 24, showing a gain of 1,180 pounds from ninety-seven bushels of corn fed, or a little over 12 pounds of pork per bushel of corn. The four sows had gained 177 pounds up to the time they were removed from this bunch, and this makes a total gain of 6,242 pounds, or 11¼ pounds per bushel of corn fed during the entire period, and a return of 80½ cents per bushel for the corn. This is in addition to the advance in price of the original 10,980 pounds when the feeding began. As stock hogs they would then have brought 5 cents if sold to cattlemen to feed, (Continued on Page 3.)

Looming up Mighty Big.



Hear is the Solution to the Problem of the High Priced Farm.

THE COW-PEA

A. M. TENEYCK

Extracts from Bulletin 160, Kansas
Experiment Station.

Cow-peas make excellent hay which, if properly handled, is equal to alfalfa in nutritive value, although as a rule stock do not eat cow-pea hay as readily as alfalfa. When sown for hay it is usually preferable to plant in close drills, requiring about one bushel of seed peas per acre, and when so planted the plants tend to grow more upright, which makes the crop easier to cut with a mower. If grown in rows, although the production of forage may be as great, it is more difficult to harvest, and the ranker growth of the individual plants often makes the hay more woody. It is not an easy matter to cure cow-pea hay; the vines, being so large, cure slowly, and with unfavorable weather the hay is apt to be badly injured, if not spoiled, before it is cured enough to stack. The difficulty of harvesting and curing cow-pea hay its tendency to become woody, and the lower yield per acre, make this crop, for hay production, less valuable than alfalfa where alfalfa can be successfully grown. In certain sections of the state, where difficulty has been experienced in growing alfalfa, cow-peas fill a need by producing hay and pasture of high feeding value. The crop is also especially valuable as a soil fertilizer when used in rotation with other crops or plowed under as green manure.

The cow-pea is sometimes sown in combination with other crops, such as corn, Kafir corn and sorghum for hay. When planted in these combinations there is danger of cow-peas being stunted in growth if the crop with which it is combined is planted too thick. Sown broadcast, cow-peas often make but little growth with these crops, but when planted in rows with corn and cultivated the growth is quite satisfactory.

SOILING AND ENSILAGE.

As a soiling crop cow-peas are very satisfactory. As they should not be planted until the weather and soil are warm, the crop is not available for feed until the latter part of summer, where they fill a place in a well-planned system of soiling and furnish an abundance of succulent green feed, although perhaps less palatable than alfalfa.

When used alone the cow-pea does not make an exceptionally good quality of ensilage, due to the large amount of water in the green vines making a watery silage that keeps poorly and is not well relished by stock. When combined with corn in the proportions of about one-fourth cow-peas to three-fourths corn, it makes an excellent silage that keeps well and is relished by all classes of stock. This combination has greater feeding value than corn silage, for the reason that cow-peas, being relatively high in protein, make the cow-pea-corn silage a more nearly balanced ration.

It is a common practice in dairy sections to grow cow-peas and corn in separate fields and mix them as the silo is being filled. It would seem a more desirable practice to grow the corn and cow-peas together. An experiment along this line was conducted at this station during 1903, 1904 and 1905, the corn and cow-peas being planted together in rows. When planted the right thickness—corn 12 to 24 inches and peas 4 to 6 inches apart in drill-rows $3\frac{1}{2}$ feet deep—each grew equally well and produced from ten to fourteen tons of green fodder per acre. The cow-peas twined around the corn-stalks, making the crop easy to harvest with the corn-binder.

PASTURE.

While the cow-pea, because of its general habit of growth, is not a natural pasture plant, few farmers are using it for this purpose. Maturing as it does in the latter part of the summer, the crop furnishes succulent pasture during the time when natural pastures run short. When used with corn to supplement the ration, such pasture can hardly be excelled, especially for hogs and sheep. The stock are usually turned on cow-peas when the crop has reached the stage of maturity considered best for hay, or when some of the pods have begun to turn yellow. Cattle are usually turned on earlier than sheep or hogs; hogs may be pastured on ripe peas. If the stock are turned on the field too early, before the plants have attained full size, there is more waste from the

trampling. The plant at this time is more watery and does not furnish its full feeding value. As with many green-pasture crops there is danger of bloat when sheep or cattle are first turned onto cow-peas, yet the danger is far less than with alfalfa, and is lessened as the cow-peas become more mature.

Where cow-peas are to be used for pasture, especially with hogs, it would be preferable to plant with corn. In this way the mixture makes a ration on which hogs do exceptionally well without other grain. When planted with corn for hogging down, the usual method is to plant the same as for ensilage, taking care not to plant the corn so thick as to stunt the growth of the cow-peas. Another method, and one often practiced in pasturing sheep in the more humid climates, is to plant the cow-peas in the corn between the rows at the last cultivation. At this station we have planted cow-peas in corn at the last cultivation for a number of seasons, and they usually make a fair growth if there is sufficient moisture, but when the early fall is dry the cow-peas do not make much growth until the corn is mature. There seems to have been no injurious effect on the corn resulting from this practice, but rather in most seasons the result has been an increased yield of corn in fields in which cow-peas have been planted. Table I gives the comparisons and yields for five years of corn planted alone and with cow-peas drilled between the rows at the last cultivation.

How Planted.	1903.	1904.	1905.	1906.	1907.	Ave.
Corn alone	23.36	23.36	23.36	23.36	23.36	23.36
Corn with cow-peas planted at last cultivation	23.13	23.13	23.13	23.13	23.13	23.13

The average for five years shows that corn in which cow-peas were planted produced 3.64 bushels more grain per acre than corn alone. In 1906, which was relatively dry in August and September, the corn with cow-peas yielded 4.28 bushels per acre less than corn alone. In 1903 the yield was slightly in favor of corn alone.

For the other three years the yield was greater where the cow-peas were planted with the corn.

In the drier sections of the state, where fall pasture is needed, it would be better to plant the cow-peas in wheat, oats, or barley stubble rather than in corn. When planted after wheat or oats, the cow-peas make a much ranker growth, are not checked so severely by a dry fall, and will produce in nearly every instance more fall pasture than could possibly be secured by planting in corn. After pasturing, the cow-peas may be turned under in the fall, leaving the ground in excellent condition for corn the following spring.

SOIL IMPROVEMENT AND GREEN MANURING.

The growing of cow-peas greatly improves the soil. Being a rank feeder and deep-rooted, the crop is able to use plant-food which the roots of other plants may not secure. Much of this plant-food later becomes available to other crops planted after the rotation with cow-peas. This crop has the advantage over other crops which are not legumes, in that it is able to use the free nitrogen of the air through the aid of the bacteria which live upon its roots. The plowing under of a crop of green cow-peas

Treatment.	1904.	1905.	1906.	1907.	Ave.
Wheat continuously	13.40	13.40	13.40	13.40	13.40
Wheat continuously with cow-peas as catch crop	14.49	14.49	14.49	14.49	14.49

will greatly increase the supply of

1904.	1905.	1906.	1907.	Ave.
56.57	37.80	64.17	38.01	43.98
67.28	45.98	59.89	41.81	47.62

humus and nitrogen in the soil, and even when the crop is harvested for hay or seed some increase in soil nitrogen will result from the decay of the roots left in the soil.

In most soils of this state nitrogen is the limiting element of fertility, and anything that will increase the nitrogen supply of the soil will in-

crease the soils' productiveness. The cow-pea, having this ability to secure nitrogen from the atmosphere, not only produces more abundantly than a crop not having this power, but leaves the soil in better condition for crops which follow.

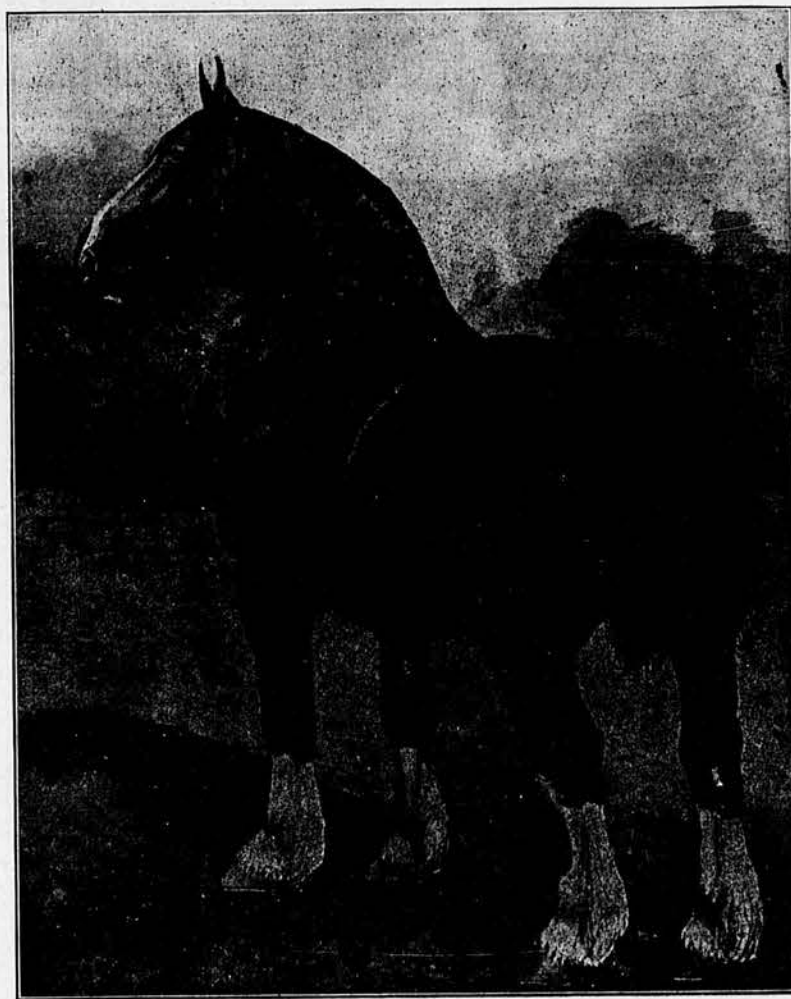
H. T. Neilsen, of the United States Department of Agriculture, in Farmers' Bulletin No. 318, in speaking of the effect of the cow-pea upon following crops, says: "The increase in yield of wheat due to the cow-peas is generally given as from three to five bushels per acre. At the Missouri Experiment Station, an increase in yield of 63 per cent with oats and 49 per cent with wheat following cow-peas as a catch-crop was secured. The Arkansas Experiment Station reports, as an average of four years' test with wheat, an increase in yield of 25 per cent from plowing under cow-pea stubble in the fall, 39 per cent from plowing under cow-pea vines, and 42 per cent when cow-peas were grown each year as a catch-crop between the wheat crops, only the stubble of the peas being plowed under."

At this station we have sown cow-peas as a catch-crop between the wheat crops for the past five years, plowing under the entire growth of peas about the middle of September, two or three weeks before seeding to wheat. The cow-peas have been sown each year after wheat harvest, in close drills, at the rate of about one bushel of peas per acre. The field was usually double-disked ahead of the drill. Both plots were plowed of the same date and given similar preparation before seeding. The field used for this work was upland soil low in fertility. The yields for the past five years are given in table II.

Each season the catch-crop of cow-peas has given an increased yield of wheat and the effect has been accumulative, the increase in yield being gradual from year to year. The first year of the trial there was a difference of only one bushel in favor of the cow-pea rotation, while after five years the plot which received the green manuring produced nine bushels more wheat per acre, the average difference being four and one-third bushels per acre in favor of planting cow-peas as a catch-crop between crops of wheat. In carrying out this test every effort was made to put the seed-bed in as good condition as possible before the wheat was sown. After plowing, the subsurface packer was used and the seed-bed made as firm as possible.

While the effect of the cow-peas in maintaining the fertility of the soil, where used as a catch-crop with wheat, is clearly shown by this experiment, the practice can hardly be recommended in general farming. In the wheat belt of the central and western parts of the state there is not sufficient moisture to produce a crop of cow-peas for green manuring and still leave the ground in condition for starting the wheat the same fall, except in very favorable seasons. Also, the extra labor involved in preparing a good seed-bed for wheat after cow-peas makes this method impractical.

A more practical rotation is to plant cow-peas in wheat or oats stubble, plow the crop down before heavy frost in the fall, and follow with corn the next year. A common practice at this station is to plant the cow-peas during the wheat harvest, following the binder directly with a single-disk drill; or, if the stubble-land is weedy or trashy, it is advisable to disk ahead of the drill behind the binder, thus preparing a more suitable seed-bed. Thus when the harvest is finished the field has been replanted and, if the extra labor can be supplied, this is an economy of time, and the new crop will have all the advantages which may come by timely rains and favorable growing conditions. If it is not possible to plant during the harvest of the grain, then the cow-peas may be sown as soon as possible after the harvest, preferably disking ahead of the drill between the rows of shocks. Occasionally, by early thrashing, the field may be cleared soon enough to plant the peas, but such planting should not be delayed long after July



Imp. Strethall Maid (58478) 10714, a 2-year-old Shire filley weighing 1,820 pounds. One of many good ones owned by L. R. Wiley & Sons, Elmdale, Kan.

1. Planted in this way at this station, cow-peas have made a growth of twelve to eighteen inches by the last of September, when the crop was plowed under. Such fall-plowed land is in excellent condition for corn the next season, since there is sufficient time between the plowing under of the cow-peas and the planting of corn for the cow-peas to decay and for the moisture to become replenished in the soil. Table III gives the yield of wheat and corn when grown in rotation with cow-peas used as a catch-crop after wheat, as compared with the yields when wheat and corn were grown in rotation without the intermediate green manuring crop of cow-peas.

TABLE III. Yield of corn per acre, bushels.

	1904.	1905.	1906.	1907.	Ave.
Following cow-peas used as catch crop after wheat	44.89	63.55	65.81	37.76	50.75
Following wheat without cow-peas	32.40	44.89	57.57	32.21	41.77
Yield of wheat per acre bushels, in rotation with corn, second year after cow-peas	1904.	1905.	1906.	1907.	Ave.
With cow-peas	17.59	22.53	16.58	9.25	16.49
Without cow-peas	17.20	18.67	14.74	9.05	14.91

These results show that cow-peas used as green manure have had a remarkable effect in increasing the yield of corn, the average annual increase in yield for the four years being nearly nine bushels per acre; also, there was a small increase (about one and a half bushels per acre) in the wheat crop following the corn the second year after the cow-peas were plowed under. The relatively low yield of wheat on all plots is in part due to the unsuitable seed-bed; the wheat was planted in the corn-stalks each fall.

This seems to be a more practical and successful method of using cow-peas for soil improvement than by growing the peas with corn or sowing them as a catch-crop in continuous wheat culture. Also this is a practical way of maintaining the nitrogen and humus supply of the soil, especially on farms keeping little live stock; but upon a stock farm a green manuring crop should not be expected to replace barn-yard manure but rather to supplement it. Upon stock farms where cow-peas are grown as a catch-crop after wheat or oats for soil improvement it will be found more profitable to pasture the cow-peas rather than to plow the entire crop under. Little of the beneficial effects of the cow-peas is lost by this practice, since by pasturing the droppings of the animals remain upon the field, and even when the cow-peas are cut for hay and fed there may be but little loss of fertilizing elements if care is taken to preserve the manure and return it to the land.

AS A ROTATION CROP.

When grown for seed or forage, cow-peas are a valuable crop to use in rotation with other crops. Preferably cow-peas should be used to precede potatoes, Kafir corn, cane and other rank-growing forage crops, rather than small grains, since in the more favorable seasons, in fertile soil, small grain is apt to lodge when grown after cow-peas. Also, since cow-peas are harvested late, the soil may be left too dry to start fall wheat well. Rotation experiments carried on at this station for five years with cow-peas or soy-beans and wheat have given the following results:

WHEAT ROTATION WITH SOY-BEANS OR COW-PEAS.

Previous crop.	1904.	1905.	1906.	1907.	1908.	Ave.
Wheat (continuously)	17.13	24.40	40.40	37.68	29.53	29.83
Soy-beans or cow-peas (alternate years)	21.10	26.54	31.10	38.03	25.16	28.39
Wheat followed soy-beans in 1904-1906, and cow-peas in 1907-1908.						
* Lodged badly, which accounts for lower yield.						

The rotation experiments with corn and soy-beans have resulted in increasing the yield of corn after soy-beans, the average annual increase in yield being over fourteen bushels of shelled corn per acre, as an average for four crops. The results are given as follows:

CORN ROTATION WITH SOY-BEANS.

Previous crop.	1904.	1905.	1906.	1907.	1908.	Ave.
Corn (continuously)	48.21	53.00	62.44	45.56	52.30	52.30
Soy-beans (alternately)	53.72	68.26	75.53	63.62	66.53	66.53

Cow-peas are an uncertain crop for seed in this state, as the yield of seed varies greatly from year to year, depending upon weather conditions. When the summer is favorable and hot the yield of seed is quite satisfactory, but when the summer is cool or too wet or too dry, the yield is apt to be low. As shown by the trials at this station, in favorable seasons, good producing varieties have yielded from fifteen to twenty bushels per acre, while in an unfavorable season the same varieties have produced only

from five to seven bushels per acre. This uncertainty of a seed crop makes the cow-pea an undesirable crop to grow in a commercial way for seed production, but the value of the crop for soil improvement, pasture, hay and ensilage, and the high price of the seed upon the market, makes it desirable for every farmer to grow enough cow-peas for seed to supply his own needs. At the present price of seed (\$3 per bushel) the average farmer does not feel that he can afford to buy the seed of cow-peas for green manuring, although the expenditure of this amount would doubtless be repaid by the increase in the yield of crops through the increased fertility of the soil. However, if the farmer

can raise each year from five to ten acres of cow-peas for seed he will have a supply of seed on hand for his own use, which, in favorable seasons, will have cost him less than one dollar a bushel to produce, and in unfavorable seasons the cost should not



Catalpa Speciosa Growing in the Winfield Nursery. A part of their 10,000,000 Stock of Trees.

Always use seedling trees one year old to transplant into the permanent grove or wood lot. The Catalpa likes a rich soil, but will do well even if not rich if it is dry. They will not grow well in a permanently wet soil. Prepare your plat of ground by plowing and fitting as you would for a crop of corn. Mark both ways so as to plant at the intersection of marks. Arrange to plant from 1,000 to 1,500 per acre, according to the use to be made of the young trees. After several years experience I am coming to believe that 1,500 will grow to fence post size without greatly interfering with each other. There are several ways of planting, but I prefer an ordinary ditching spade to any other tool. Set the spade into the soil as deep as plowed, press forward and insert the tree in the space back of the spade. Set the spade again about three inches back

be greater than the average market price of good seed peas.

OTHER USES.

Besides the uses for cow-peas discussed above there are a few minor

uses for which the crop is sometimes grown. In some of the Southern states where cow-peas seed heavily, the seed is grown and used for stock feed. Cow-pea seed has a high feeding value, furnishing about two and a half times as much protein and nearly as much carbohydrates as corn. At the

present prices cow-pea seed cannot be profitably grown for feed, but in thrashing more or less of the seed may be broken, making it unfit for planting. Such seed should be ground and fed; mixed with corn-meal or other ground grain it makes especially good feed for hogs or dairy cows. Cow-peas are also used in a small way for human food, prepared in much the same manner as the garden bean.

HOGS AND HIGH PRICED CORN.

(Continued from Page 1.)

and the advance of more than 2 cents per pound means a profit of \$332.14.

The total cost of the 552 bushels of corn was \$356.73, and the average price paid was a little over 64½ cents per bushel. The gain produced while feeding paid him 16 cents per bushel above the cost of his corn. Probably it is fair to count the weight of the four sows retained, 665 pounds, at the same price, \$7.12½, making \$47.38, which brings the total return up to \$1,246.16. The total cost of the corn taken from the selling price of the hogs leaves \$889.43. The exact profit in this whole deal would be found by estimating the cost of the pasture and production of these pigs and labor bestowed upon them, and deducting these three items from the \$889.43, and not forgetting the benefit to the land of having this grain fed upon it.

Other farmers suggested to Mr. Mason that it would be pretty difficult to get any profit in feeding hogs on 60 and 70-cent corn, but he saw the great drift of farmers out of the pig business and the advancing market, and had faith in producing pork when most of the other fellows were not doing it.

Here is another McLean county in-

the wisdom of going in the opposite direction from the crowd and standing by a carefully considered system of farming to which one's plans and equipment have been adjusted. The crop of spring pigs has been quite generally neglected and it is going to be a very tedious and expensive thing for the farmers to get started again with good breeding stock. Probably many of them are already seeing how foolish and wasteful it was to dispose of good well proven brood sows. It would not have taken a great deal of corn to carry them through the winter and spring and to have several litters of pigs coming on to fatten on the new corn.

Information on all industries of the Arkansas Valley, including the mammoth irrigation projects, one of which is now being completed for the delivery of water from its huge reservoirs next spring, bringing under irrigation 40,000 acres of the very best land in Colorado, can be had by addressing Messrs. Bell & White, Civil and Irrigation Engineers, LaMar, Colo. See further announcement under Farm and Ranch Bargains.

National Live Stock Breeders' Convention.

The National Association of Live Stock Breeders and Raisers will hold their annual convention on the night of Dec. 2, 1909, in Masonic hall, over Drovers' Deposit Bank, directly opposite main entrance to the great International Live Stock Show, Union Stock Yards, Chicago. The following high class program has been arranged: Dr. M. W. Ravenel, Wisconsin University, "Tuberculosis;" Dr. A. T. Peters Nebraska University, "Hog Cholera and Plague;" Prof. F. H. Reynolds, Minnesota College of Agriculture, "Animal Diseases;" Prof. E. S. Good, Kentucky Experiment Station, "Sheep Scabies and Anthrax;" Hon. F. C. Giltner, Eminence, Ky., "Cattle Ticks;" Dr. David Roberts, Waukesha, Wis., "Healthy Animals;" Hon. James Campbell, East St. Louis, Ill., "Cattle Feeding." A subject that will be agitated at our convention will be the appointing of a strong committee to go before Congress and urge a liberal appropriation for the Department of Agriculture and the Bureau of Animal Industry to prevent and eradicate Tuberculosis, Hog Cholera and Plague, Sheep Scabies, Anthrax, Ticks, etc., with a proper reimbursement to the breeder and raiser for all animals condemned by the government.

Graner's Big Sale Dec. 8.

An event that should interest large numbers of breeders and farmers will be the big Percheron, Shorthorn cattle and Poland Chins sale to be made by H. C. Graner, at his fine farm near the town of Lancaster, Kan. The date of this sale is Wednesday, Dec. 8. Mr. Graner is forced to make this sale because of poor health and is putting in all of his good stuff. Among the things to be sold will be great individuals that wouldn't be sold at all but for the reason that we have already given. There is to be sold 50 hogs, 34 cattle and about a dozen horses. The cows are largely descendants of the Rose of Sharon and Josephine families and all of them Scotch and Scotch topped. Among them are seven bulls of serviceable age, 5 by Victor Archer, one by Scotchman and one by Moorish Duke, he by Im. Royal Pride. The calf by Scotchman is a good one and should go to head some herd. The Poland Chins are for the most part good specimens of the big type strains. There will be 10 excellent tried sows safe in pig to the great boar Guy Monarch, grandson of Guy's Price. There will also be a number of good young boars. Among the sows and gilts are daughters and granddaughters of such sires as First Quality, Chief Hadley, Blains Tec, Neemo L's Dude, etc. The Percherons are splendid specimens and will please parties that are in the market. The best way to get complete information is by reading the catalog. Write for it at once and mention Kansas Farmer.

Alfred Makes Good Sale.

The Duroc sale of S. W. Alfred & Son was one of the good sales. The prices were very even. While the prices were not high, the sale was very satisfactory to Mr. Alfred. Several breeders from Kansas and Oklahoma were present and bought several of the good ones. J. P. Beall, of Nashville, Okla., topped the sale at \$75 for No. 3, Ohio Boys Gem. Following is the report of those selling above \$20:

No. 3—J. P. Beall, Nashville, Okla., \$75.
No. 4—R. A. Parker, Sharon, Kan., \$36.
No. 5—L. J. Licklight, Sharon, Kan., \$43.
No. 6—Robert Hamilton, Medicine Lodge, Kan., \$33.
No. 8—H. N. Hazen, Enid, Okla., \$37.
No. 10—E. Oldfather, Harper, Kan., \$29.
No. 11—H. N. Hazen, Enid, Okla., \$22.
No. 12—Jas. Rymph, Harper, Kan., \$21.
No. 14—J. P. Beall, Nashville, Kan., \$23.
No. 15—J. J. Baker, Elk City, Kan., \$25.
No. 16—J. J. Baker, Elk City, Kan., \$21.
No. 17—J. E. Ware, Chickasha, Okla., \$25.
No. 24—J. D. Rymph, Harper, Kan., \$22.
No. 27—C. Stith, Eureka, Kan., \$20.
No. 32—E. Oldfather, Harper, Kan., \$21.
No. 40—H. N. Hazen, Enid, Okla., \$24.
No. 42—J. E. Ware, Chickasha, Okla., \$26.
No. 46—Joseph Cann, Harper, Kan., \$40.

Summary:
27 females averaged \$27.33.
10 boars averaged \$20.35.
37 head averaged \$25.44.



KANSAS FARMER

EDITORIAL



Land plaster is a soil stimulant and while it increases growth at first, it will injure the soil. Land plaster is put into some fertilizers, but it hurts the land. Farmers don't want to begin to use a stimulant for the land.

On an Illinois farm where corn and oats have been grown alternately for thirty-one years the physical condition of the ground is very bad. It washes easily and runs together as the other soil near it does not. Last year the heavy rains in June seemed to cement this soil together so the water could not get off.

Americans have almost reached a point where owing to increased population without increased production per acre, our home food supply will be insufficient for our own needs. Within ten years, possibly less, we are likely to become a wheat importing nation. The percentage of the population engaged in agriculture and the wheat product per acre are both falling, at the same time the cost of living is raised everywhere by this relative scarcity of bread, and by a habit of extravagance which has enlarged the view of both rich and poor of what are to be considered the necessities of life.

Prices of farm products now, as compared with those of a few years ago, afford ample and costly evidence that the farming industry is not keeping up with the general growth of the country, but confirmatory statistics may be easily compiled. In the case of wheat, for example, the record of exports shows how rapidly the home demand is gaining on the production. In the five years ending in 1902 the exports of wheat and flour from the United States were 1,064 million bushels, averaging 213 million bushels yearly. In the five years ending June 30, 1908, total exports were 573 million bushels, equal to 115 million bushels yearly. The largest exports of any year in the past five were less than the smallest exports of any year in the preceding five years.

Here is a colt breaking device such as the writer never saw before. It consists of a sort of rotating stall. Two heavy poles 30 feet long and six or eight inches in diameter at the butt radiate from a central post. The outer ends work in old wagon wheels and the poles are separated just the right distance for the horse to be tied to the front pole and to be hitched to the rear pole. Side rails hold the animal as in a little stall. He can go forward or backward as much and as fast as he pleases without injury to himself or anything else. The poles are heavy enough to make a good load for him to pull around the large circle. The new horse can get plenty of work in this track, and the driver has every advantage in the matter of bringing the animal under proper control.

While talking about farmers' institutes it is worthy of mention that farmers are this year attending institutes in greater numbers than ever before in Kansas. This indicates growing interest in matters pertaining to better farming and live stock husbandry. The news dispatches in a single issue of a daily paper report the attendance of five institutes reported therein at 1,400 farmers or an average attendance of 250. At the Jewell City, Kan., institute Dr. King, one of the speakers, dissected a pig which he pronounced as having died from hog cholera. He made hog cholera, its cure and preventative, the subject of his remarks. He urged vaccination and so interested were farmers that it was immediately arranged that a veterinarian should be sent for and instructed to vaccinate all hogs in the community. Vaccination for hog cholera is as effective as vaccination for blackleg and the farmer who wants to be on the safe side should not hesitate to take advantage of it. In the past few years science has accomplished wonderful results in treating and preventing diseases of live stock and to prevent the serious loss of past years it only remains for the farmer to make a practical application of what the scientist has figured out for him.

J. J. Hill once said "that the majority of people fail to realize practically

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tisers under the following conditions: We will make good the loss of any paid up subscriber who suffers by dealing with any fraudulent advertiser in our columns, provided complaint is made to us within thirty days after the transaction. This guarantee means just what it says. It does not mean that we guarantee to settle all trifling disputes between a subscriber and an advertiser, though we offer our good offices to this end. We do, however, protect you from fraud under the above condition. In writing to advertisers be sure always to say: "I saw your advertisement in Kansas Farmer."

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.

the declining status of agriculture in the country. They are misled by the statistics of farm values and products, mounting annually by great leaps, into thinking that this absolute increase implies a relative advance of this industry as compared with others. Exactly the opposite is the case. I refer not merely to the quality and results of our tillage, but to the setting of the human tide away from the cultivated field and toward the factory gate or the city slum. This is something whose consequences for evil are as certain as if the aggregate deposits in all the banks of this country were decreasing by a fixed percentage every ten years, while their loans were increasing by another percentage just as stable. It means the same thing, in kind and consequences, when the agricultural population, the producers and depositors in the great national treasury of wealth, is declining year by year, while the city population, which thrives only by drawing drafts upon the land, and cannot live a year after these cease to be honored, rises at its expense. Yet not only is such a crisis approaching, but it is being hastened by legislative stimulation in favor of other industries while overlooking this."

THE IMPROVEMENT OF INTERIOR WATERWAYS.

The awakening to the importance of our internal waterways is timely. Our internal commerce is greater than that of any other nation in the world, and immensely exceeds our foreign commerce, important as that is. The question of inland transportation directly affects all our people in a very large way. But the great importance of improving the means of transportation by water is no excuse for going into it in a haphazard way, without due consideration.

The difficulties and the cost should not stand in the way of the improvements, but they should be carefully considered, and every precaution taken to overcome the one and to lessen the other by the adoption of intelligent and practical methods. Undue haste often makes for waste and failure. So important are these improvements, that a serious mistake in plans or methods would be a public calamity. Fortunately the government engineers have for years been studying our waterways, and making experiments for their improvement and control. This experience will be of great service in maturing plans at an early day for the carrying on of the great work.

FACTS ABOUT MANURE.

Manure is never so valuable as when fresh. Exposure to air and water in the barnyard does not improve it; nothing is added, except water, and much is lost.

It should be spread evenly with a manure spreader; it can not be spread so well nor so cheaply by hand.

In most cases it is better to spread on top of a growing crop. In the fall and winter it can be spread on grow-

ing wheat, blue grass or alfalfa.

A thin covering, often renewed, is to be preferred to a heavy cover, at long intervals.

The value of manure does not depend wholly upon its fertilizing properties; it adds humus to the soil. It is especially beneficial to gumbo and to mucky soils.

Well-rotted manure is all right in its place, but it has very little place on a farm; the process of rotting it is too wasteful, whatever the process may be.

There is no more certain way of burning up money than by permitting manure to stand in the barn yard in heaps, and burn away its fertilizing properties. When it does not burn—and sometimes when it does—it becomes water-logged, and is twice as heavy to handle as when fresh.

If the spreading of it is left until spring, other work presses, and the ground is frequently soft. The wheat, or the grass has missed its stimulating cover.

THE REVISION OF OUR BANKING LAWS.

The most important question now before the country is the revision of our currency laws and methods, including our banking system. It has long been obvious that our present system is inadequate to the needs of our rapidly growing commerce. In a country so prosperous as this, panics should be unknown. Our too frequent financial furies are as disastrous to the farmer as to any other class. Such disturbances not only arrest the ordinary course of buying and selling, but they disastrously impair prices, causing wide-spread loss to all classes of people.

It by no means follows that methods which work well in England, France or Germany will prove equally successful here, where conditions are vastly different. This is a large country, with varied industries and interests. But the immense importance of our commercial interests makes it all the more necessary to adopt some financial system which will protect those interests against unnecessary and paralyzing panics. The question is, however, of such overwhelming importance that it ought to have the most careful attention of Congress, and of the business world.

There ought, at all times, to be plenty of currency to carry on the business of the country, and every man who can offer good and sufficient collateral ought to be able to obtain whatever money is needed in his legitimate business. And above all, there should be no suggestion of politics in the settlement of this question. It is wholly economic, and in no sense political.

THE PASSING OF BRADFORD MILLER.

In the recent death of Hon. Bradford Miller of Topeka, Kansas, and particularly Shawnee county, has lost a man whose memory will long be cherished by both young and old. He

was one of the big men of Kansas, both physically and mentally, and his genial, kindly disposition and his willingness to help others has given him a large place in the hearts of his fellow citizens. His chief activities since he came to Kansas thirty-one years ago, have been toward the improvement of agriculture, and in this work he has been the organizer of numerous farmers' institutes, neighborhood fairs and other meetings for the development of the farmer and the betterment of his condition. Himself a pioneer farmer, he has always been in the front rank of progressive agriculture. He served two terms as president of the Kansas Good Roads Association, he was one of the organizers of the famous Shawnee Alfalfa Club and its first president, and was the organizer and sponsor of the Boys' Corn Contest Association of Shawnee County, whose benefits can never be estimated. He has served his fellow men in other capacities as well. He was a Civil War veteran, a champion of temperance and prohibition, an active church member, and always with the good of his fellows at heart. His neighbors have called him to responsible political offices. He served three years as county commissioner, two terms as county treasurer, and was city assessor and later on mayor of Topeka.

During the last few years of his life he was incapacitated from active physical work, and devoted his time largely to the interests of the Boys' Corn Contests, where he had remarkable success.

Such men are all too few and in his passing the farmer has lost an earnest helper, the farmer boy a friend and guide and the state a man.

NO SOIL, NO NATION

"The conservation of the soil is the conservation of the basal asset of the nation. Only by the conservation of our soil, undiminished in its fertility, can we hope to be able to provide for the hundreds of millions of people who, in the near future, in the United States, will be demanding food and clothing. If present methods are allowed to continue, it is certain that in the not distant future this country will be able to support only a relatively sparse population."

This is the prophecy made by President Charles R. Van Hise of the University of Wisconsin in an article on "The Future of Man in America," in the current number of the World's Work.

"It is necessary that a great campaign of education be inaugurated at once with reference to conservation of soil, just as there has been a campaign of education with reference to the conservation of the forests," writes President Van Hise. "The task is an enormous one, indeed, vastly greater than that carried on with reference to our other resources, because of the fact that the land holdings are so sub-divided. But the campaign of education must be carried on, and, as a part of it, the laws must be developed, until we reach the situation where no man dares to handle his land so as to decrease its fertility."

"Every man who owns a farm is a trustee for the nation for his small property. If, at the end of his life, the farm goes to his son depleted in richness, he is as truly faithless to his trust as are the great interests, some of which think only of present gain, and wastefully exploit the natural resources of the country. Each, in proportion to his own responsibility, is a traitor to the nation."

This is indeed a great argument in favor of dairying. Butter-fat removes no fertility from the soil and if the manure is handled judiciously, this system of farming enables you to preserve your farm and maintain its earning capacity.

HORSE INDUSTRY

The horse industry is attracting the attention of the farmer to a greater extent than in any other period under the observation of this editor. This is due no doubt to the feeling that there is money in growing a good horse for sale also that better horses and fewer of them is a farm economy, and in fact necessity. Time and labor saving machinery, forced upon the farmer as a result of

scarcity of help, require more horse power and the need of better horses is realized.

Anyway, the farmer is rearing better horses. Better stallions in every community are forcing out the poorer stallions. Good brood mares are being sought. A team of purebred mares is not an uncommon sight on the best farms. Breeders report that the demand for good mares is greater than the demand for stallions, a condition of the horse industry not known heretofore in the western states. It has been figured that it costs \$50 to produce a good yearling colt. This cost is too high for Kansas. Our idea is that \$25, not including stallion service, will cover actual cost of keeping the colt the first year. It will cost slightly more the second year and third year. If these figures are conservative then it will pay to rear a good colt and sell for \$150 at end of third year or as a 4-year-old. The selling price is conservative, too. It can be increased in proportion to the superior quality of the animal. At any rate, it costs us more to rear a good colt than will sell for \$150 than a poorer one selling for \$75 or \$100.

Farmers can well afford to pay attention to matching and selling teams. This is a feature of the horse business which pays well for a little trouble. It's a good plan to rear the colts in pairs, anyway. A pair of well mated colts will bring \$75 to \$100 more money than the two sold singly, if of course the quality is there and the pair is desirable. The horse industry fits into the operations of the large and small farm alike and will help swell the bank account.

MORE CORN AND LESS WHEAT

Kansas farmers are raising more corn and less wheat. Secretary F. D. Coburn of the State Board of Agriculture says some of the counties which have heretofore been regarded as special wheat counties are now taking up corn and dropping wheat. The corn belt in Kansas is moving westward just in the rear of the wheat belt. The wheat belt is 100 miles further west than it was a few years ago. It reaches almost to the Colorado line. The corn belt used to consist of a narrow fringe up and down the eastern edge of the state. Now it extends from the eastern edge of Pawnee and other counties on a line with it.

"The agricultural statistics of Kansas for the past year reveal some interesting facts as to changes of crops and their acreages planted in the different counties," says Mr. Coburn. "As examples there is a net increase in corn of 659,212 acres, and 86 counties planted more corn than in the preceding year, while 80 counties sowed less wheat. There was an aggregate decrease of 503,617 acres in the wheat sowing.

"The shifting from wheat to corn in some of what have been regarded as especially wheat counties is very noticeable. Sumner, for instance, famed heretofore as being either first or second in wheat diminished its sowing by 56,000 acres, and now occupies but seventh place, while increasing her corn planting more than 35,000 acres, and as a corn county occupies third place instead of eighth.

Barton county, with 261,008 acres, remains first in wheat, an increase of 4,700 acres, but adds to her corn 11,020 acres; Rush, with 214,904 acres, is second in wheat, and Pawnee third. While Reno, with 191,800 acres of wheat, is fourth in that respect, many will be surprised to know that no other Kansas county plants so much corn, or 203,289 acres.

"After Reno the next counties in big corn acreage are Jewell, Sumner, Marshall, Smith, Nemaha and Sedgwick in the order named. These are pretty and southern portions of the state, but are all, except Smith, in the eastern half.

"In corn area—100,000 acres or more—the six big counties in the western half of the state are Smith, Norton, Phillips, Graham, Decatur and Osborne, as named, and these, excepting Graham and Osborne, are in the extreme northern tier."

HOW TO HAVE BETTER FARMS.

There is a growing disposition among Kansas farmers to get away from the one-crop system. Every year sees an increased movement towards more diversified crops. The wheat counties are turning to corn

and alfalfa, and the corn counties are growing more wheat. But the general result is a decrease in the acreage of wheat. This change will be more marked next year than usual, owing to dry weather this fall, which has, in many localities, made the seeding of wheat difficult.

This movement is in the right direction. A one-crop country is generally a poor country, especially for the small farmer. When the one crop is large, prices are frequently low. When it fails, he has nothing to fall back upon. And, worse still, this system exhausts the fertility of his land, makes the yield less, and failures more frequent. Under a scientific system of crop rotation, the farmer grows better crops, receives a better price for them, and does not wear out his land.

Kansas is a great wheat state, and while it ought to raise more wheat, it ought to do so on fewer acres. It would be a mistake to let the state go back as a producer of wheat, even though corn is the more profitable crop in many localities. Both crops

are necessary for a proper rotation of crops, and both can be grown at a handsome profit. The yield of both is now much too small, and can best be increased by frequent changes from one to the other, with crops of alfalfa, clover or some other crop between.

How to increase the yield of these crops is not a difficult problem. It is more generally understood than practiced. Does any one believe that the states of Iowa, Kansas, Missouri and Nebraska can not, without the use of any considerable amount of commercial fertilizer, grow as much corn on an acre as the states of Connecticut and Rhode Island?

The question of better farms and the production of more abundant crops is one which KANSAS FARMER believes to be of paramount importance, and which it will discuss in season and out of season. In this investigation and discussion it asks the assistance of its readers. Actual trials and experiences, whether successful or unsuccessful, are interesting and instructive.

New York State Farms.

Every westerner has heard of the deserted farms of the New England states. Such designation means these farms have been robbed of their fertility by continued cropping with the use of no fertilizer and no return to the soil of those elements necessary to plant growth and which elements are gradually taken from the soil and sold off with each load of wheat or corn hauled to market.

Not long since in discussing the land situation in general with a traveler whose home was in New York state, this editor learned that thousands of acres of this worn out land were being bought at low figures by Jews, Russians, Bohemians and people of other nationalities who have heretofore crowded our cities and that in his opinion these people were picking up these lands at great bargains. It was his opinion, and we can see some reason thereto, that in the years to come the tide of immigration would to a considerable extent be turned eastward instead of westward as at present. It was his opinion that great bargains could be had in these lands almost within the shadow of the great cities and he thought that the energetic westerner should have his attention called to this condition.

Within the past few days a bulletin of the New York state bureau of agriculture has come to our hands. This bureau has taken up a work quite unique in its character and asserts the truth of the above statement of our chance traveler companion. The bulletin contains a list of 936 farms, at prices varying from \$20 to \$50 an acre, and in some cases small payments may be made. To those who desire it, the bureau will also furnish a scientific report as to the products for which each farm is best adapted.

While the bureau has been in existence only three years, it has in that time been instrumental in the sale of \$3,000,000 worth of farms, which also means their rehabilitation. It has also sent out several thousand farm laborers to those who need their assistance and maintained an office in the state agricultural department to attend to correspondence in relation to the sale of farms and the engagement of agricultural labor. It has also advertised the opportunities for farming in New York State, posting notices in European districts which send the most desirable immigrants.

Milking Shorthorns.

In correspondence with our readers on dairy matters there is no inquiry made so frequently as that pertaining to the location of breeders of milking Shorthorns. All inquirers are asked to peruse carefully the breeders' cards in KANSAS FARMER. A number of these advertise milking strains of the Shorthorn and these breeders should have a good trade from KANSAS FARMER inquiries alone provided upon investigation the inquirer is able to satisfy himself regarding the milking qualities of the animals advertised. There is a demand for the milking Shorthorn. The editor's experience and observation enables him to make this statement positive. We have so asserted in addresses before various breeders' meetings in years past. For strictly dairy purposes, regardless of any beef consideration, it is our judgment that the dairy bred animal should be used. Our farmers in general are not yet ready to disregard all consideration

from the beef source, hence this demand for the milking Shorthorn.

This editor has seen many Shorthorn cattle, both pure bred and high grades, which were good milkers. Such animals are the exception and not the rule, however, in the herds of western Shorthorn breeders. Certain strains of the Shorthorn in England were good milkers, in fact, real dairy cows. The cows of such strains, however, were not of the very decided beef tendency such as commonly exists in this country. A good deal of the blood of these milking strains exists in the Shorthorn herds of the middle west and this blood if given a chance will show itself in producing cows of superior milking qualities and will furnish western breeders a good foundation upon which to build if they should desire to supply to unquestionably urgent demand of the western farmer for milking Shorthorns.

The use of bulls of these milking strains and the suckling of the dam by the calf and the cows otherwise handled as beef cows will not, however, produce milking Shorthorn. The milking qualities in any breed can be developed and intensified only by milking and feeding for milk. The breeder of Shorthorns to produce milkers must actually engage in dairying at least in so far as the handling of his cows are concerned. It will be necessary to keep the milk and butterfat records of the cows as do the breeders of Holsteins and Jerseys. The poor milkers must be culled out and the best retained as breeders. In other words, the demand for milking Shorthorns for dairy purposes is such that it will not be satisfied with the statement that the animal has a certain per cent of the blood of some well known milking family which family so far as is known was used for milking purposes in England, only.

There is a grand opportunity for the man who will milk and develop milk producing Shorthorns and such as can only be developed by well known dairy practices. Such breeder can sell his calves at high prices and with practically no effort. The surplus females will be eagerly sought. In fact, such breeder will not be able to rear anywhere near the number of animals he could sell. The western farmer wants red dairy stock. He does not want black and white or any color of the strictly dairy breeds. The Shorthorn breeder has a chance to sell what he wants if the present practices of Shorthorn handling are somewhat revised.

Shredding Corn Fodder.

Several inquiries have recently been received asking cost of shredding corn fodder. In each case reference was made to the necessity of realizing more from the corn crop than heretofore, showing that farmers are thinking along lines on which KANSAS FARMER has for years preached, viz: that it seems foolish to grow a crop of corn and waste more than 40 per cent of the crop by allowing the stalks to remain standing in the field. If the stalks are pastured small benefit aside from the corn saved is realized.

A few years ago the Iowa Experiment Station obtained figures from hundreds of Iowa farmers regarding the cost of shredding fodder. In Iowa large quantities of fodder are so handled. The figures for the several items indicate that the average cost of machinery for shredding was \$1.55 per acre; cost of fuel, 31.4 cents. The

Silk Waists

\$2.89

Such a waist as you would pay considerably more for and think your purchase a bargain.

New shades of raisin, blue and grey, also black—good quality soft taffeta with the newest pleated front and fancy button closing, or plain tailored, pleated front. Both styles with the newest tuck trimmed sleeve.

Order at once, stating your size. Postage paid in Kansas.

KANSAS MAIL ORDER SERVICE.

THE MILLS CO., TOPEKA

total cost for shredding per acre varied from \$2.45 to \$6.65. This is a very wide range, owing to the varying conditions, such as distance to be hauled, the yield per acre, the size of machine used, the work required in handling the outfit, as well as the condition of the fodder and accidents to the machine.

The average cost of shredding 1,600 acres was found to be \$4.41 per acre. The estimated yield of corn per acre was 57.25 bushels. The yield of fodder was two tons to the acre, and the cost of husking in the field 5 cents per bushel. On this basis the Iowa station figures the cost of shredding the fodder at 77 cents per ton.

The United States Department of Agriculture has a bulletin on this subject, and that part referring to the cost of a gasoline engine equipment with comment is as follows:

"With such an outfit the farmer may do his work at his convenience, as he needs the corn and the fodder, and may also do some work for neighbors, which will aid in paying for the machine. It requires one man to feed, one to look after the engine, shredder, and the corn in the wagon; one man in the mow to remove the fodder, one to unload the wagons, two teams and one loader in the field. The computed cost would be:

Use of engine and shredder and repairs, per day.....	\$ 1.00
Five men, at \$1.50 each.....	7.50
Two teams, at \$3.00 each.....	6.00
Power, six gallons gasoline, at 15 cents per gallon.....	.90
Total cost per day.....	\$15.40

"From experiments conducted by the author with the above outfit, it was found that the number of bushels husked per hour varied considerably with condition, but that the average was 18 bushels, or 180 bushels per day. This, at the average yield of corn per acre previously derived, would be equal to four acres per day. To husk 180 bushels by hand and put it in the crib would cost \$10.96. This would leave a cost of \$4.44 for four acres of corn fodder shredded and delivered in the mow. The average yield of shredded fodder is two tons per acre. This would give a cost of 55 cents per ton for hauling the fodder from the field, shredding it, and placing it in the barn ready to feed. When corn has been husked in the field and the farmer wishes the fodder shredded, it costs him about \$1.50 per acre for shredding the fodder by machine.

"With large machines the work of husking and shredding corn is usually custom work. The owner of the machine furnishes the shredder and engine, with two men, charging the farmer from 4 to 5 cents per bushel for this work. The farmer will have to furnish the fuel and the teams, as well as the balance of the help, to run the machine. The large machines require from six to eight teams and twenty to twenty-five men for full operation. The large machine, while it does the work quickly, has the disadvantage of requiring a large crew of men and teams; and if anything goes wrong with either engine or shredder this force is idle at the expense of the farmer until the machine is repaired."

DAIRY



Improve Animals as Well as Grains.
Can a man sow poor seed and hope to get a good crop? Will nature make any exceptions in one man's favor? These are questions which ought to interest the man who keeps on year after year breeding his cows to some scrub bull. Farmers in all sections are pretty well aroused over the necessity of better seed wheat and corn. The same enthusiasm should enter into the improvement of farm animals.

Buying a Dairy Sire.

Any man with a herd of ten cows can afford to head his herd with a pure bred sire. Many men are satisfied if they can buy a registered calf, and the registration is about all they get. It don't make a sire better because he is registered. The question is, "What are the calf's ancestors, and what is their record?" The best pure bred sire at the head of the herd means more than one-half the herd. Buy only of a man in whom you have confidence. Buy a sire that has been tried and has produced a daughter of high production, even if it was an aged sire. Buy on the records of the dams back of him. Buy a sire that dams that were great producers.

The Difference in Cows.

As illustrating the differences in dairy capacity of cows that appeared equally capable, an interesting table has come to our notice. The table is not here given, but the cows are designated by the number of each in the table for convenience. No. 2 freshened in April, 1906; gave during the eleven months of the test 338.1 pounds of butter-fat, at a cost of 6.7 cents a pound, the profit for the year being \$50.36. No. 4, fresh in November, 1905, gave in the nine months she was tested 141 pounds of butter-fat, at a cost of 12.5 cents per pound. Her owner sold her because he wasn't satisfied with a cow that gave but \$14.38 profit in a year. He was offered three good cows for No. 2, but refused the offer. Yet No. 4 without doubt was making him more money than the average of Kansas cows. It pays to get sometimes a salutary dissatisfaction. Attention is called to the cost of producing a pound of butter-fat by a 300-pound cow. In what farm animal is there as much money as in a cow which will produce a 25 cent pound of butter for 6 cents?

Feed—The Great Factor.

I own and have owned some royally good cows, writes W. F. McSparan. I am satisfied that those of pure breeding are most uniformly the best, but I have never yet seen the cow so wonderfully bred that her good performance did not depend upon the feed that was furnished her—quality and quantity.

Milk elements were once feed elements before the alembic operations of the cow refined them. The good cow does wonderful things with grass and hay and meal and water, but she performs no miracle by making something from nothing. She must have the feed.

The well bred special purpose dairy cow is supposed and expected to do a little better with the feed she consumes than the ordinary cow consuming the same ration. The former will do better because all her tendencies have been directed and encouraged to the specific end of such doing, and the greatest single factor in that direction and encouragement has been feed.

Generally speaking, what breeders call "reversion to type" starts with poor feeding. Hence it is plain that the agent that was the most active in improving a breed or a strain must continue to be most potential in keeping up or advancing the standard.

Three Things Evident.

There are three things that are absolutely essential to success in dairying; a milk scale, a Babcock tester and a centrifugal separator. Where dairying is made a business these things are very generally used, but in the small dairy of five or six cows, kept as an adjunct in mixed farming, they are too often wanting. A scale enables one to quickly ascertain the quantity, so that every milking can be recorded if desired, and it pays to do it. A Babcock tester easily shows the fat in a sample and often changes one's opinion as to the productiveness of the cow. There is no other way to find her butter capacity except to churn her product separately. Except as the capacity of each cow is ascertained her production is unknown and if she is not paying her way a better one is feeding her.

When the productiveness of the cow is known the older processes of gathering the cream, as pans and surface skimming, dilution separators and the like, are wasteful. If a farmer grows a crop of wheat he takes pains to save it all, gleaning if necessary after the binder, as that product can be seen, but the cream lost rarely shows and it will be established that there is from the processes noted a daily loss. Here is where the centrifugal separator comes in. It saves the better-fat.

Milk as Human Food.

Milk is very nearly a perfect food. It contains all the ingredients needed to build up the body and keep it in repair, and also the fuel to keep it warm and energy and power necessary to run the animal machine.

"We live not upon what we eat, but upon what we digest. Milk is the most easily digested of animal foods. Meat contains more nutriment to the pound than milk, but it is more difficult of digestion. It is not so much upon the nutriment contained in food, but upon the amount the body is able to assimilate that its food value depends."

"Different people differ greatly in their power of digestion and in the amount of food required, but all are alike in that they must have protein for building and repairing the body machine and fuel, sugar, starches and fats, to keep it warm and to give it power."

"Of these two classes of food, protein necessary for growth and repair, and fuel necessary for heat and energy, the former is the more expensive and the more apt to be deficient in the ordinary dietary."

"The foods rich in protein are: Fish, veal, lean beef, milk, fowl, lean pork, beans, peas, bread and eggs con-

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tain a medium amount of protein. The sugars, starches and fats are the fuels or the heat and energy producing foods.

The daily amount of protein required differs considerable with the age, occupation and with the individual, but the average requirements for men at ordinary manual labor is; .28 of a little more than one fourth of a pound. The amount of food of the fuel class for a man having a moderate amount of muscular exercise is enough to produce 2,500 calories or heat units. Men at sedentary occupations require about four-fifths this amount. The daily requirements of protein for a man at ordinary muscular exercise can be furnished in whole milk at a cost of 30 cents, in skim-milk at 10 cents, by round steak at 22 cents, chicken at 40 cents, or by oysters at \$1.35.

"All protein in milk is easily digestible, that in meat somewhat less easily digested, and that in vegetable foods difficult of digestion."

One Cow to the Acre.

"No western farmer on good land capable of growing 60 to 80 bushels of corn to the acre, according to the season, should be satisfied if when it is in pasture it does not keep a cow to the acre from the first of May to the first of November writes Henry Wallace in Wallace's Farmer." "We are quite well aware that few acres do this. On many farms it requires three acres to the cow, on average farms even in the cornbelt two acres, and only once in awhile do we find pasture good enough to keep a cow to the acre in first-class condition during the grazing season. We have done it some years, but most years we have failed. We are not satisfied, however, unless our pasture keeps a cow to the acre during the summer season."

"To do this the land must be kept rich; it must be well seeded. We do not know that there is any one kind of grass that will do it alone, except possibly an old blue grass pasture, and that only when the land is rich, when it has not been overgrazed and when it has a good deal of white clover with it."

"Next to keeping the land rich the main points is to get enough grass seed in it to fill up every available space, and such a variety of grasses as will furnish fresh bloom over as much of the year as possible. If the land has been in grass some years, so that some of the varieties of grass have weakened, it must be reseeded in order to keep down ragweed, ironweed, foxtail, and other weeds that will fight for a place wherever there is a vacancy. The point is to have no vacancy. There are many pasture lands that have been in pasture two or three years that require two acres to keep a cow that can be made to keep one to the acre if farmers will wake up and give it the proper cultivation."

"You ask how to begin? In case you are seeding down in the hope that will keep a cow to the acre, be sure you put on enough seed and have sufficient variety, and as little nurse crop as possible. In the humid sections a

nurse crop is advisable; not that a nurse crop does grass any good, but because unless you grow some kind of weeds, and a nurse crop is simply a necessary choice of the lesser of two evils.

"If you have a field that has required two acres to keep a cow during the last season, then there is something wrong with it. It either has not sufficient fertility or it has not a sufficient stand of grass; one or the other. If it has not sufficient fertility, then proceed at once to manure it, using a manure spreader and putting on from eight to ten loads of well decomposed manure to the acre as a surface dressing. If the manure has been made from hay that has more or less grass seed in it, so much the better. If you cannot conveniently put this manure on this winter, then defer it to the early spring and before doing so supply yourself with a disk drill. Then as soon as the frost is out of the ground put in a mixture of red clover, mammoth clover, and alsike clover, using four pounds each of the first and second and a pound of the last, and adding five or six pounds of timothy. Don't defer this until the ground settles, but do it as the frost is coming out, when it can be done easily. Then follow with your manure. Get it all done before the land becomes dry or baked."

"While you may not be able to carry a cow to the acre on this land the first year, you will carry more than you ever did before, and probably in the second year, or at any rate in the third, you will reach your ideal of a cow to the acre. Our land in the corn belt is becoming too high priced to allow an acre to fool along by keeping less than a cow. By a cow we mean one thousand pounds of animal, whether cow, steer, hog, or horse. Make this your ideal, the point to which you intend to work, and if you will follow our directions you will realize it. In all your seeding down put in plenty of grass seed."

Farm Cream Separator History.

Along in the early '90's the skimming station began to make a sweeping change in creamery practice. The idea had been conceived of skimming the farmer's milk at a station and shipping the cream to a central part for churning. The result was much more satisfactory for a time than anything previously undertaken. A station was built which the farmers owned, and a creamery was leased. The farmers hauled their skim-milk home. One thing that helped the industry at this time was a general period of depression, the cow seeming to be the only thing which would yield an assured income. Although prices of butter were comparatively low, the business boomed. Following this a few prosperous years came and the farmer wearied of the long haul and the small returns he was getting. He hired the hauling done; this ate up the profits. With easy money in other lines of farming and but little profit in the milk business, dairying again had a setback. Skimming stations became expensive

TIME TO BUY CREAM SEPARATORS NOW

There never was a better time to buy the best of Cream Separators than right now. The advantages derived from the use of the good Cream Separator are greater in the fall and winter than at any other time, when the cows are old in lactation, the loss of butter-fat is otherwise greatest, and butter prices are highest.

Likewise are the advantages of the superior DE LAVAL separator greatest over imitating separators when the milk is hard to separate and the weather cold and variable. In every case a DE LAVAL separator, of suitable size, will surely at least save its cost between now and July 1st next, and go on returning 100% per year on the investment for twenty years to come.

The agricultural and particularly the dairying outlook was never brighter and more promising.

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

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SEE US BEFORE PLACING YOUR stock catalog printing. Western Printing Co., Ptg. Dept. of Kansas Farmer, Topeka, Kan.

FOR SALE—25 FANCY BRED, GRADE Holstein heifers due to calf by registered Holstein bull this winter. H. B. Browning, Linwood, Kan.

FOR SALE—FULL BLOOD RED Polled bull, eleven months old. Duroc Jersey hogs. 70 head to select from; priced right. I. W. Poulton, Medora, Kansas.

JERSEY CATTLE, CHOICE BULL calves of the very best breeding \$25.00 each. A few cows and heifers. H. C. Young, Wineland Farm Dairy, Lincoln, Neb.

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SHETLAND PONIES—WRITE OR COME and see us; we are sure to please you. Low prices for 30 days only. Clark Bros., Auburn, Nebraska.

FOR SALE OR TRADE—ONE JACK was two years old August 5; weight 750 pounds, is 14½ hands high and has very heavy bones. Earl Wilson, Palmer, Kan.

FOR SALE—CHEAP, OUR IMPORTED Shire stallion, 5 years, weighs ton, sure breeder, can show colts. Nebraska State Fair winner. Address Lee Roy Judd, Dawson, Kan.

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O. I. C. BOARS OF ALL AGES AT farmer's prices. Prize winning stock. Arthur Mosse, R. F. D. No. 5, Leavenworth, Kan.

POLAND CHINA BOARS, PURE BRED, fine individuals. 175 lbs., big boned, growthy, no culls. A. P. Wright, Valley Center, Kan.

Painted and the tires tight, but have kept it housed.

When I raise alfalfa seed I stalk it with care. About wasting seed, when I thrash it I lay down canvas on the ground and drive separators on it, and by so doing I save all the seed and it is much less work to clean up. Think when thrashing it would pay to spread a canvas on the ground. Then when the grain is thrashed, it seems as though they do not see how good a job they can do, but to get through with it as soon as they can. I use considerable straw for bedding and have concluded that much grain is wasted in Kansas by machines not being in proper condition for work. My experience with thrashing causes me to think it is a mistake to use teeth in cylinder or concave after they are worn considerably, as the machine will not do as good work as when teeth are new.

I sometimes am inclined to say that the Kansas farmers' methods need revising as much as the tariff, but I consider that the farmers of Kansas, though wasteful and shiftless in many of their ways, manage their affairs much better than Congress does the tariff. I consider an up-to-date farmer one that uses good seed, especially corn; one who raises as good stock as he can and then feeds it well, and who does not try to see how cheap he can raise it; one who attends the farmers' institutes and fairs. I used to go to fairs, not to learn so much as to see what there was on exhibition, but now consider it time well spent for what I can learn, and the acquaintances one forms at such places I consider valuable.

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FARM FOR SALE: S. W. ¼ SEC. 1, 5½ miles N. W. of Medford, the county seat of Grant county, 1½ miles east of Clyde on Santa Fe. Will sell cheap if taken at once. The rental, third of crop, amounted to over \$500 to the landlord. For particulars write to P. W. Enns, Newton, Kan.

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FOR SALE—3 QUARTER SECTION OF land on the north slope of wheat ridge, 6 miles south of Dodge City, Ford Co., Kan. Price is right. 135 a. in wheat, good stand, good terms. Buy of me and save commission. W. S. Marion, owner, Dodge City, Kan.

KING ALFALFA MAKES FORTUNES for owners of Eastern Colorado sub-irrigated low-priced farm lands, near Denver. Send for our alfalfa literature, Colorado Farm Land Association, 279 Dearborn St., Chicago, Ill. Live agents wanted in town or country.

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MISCELLANEOUS.

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"EVERY FEATHER BUFF" LEGHORNS and Rocks, best grown, \$2 each. Mrs. Cora Ben, Moline, Kan.

BARRED ROCK COCKERELS FOR SALE at reasonable prices. Mrs. E. L. Rice, Route 2, Eureka, Kan.

S. C. W. LEGHORN COCKERELS, farm raised, two for \$5, one for \$3. Carrie Dawdy, Jewell, Kan.

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PURE BRED SINGLE COMB WHITE Leghorn cockerels at \$2 each; pullets at \$1 each. Ray Woodson, Douglas, Kan.

FOR SALE—Single Comb Buff Orpington cockerels, hens and pullets; also Buff Orpington ducks. C. B. Owen, Lawrence, Kan.

WHITE PLYMOUTH ROCK COCKERELS prize winners at \$1.50 and \$1.00 each; also Pekin drakes \$1.00 each. L. T. Spellman, Route 8, Paola, Kan.

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LAYING STRAIN ROSE COMB BROWN Leghorn cockerels, fine birds, no disqualification. \$1.00 each. Selected for high scoring \$2 to \$5 each; yearling hens, \$12 per doz.; return if not satisfied. H. M. Johnson, Formoso, Kan.

FOR SALE—S. C. W. LEGHORN COCK-erels. Pure white, farm range. Price \$1 to \$3 if ordered this month. Satisfaction guaranteed. These birds are equal to the birds from the East that sell from \$5 to \$10. Mrs. J. W. Cook, Route 3, Hutchinson, Kan.

FOR SALE—18 DIFFERENT VARIETIES of thoroughbred poultry, cocks and cockerels. 3 kinds of ducks, geese, turkeys, guineas, bantams, dogs, white rabbits, all kinds of fancy pigeons. Write for free circular. D. L. Bruen, Platte Center, Neb.

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FOR SALE—Brown and black spaniels, both sexes, good ones, cheap; closing out. Thorndale Kennels, Wayne, Kan.

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

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

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

LAWYERS.

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

to operate because of the small amount of milk handled, and it looked as though many of the small centralizing plants had met their doom. For mutual protection, and with a hope of building up the business again, many of these smaller creameries consolidated, forming large companies. A few enterprising men had by this time taken up the crusade for the farm separator.

Separators have become commonly known through the use of power machines at creameries and separating stations. The farm separator is the same machine, but of a size and pattern suited to do the work on the farm. Generally it is small and operated by a crank turned by hand. But it may be fitted for use with a dog, bullock, or other animal, or by water, or any power convenient on the farm. Hence, while the farm separator is usually regarded as a hand machine the way in which it is operated is merely a matter of suitability and local economy.

They were frowned upon at first by all conservative creamerymen. Separator agents multiplied, however, and began to pile up evidence that the farmer could cut off the great expense of hauling milk both ways, and farmers began to buy.

It soon became evident that the farmer was going to have a separator. The conservative creameryman now began to see that, if the farmer bought a separator and was opposed by his creamery in so doing, the cream would go somewhere else. This opened up the whole territory west of the Missouri River, and the creameries, large and small, began to push the farm separator. The separating station dropped out of view almost as suddenly as it had appeared scarcely ten years before. Separator companies could not keep up with their orders. Farmers could hardly wait until a machine could be delivered to them. To be sure, this great demand was not created in a day. The pioneer work for the farm separator was slow and discouraging to those who were carefully fostering its interests. The farmer had already bought a creamery and then a skimming station, and it was almost the "last straw" to ask him to buy a separator. Here and there a machine was sold, and the leaven began to work. Today the creamery business of Kansas and Nebraska is on the cream-gathering system, and the farmer has the separator in his home. In the more thickly settled portions, a few skimming stations still remain but their days are numbered.

The day of speculation as to the probably trend of the business is past. The farmer now has a separator and the creamery has the product from it. The question is no longer, Will the creameryman sell machines? but, What can the farmer and the buyer of the cream do to make their use more profitable to all concerned? This issue must be met intelligently on both sides. The farmer must learn that he has a big part in the final success of the system, and the creameryman must learn that it does not all depend upon the farmer, but that there are things in factory management which he must study and improve.—Ed. H. Webster, in United States Government bulletin.

DAILY FARM LOSSES.

By J. A. Gifford, Beloit, Kan.

You have touched an important subject, viz. "Farm Leakage," and I hardly know where to begin or to leave off, for there are so many leaks. I used to stack my hay, thinking I was not able to build a hay barn, until after seeing how much I lost by having a barn to put it in I concluded that instead of not being able to build a barn I was not able to get along without one. I then built a barn for hay in the center of the field that was some ways off from the house. I found it did not cost much, and it stopped a leakage worse than bank interest.

The custom of leaving farm machinery out the year round without housing it, I consider a great mistake. It costs but a small amount to build a shed suitable to house farmtools. Then, I see farmers are inclined to back machinery up in some corner when it gets a little out of repair and to get new. Think there should be repair shops where machinery could be taken and repaired properly. I have a spring wagon made in 1868, in good repair, yet have not been obliged to repair it much except to keep it

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Ever have a fine, high-strung horse go mysteriously wrong just as you were closing up a trade with a gyp dealer? You did not know it then, but that gyp made the horse act mean—gave him "dog water," "hop up," or some similar dope.

Gyps have tricks when buying as well as when selling, which make your horse appear lame, sick, broken-winded, weak-eyed or balky, so you are willing to sell for less than your original figure.

Learn how to protect yourself against such tricks, which are fully explained in HORSE SECRETS, an expose of the tricks and dopes used by gyps and peddlers. It also discloses many secrets heretofore carefully guarded and explains the methods of reputable horsemen.

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LIVE STOCK



Rape is a most valuable crop for summer and fall pasture, partly on account of its providing excellent pasture until late in the fall, and also because it is very useful in cleaning the land. As a food for dry cattle, sheep and hogs it is most excellent, furnishing an abundant pasture from the latter part of July until very late in the fall. The expense of seeding is trifling, as the seed costs but a few cents per pound, and from two to three pounds is sufficient for an acre, providing it is sown in drills, which is the proper way to sow it. Any soil which will produce a good crop of turnips will give a good crop of rape.

"What is the best breed of hogs?" This is a question that has been agitating the public mind these many years. But in the essential qualities of meat, pork and lard produced at the least cost of feed consumed there is no contention of breed difference that is influencing in this particular feature of the hog industry. The possibilities of the hog is a matter almost wholly in the hands of the feeder. The skill of all men is not alike for one man will bring about greater results than another, and this skill is far more important in the development of a good hog than the breed. All breeds are good. Among all breeders and feeders there are those incapable of bringing out the best in any breed.

A leading swine grower before a meeting of hog men said: "The purpose or final end of the feeding operation is to produce a hog with strong, bony frame work and a development of muscles to such an extent that all the vital organs, such as the lungs, heart, digestive and reproductive organs, will be as perfect as possible when the hog is matured. To do this, the scientific, or, as I would rather call it, the systematic way of feeding must come into operation. Feeds high in protein and ash must be used or the development will not be so complete as it otherwise would be. Any of the following feeds may be used: wheat, wheat shorts, middlings, oil meal, oat shorts, packing house by-products, alfalfa and clover pastures. The ration should consist for the most part of one or a combination of these feeds. Every man has an idea of what combination he likes best."

"There are too many young pigs whose usefulness is impaired by feeding too much corn," writes W. J. Hartung, an Iowa breeder. "I find in my own experience that I am well paid for all the cost of the additional feeds, as there is less risk of disease and they put on better gain, and therefore I can make a greater profit. I think a farmer ought to raise more of this protein feed himself. I believe it can be done. I will tell you how I am solving the question. I mix wheat and oats about half and half and sow them together and have raised from 30 to 50 bushels per acre. I do not like too much oats with it, as after it is ground the hull of the oats make too much bulk. I have gasoline power and do my own grinding and I take this wheat after it is ground with corn and a very small part of oil meal or tankage and it makes a ration for the young and old alike and they eat it with a relish."

The Cost of Silo Filling.

By Fred G. Miner in Review.

The silo we use is 20 by 40 feet with a capacity of nearly 300 tons. To fill this economically and in time necessarily requires quite a little figuring ahead. The first year we filled the silo it cost us nearly 50 cents a ton. We have gradually cut this down until this year, it was filled at 25 cents a ton.

It is one thing to plan and another to follow the planning. Here are our net results: Thirteen men at \$1.50,

\$19.50; four teams, at 50 cents each, \$2.00; engine and man to run it, \$5.00; meals, \$3.00; coal, \$2.50. Total, \$32.00, for one day's work. We filled the silo in two days. How did we do this? We own our own corn binder and ensilage cutter, so we did not take these into account. We used three teams of our own, so did not have to hire all the teams. We stationed our men in the following manner: One man and team for the binder; three men to help load in the field; six men with their teams to haul to the machine; two men at the machine to feed oil and look after things generally; and one man in the silo. Putting 128 tons into the silo for \$32.00 figures it at 25 cents per ton. But we did better than this. Nearly 150 tons went in per day. We hope to reduce this expense and I believe we can. This year we had two men unloading at the machine all the time. Before this we have had but one. With the two men we were able to feed the machine more regularly and of course we accomplished more.

One way in which we might reduce expenses would be to get more of our neighbors interested in the silo so that we could change work with them. We could then do all the work with our teams and our regular farm help. Then, too, the same machine would do the work for several neighbors.

At first we made the mistake of making the bundles too large. We have learned that our men will handle three medium sized bundles more easily and quickly than two large bundles. We have also been studying the kind of rack best suited for hauling. We find a very low wagon preferable. We like a wagon with the top of the rack not more than 30 or less than 24 inches high. A too high wagon is slow unloading and a too low slow unloading. We have used different styles of racks and we are not yet sure just which is the best. It is somewhat like the tariff—a matter of local issue. Some of our men prefer one style while others do equally as well work with another. But for a general guide all racks that are more than three feet should have a solid top. Narrow racks do not need this for the man can as well unload standing on the ground as on the wagon.

Improve Time; That's All.

A successful Indiana farmer read a paper before a meeting of his neighbors in which he said:

"To be a farmer of the present time, one must be learned in chemistry, a good carpenter, a fair machinist, an ordinary house painter, an accurate bookkeeper, a good veterinary surgeon, a competent civil engineer, know enough about law to keep out of court, be a shrewd buyer, an affable salesman and a good citizen."

"The proper use of your time will produce a good farmer. The successful man in the city never sleeps. He does not have one-tenth part of the recreation the farmer has, but he does have ten times as much trouble to succeed. There are plenty of men who will make good farmers and some of their sons will succeed in farming and others will be amongst the best business men in the world."

Salting Cattle.

Every farmer salts his cattle. It is not always provided regularly or in any particular quantity, but each owner figures that his cattle are getting sufficient salt. The Wisconsin Experiment Station went into this matter deeply and thoroughly to find the real necessity for salt. The result was that it was found that when salt was kept away from cows for a long time, say, several months, a condition of low vitality ensued which if continued too far resulted in a complete breakdown. When salt was supplied the cows recovered at once. The time of break-down comes generally right after calving, and the best cows showed this tendency the most.

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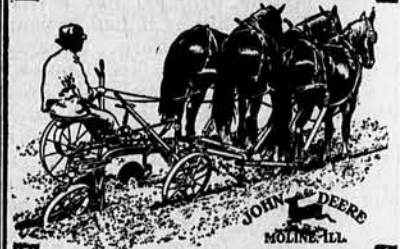
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Governor Deneen, of Illinois, owns a section of land in Saskatchewan, Canada. He has said in an interview: "As an American I am delighted to see the remarkable progress of Western Canada. Our people are flocking across the boundary in thousands, and I have not yet met one who admitted he had made a mistake. They are all doing well. There is scarcely a community in the Middle or Western States that has not a representative in Manitoba, Saskatchewan or Alberta."

125 Million Bushels of Wheat in 1909

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Law Concerning Glanders.

When an animal is found to have glanders, it is the person's duty to notify the sheriff of his county and tell the owner at the same time. This will be virtually quarantining the animal.

The law prohibits the sale of giving away of any animal affected with a contagious disease. The sheriff may then quarantine the animal or animals or the whole premises on which the animal has been found. It is the duty of the sheriff to notify the Live Stock Sanitary Commissioner, whose office is in the State House, Topeka, and he will then take charge of the case.

As the owner receives no compensation from the state and the animal is a dead loss, the custom has been that when an animal has been found to be suffering with this disease, the veterinarian and the owner together dispose of the animal by killing and either burning or burying the carcass and then disinfecting the premises, stables, harness, neck yokes, watering troughs, buckets and in fact everything in which the animal has come in contact with, and which is liable to harbor germs, and spread the disease.

This plan when properly carried out saves considerable time and annoyance and frequently the spread of the disease. Government Mallein will be furnished free of charge, by the Veterinary Department of the S. A. C. at Manhattan, to veterinarians making the test provided that they report the results.

Important Hog Feeding Tests.

For four years Professor Dietrich, of the Illinois Experiment Station has been endeavoring to establish an exact fundamental basis for the feeding of hogs. He has learned a few things but the most important conclusion reached is that "Nobody knows yet how to feed a hog." His work has had to deal with 400 hogs, each record from pigs to hogs on the Experiment Station farm.

It is Professor Dietrich's desire to ascertain exact proportions and quantities of feed in rations that would produce the most pork at the least expense. Some men have obtained good results, but they are not uniform from year to year, and these results cannot be surely traced to their causes. It has been too much like guessing and gambling. He says that pig feeding will not be mastered until we get the largest and most economical gains and get them every time. He has been able to make 40 per

cent greater gain in live weight and at less cost per pound, by his method of feeding than by the accepted feeding standard. In two lots he made his pigs weigh 280 pounds at eight months.

Professor Dietrich is certain that we must make the pig eat more. He says the appetite of the pig is not always a safe guide as to the amount of feed that may be consumed to the best advantage. Under five or six months of age he will eat too much of a concentrated food, and above that age he will eat too little. These tests show that pigs may be induced to eat 14 per cent more feed for the six months, than pigs otherwise fed.

During the second month of a pig's life it should have a thin slop, so that it will get enough water and not an excess of nutrients.

In the one experiment it was observed that a definite amount of water in a ration has an important bearing on the extent and the economy of gains made by pigs. When pigs have free access to water they apparently drink too much during the hot days of summer and do not drink enough in winter.

Professor Dietrich suggests the following approximate ration, as coming somewhere near his more exact method. The figures stand for pounds of feed per day per 100 pounds live weight of the pig, and are for the second, third, fourth, fifth, sixth, seventh and eighth month of its life, respectively:

Finely ground corn, 2.6, 2.8, 3, 3.2, 3.3, 3, 2.6.

Soy-bean meal, ground fine, .8, .9, 1, .6, .8, .4, .4.

Skim-milk, 6, 6, 6, 6, 6, 0, 0.

Water, 6.6, 5.1, 3.8, 2.6, 1.4, 5.5, 4.

If corn is not available, rye, barley, wheat, rice, etc., may be used instead. If soy-beans are not at hand, peas may be used, but the quantity must be increased as peas do not contain as much protein. This would also increase the carbohydrate, hence the corn would have to be correspondingly decreased. Or these may be left out and more skim-milk added. Some of the protein may also be supplied in the form of clover or alfalfa. If skim-milk is not available more of some other nitrogenous feed may be supplied and also more water as milk is 85 to 90 per cent water.

By giving pigs access to a clover pasture in addition to ground corn, water and mineral matter during the first half of a six months' feeding period, they made 2.7 times as much

gain in live weight as was made by the pigs that had ground corn, water and mineral matter but no clover.

By feeding pigs a bulky ration during the early part of their life, when their capacity for eating feed is greater than their ability to utilize the digested material, the appetite may be satisfied, the digestible nutrients held down to the proper point, and the capacity largely retained. Later, substitute concentrates for bulky foods.

A ration for maximum efficiency should also be well provided with variety; that is, it should contain a large number of feeds rather than only two or three. The greater the number of feeds in a ration, the greater will be the probability of supplying what the pigs need.

Winter Feeding Calves.

Recent tests at the Colorado Experiment Station tend to show that the yearling steer makes larger gains on less feed than the 2-year-old. The more rapidly you can push a meat animal to maturity the greater the profit. The work was done in an attempt to find whether it pays to grain feed steers that are to be carried over on range another season or two.

The first question to which an answer was sought, was whether it is profitable to winter-feed calves destined to be finished and sold as 2-year-olds. Some of the calves fed during the winter were given a ration of four pounds per head of corn, with all the alfalfa hay they wanted; while others were fed 20 pounds of sugar beets, with alfalfa hay. These calves gained on the average 259 pounds per head during the winter, only 31 pounds less than they gained the next winter as yearlings. The fall that they were yearlings they weighed 140 pounds per head more than steers of the same crop brought in from the range as yearlings. The next spring they were only 110 pounds heavier; the next fall 99 pounds heavier, and the spring they were marketed 39 pounds lighter than the steers brought from the range as yearlings. The gradual decrease in the margin between the two sets of steers indicates that the winter-feeding as calves hastened the steers to maturity and consequently lessened their capacity for gain each successive season at a rapid rate.

Another way to look at the question is to compare the gains made each year by the same lot of steers. The lot fed as calves made a gain of 400

pounds per head the first winter and succeeding summer; the next year they made 352 pounds gain per head, already starting down hill, you notice, and the last winter they made a gain of only 223 pounds per head or 36 pounds per head less than they made the winter they were calves.

Considering the year when they were one year old, they made a gain of 431 pounds, as against a gain of 285 pounds when 2-year-olds. And the steers that were not fed until they were yearlings made a gain of 456 pounds the year that they were twos.

Thus, any way one wishes to look at the problem, the feeding of calves does not appear profitable if they are to be held over for finishing as aged steers.

Alfalfa Hay for Brood Sows.

On the farm of former Governor Hoard, in Jefferson county, Wis., all the brood sows have for several years wintered on alfalfa hay of the season's third cutting, and their drink (skim-milk from the dairy), without any grain until the last two weeks of gestation. Mr. Hoard says the object is to give the sows a food that will keep them in a non-feverish state and furnish protein sufficient to build the bodies of the forthcoming pigs.—Coburn's "Swine in America."

Hog Economy.

The hog, properly fed and handled, will give the farmer for a bushel of corn double the pounds of gain that the steer will from the same bushel of corn. The natural usual increase of cattle is 60 to 80 per cent on the farm, the hog is 500 per cent. The steer is two years in getting to market, the hog is cash in eight months. The feeding of a hog is not a matter of throwing the feed in the lot. Feed is high in price, but pork is high. The right kind of a feeder can make money feeding grain at present prices of grain and pork.

For his own good the farmer should be sure his herd, whether beef or dairy, is free from tuberculosis. The skill of a veterinarian is not necessarily required to apply the tuberculin test. Any intelligent, pains-taking person can apply the test, but some care must be used in interpreting the results. Experience will teach this. When the farmer understands testing himself and gets to work with it and thinking about it he acquires more confidence than if he depends on others to do the job for him.



Table Tools

The temper of a carving knife should be unusual—so that the knife will cut easily without being worn out on the sharpening steel.

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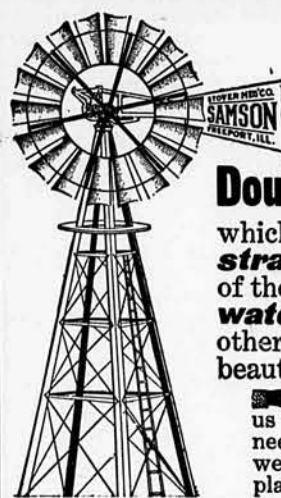
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THE FARM



At a farmers institute last week at Argonia attended by the editor many questions were asked regarding seed corn, how to select it, how to care for it and where to get it. The questions were answered by Professor Wheeler, of Kansas farmers' institute force. His directions regarding selection and care were similar to those given in last week's KANSAS FARMER. The seed corn question is a live one at this time. The article of Professor Holden, of Iowa, in last week's paper should be saved and read and re-read. It answers the first two parts of the inquiry. On where to get seed corn Professor Wheeler's advice was brief and to the point. Buy as near home as possible. Do not move the seed more than 30 or 40 miles. Seed corn moved greater distances is generally disappointing.

At this same institute farmers showed great familiarity with the principles of scientific feeding. They talked about a balanced ration as if they had always fed such a ration. A few years ago the institute speaker who referred to a balanced ration expected a considerable part of his audience to make a break for the door. This writer does not like the term "balanced ration." In the Kansas language it means alfalfa and corn. A balanced ration is an economical ration, a common sense ration. Its use means supplying the animal with the constituents in feed as needed by the animal body. In the body there is fat, lean meat and bone and each of these can be made from only certain elements of feed. The feed which makes bone will not make fat or vice versa.

In the matter of feeding the principal discussion was regarding the feeding of hogs and the profitable fattening of the same on corn at the present high prices. The discussion was led by a neighborhood feeder who feeds every year and who had recently sold, if we remember correctly, about \$14,000 worth of hogs this year, a large part of the amount within the past few weeks. This feeder says he can make money feeding hogs on 75 cent corn. He pastures alfalfa and rears his stock hogs well. He grows a hog of big bone, healthy and vigorous before he goes onto feed, weighing near 150 pounds. The hog gets a ration of corn and tankage and the feeder can actually see the fat produced.

It is this editor's judgment that the science of feeding hogs has made greater headway among farmers within the last few years than the feeding of other farm animals. Alfalfa hay and alfalfa pasture, together with the use of skim-milk is responsible for the advance. Any man who knows the composition of alfalfa and observes how it makes the animals thrive can plainly see that protein is a highly necessary element in the animal body. Where there is plenty of alfalfa the best of all kinds of farm animals are seen and farmers are best pleased with live stock farming.

Professor Wheeler, besides taking a hand in the discussion on feeding, spoke on the principles of breeding. By charts he showed the conformation of the early steer, the wild steer in fact, and wherein it differed from the perfect beef type of today. The present type of beef steer is the result of careful breeding and good feeding. The good beef type is an economical feeder compared with the range steer. The good beef type uses his feed in the production of high priced cuts and so commands a price per 100 pounds on the market in advance of the common type or scrub. The same principle applies in feeding and value of all farm animals. Breeding, feeding and environment have improved our animals. Only by continuing these under favorable conditions will they continue to improve.

Some samples of very good corn were shown. The samples were of this year's crop and were shown by farmers who are endeavoring to secure large yields by improved seed. The old question as to whether white or yellow corn had the greater feeding value came up. The question was no nearer settled at the close of the institute than at the opening. We think there is little difference in feeding value and little difference in yield if the best varieties of each are grown. Plenty of either will make a world of pork, beef and milk if fed to the right kind of animal in combination with alfalfa hay.

Farmers in attendance at this institute were thinking of the soil fertility problem. They realize that the straw stacks burned in the past years resulted in everlasting loss to the farms on which they were burned. Their county is growing a smaller wheat acreage now than years ago. Each year the corn acreage is increasing. This shows the tendency to live stock farming, the production of feeds which can be consumed on the farm and these feeds will be of such nature as will not rob the soil but improve it. The feeding will produce manure and with the spreader will go onto the land from which the crops came. One farmer said he had discovered the value of cow-peas as a catch crop, sown after wheat harvest and also drilled in the corn after the last cultivation. The vines he left on the ground and plowed under and the results were apparent in the increased yield of grain the following season.

The dairy business was discussed by this editor. In their progress on other lines dairying has not been overlooked. While conducted as a side issue at present, it is safe to say that the next few years will find it the main issue on many farms. The dairy discussion very naturally drifted to the feeding of skim-milk to calves. In every locality this question is important to the dairy farmer. The successful feeding of skim-milk is easy. Not too much milk, fed from clean utensils, fed warm and sweet from the separator and with it a sufficient quantity of corn or Kaffir corn to replace the fat taken from the milk the calf will thrive. Feed some whole milk until the calf eats grain. Feed good roughage. Keep the calf comfortably housed. This brief recipe will produce a good calf. The recipe must include some good judgment, which can only be supplied by the feeder himself.

At this institute the farmer's wife and daughter were not overlooked. Mrs. Brown of Kansas farmers' institute staff, talked interestingly and instructively about many things—principally about fireless cookery. A few years ago fireless cookery was looked upon as a fad. No longer so. It is a practical thing. In city homes it is used to greater extent probably because the city man must buy every bit of his fuel. He must save fuel—gas, electricity, coal, etc. The farmer does not feel the necessity of fuel economy to such an extent as the city man, but that is no reason why he should not buy a cooker for his wife. There is another reason the city woman uses the cooker. That is because it gives her more time to go to the theater and the club. Would not the farmer's wife like a little more spare time, to read maybe? The fireless cooker will save time for any woman who uses it. This editor's wife uses one and the editor knows. Mrs. Brown is employed by the people of Kansas. You can write her at Manhattan, Kan., for information.

Guy Gould, cream buyer for the Continental Creamery Co. at Argonia, was instrumental in a large part for the success of the institute. He did the hustling among farmers, urging their attendance. Besides this he treated the members of the institute to a free dinner. Mr. Gould is secretary of the institute organization.

MOVING PICTURES

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"TRADE NAME" FOR A MEDICINAL, TONIC PREPARATION The United States Government issued me a Trade Mark No. 22386 on the world famous lines, 3 Feeds for One Cent—as showing how cheaply International Stock Food can be mixed with the regular grain feed—My label shows a list of the medicinal ingredients used and 250,000 Dealers have sold "International Stock Food" for over 20 years as a medicinal tonic preparation.

Mr. F. A. Hawley, Waverly, Neb., Won in the Forest Patch Contest

18 Acres of Floor Space Covers Over A City Block



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Covers Over a City Block and Contains Over 18 Acres of Floor Space

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Dan Patch Stable Disinfectant
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ASK YOUR DEALER FOR ANY OF THESE PREPARATIONS and insist on having what you ask for. Beware of many cheap and inferior substitutes and imitations. High Class Dealers Sell My Preparations on my Spot Cash Guarantee to refund your money if they ever fail.

Signed, M. W. SAVAGE, Owner of International Stock Food Co.—and also—International Stock Food Farm

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DAN PATCH, 1:55 HAS PACED

1 MILE IN	1:55
1 MILE IN	1:55½
2 MILES IN	1:56
14 MILES AVERAGING	1:56½
30 MILES AVERAGING	1:57½
45 MILES AVERAGING	1:58
75 MILES AVERAGING	1:59½
120 MILES AVERAGING	2:02½

DAN HAS BROKEN WORLD RECORDS 14 TIMES

In addition to all these records Dan Patch is proving to be one of the greatest sires of both pacers and trotters in all horse history—Look up his large official list of standard performers.

Dan Patch 1:55 has gone more extremely fast miles than the combined miles of all the trotters and pacers that have ever lived. Be sure and remember these facts when you think of some horse equalling Dan's marvelous performances.

For seven years Dan Patch has eaten "International Stock Food" every day mixed in his regular grain feed. It has given Dan Purer Blood, More Strength, More Endurance, More Speed and Perfect Health. It is constantly used and strongly endorsed by over Two Million Farmers and Stock Breeders, as the greatest Animal Tonic, and has been for 20 years. No other preparation has such strong United States Government and practical stock breeders endorsement, as has International Stock Food.

POULTRY



No vegetable makes better succulent food for the hens in winter than the beet when boiled or pulped in a root cutter.

Chopped onions are also very good for all kinds of poultry. Onions are not only invigorating, but are excellent when the fowls are subject to colds.

Poultrymen would make more money if they would find regular customers who would take their eggs two or three times a week, while they were perfectly fresh. Such customers would not be hard to find in almost any village and they would be willing to pay a little more than the regular store prices for them. But the eggs must be fresh and clean every time. The same thing is true of well-fattened and newly dressed chickens.

An old experienced poultry breeder told us the other day of a simple remedy for roup that he has used for years and has never failed to cure the worst cases. He takes June cider vinegar and bathes the head, nostrils and throat of the fowl quite liberally with it two or three times a day. If the fowl swallows a little of the vinegar it won't do any harm. The breeder was particular in stating that the vinegar must be the pure stuff and not the manufactured article that we generally get at the stores. Another simple remedy for roup is to dip the fowl's head into a cupful of salt brine until the fowl commences to strangle.

Possibly the failures in raising poultry are not dwelt upon as much as the successes. One must avoid the rocks as much as they would strive for the open sea of success where everything goes along swimmingly. Overcrowding fowls in the roosts or range must always be counted as one of the worst rocks on which poultrymen steer with more or less disaster. Fifty hens in an overcrowded house will not lay as many eggs as 25 that are not crowded, and they will eat twice as much.

A hen house may be plastered, cemented or lined with tar paper or oiled muslin. All that is necessary is to tack on the paper and fasten lightly in place with lath. By so doing all the cracks will be closed and the house rendered warm and comfortable. It is not the large openings that cause colds and roup, but the small streams of cold air that come and give the birds that may be roosting near them swelled heads and closed eyes. If the comb is large, a hole no bigger than the head of a pin may let in a constant stream of air, which, coming in contact with the comb, may cause it to be frosted, in which case the pain is so severe that the bird will be useless until a portion rots off and the comb heals up again.

There are thousands of persons deterred from entering the poultry business on account of the dread they have of cholera getting among their fowls and the consequent results. Now there is no more danger of cholera among chickens than there is of cholera among hogs or cattle and if properly attended to, there is no danger at all. A farmer in Brown county not long ago wrote to his county paper stating he had been breeding hogs for 25 or 30 years and had never been troubled with a case of cholera, while his neighbor's hogs were dying all around him, with this disease. He attributed his immunity from attack to the fact that he changed the location of his hog pens every season, plowing up the old pen and sowing it to oats or rye. We believe that farmer did the right thing and that the same methods applied to poultry yards will solve the poultry cholera. Perfect cleanliness about the yards and poul-

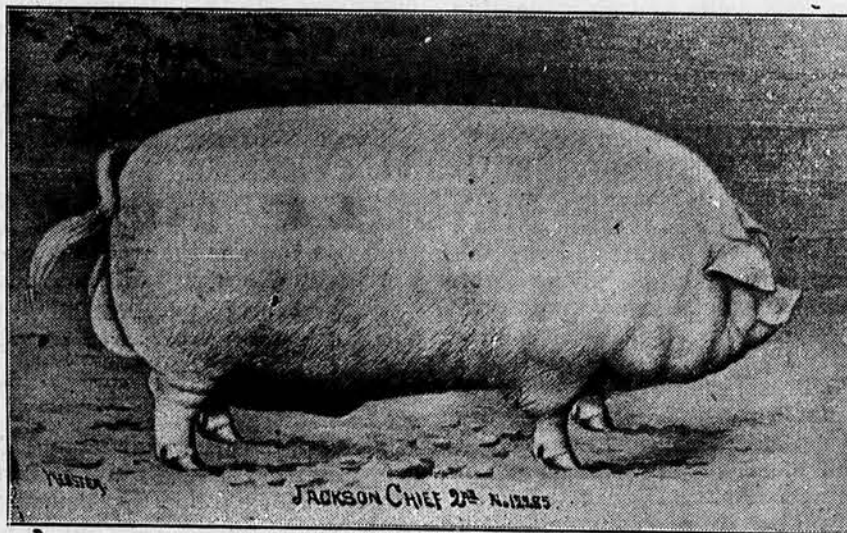
try houses is indispensable to the health of the fowls. If new yards cannot be given them, the old ones ought to be spaded up each spring. The habit of throwing the feed of fowls and hogs on the ground, in the midst of all the filth of their surroundings, is what causes this disease and until the method of feeding is changed cholera will be prevalent. On the other hand, if the yards and houses are kept clean, the feed and water fed in clean vessels and the yards changed or spaded up each spring, cholera will be unknown and disease of all kinds will become an unknown quantity. The writer has raised poultry for 25 years and has never had cholera in his flock.

How to Destroy Rats.

My object in writing is to inform your readers how I keep my own hen that it is a splendid disinfectant, and

trouble with rats. That is how I cleared the premises of the vermin in quantity; already I have pointed out that it is a much easier matter to get rid of one, two or three.

Some eight or nine years ago I erected a new sleeping house and covered-in run. Before the boards were nailed up I dug a trench about a foot deep and about the same breadth along the back and end of the house which were exposed to outside intruders. The trench extended about six inches outside the uprights and three inches inside. This trench was then filled with dirty tar, i. e., tar which could not be used for mercantile purposes. Inside the house and run it was covered with soil to the depth of eight inches or nine inches; outside it had only a slight covering. In that house and run I have never seen the slightest trace of rats or mice. Another method I have seen used with good effect is to catch a rat alive, smear him well with tar and then release him near a hole into which he will plunge, causing a great consternation among, and very probably insuring the removal of the whole fraternity. The tarred rat carries the stickiness with him, and nothing upsets rats more quickly than to have their fine coats soiled with tar.



Jackson Chief 12285 at the head of the fine O. I. C. herd belonging to W. H. Lynch, Reading, Kan.

runs clear of both rats and mice. Like other poultry-keepers I have had frequent visits from these destructive pests, but their visits have always been of the shortest duration. At all times I have on the premises a drum of Archangel tar, and on the slightest trace of a call from either Mr. Rat or Master Mouse the tar is applied to their tracks. The holes they make I fill with tar as soon as observed, and the process finishes these places for either egress or ingress. Should the visitor seem determined to have a lodgment where he is not wanted and make entrance at another part, the process is repeated. This done as often as need be, and generally it is not required more than twice or thrice, soon convinces the intruder that he is unwelcome, and he betakes himself to quarters more congenial. If the holes are made in places where the tar would soil the hen's feet, then the holes are covered up after as much tar has been run into them as they will take. That this process is effective I have proved.

Some thirty years ago I went to reside in a village about six miles from my present residence. I found the place infested with rats. I at once set to work to effect a clearance, although I had been told by the previous occupant that he had tried everything to clear them out, but without success. We have an old saying that "it is easier to keep out than to put out." On that occasion I had to "put out." To cope with the problem I got a ten-gallon drum of tar, which was thoroughly thinned by heating it. By means of a small can the tar was poured into the holes so long as they would take it in, and before all were filled I had nearly exhausted my supply, but it was a complete cure. I had no more

so long as the feet of the fowls are kept clear of it, nothing but good can come to their health.—Poultry, England.

Look to the Egg Basket.

Pullets should be grown, or nearly so, and should be laying or showing inclinations that way, now. The hens should be young, active, and of known value as layers to be profitable through the winter months. Don't keep the culls, the loafers, the puny, weakly chicks around. Cull them out, clean up, make room for the members of the flock that mean business, push them with any food that is appetizing, give them lots of clean straw, and sell thirty cent eggs this winter.

Poultry Values.

You know that the cockerels that you are selling now were worth twice as much a pound when they were half as old, and that you have been feeding them two or three months solely for the pleasure of their company; do you know that the old hens you are now selling have produced very little since the time they were worth 50 per cent more on the market? Every day you keep marketable chickens whose intentions toward the egg basket are not honorable, means loss; cull them out, then cull again and again until it hurts.

How Lincoln Saved Thirty Dollars.

While Lincoln was practising law in Springfield the fire-hose company, desiring to buy some new apparatus, sent out subscription papers, and our youthful collector called upon the future president. He was closely examined on the purpose of the subscription, and finally Lincoln agreed to subscribe in this fashion. "Well, I'll tell you what I'll do. I'll go home to supper—Mrs. Lincoln is generally good-natured after supper—and then I'll tell her I've been thinking of giving \$50 to the brigade, and she'll say: 'Abe, you will never have any sense! Twenty dollars is quite enough.' So tomorrow, my boy, you come around and get your \$20."

Terms With Tenants.

Readers of agricultural papers are familiar with the frequently reported operations of the Funk corn farms of Illinois. When Prof. Cottrell left Kansas Experiment Station he went to the Funk farms. Arthur Bill reports that Mr. Funk requires that clover be grown in rotation with corn and small grain on all his tenants' farms, but as the tenants do not have enough live stock to feed all this clover, by special terms of the lease, Mr. Funk's foreman takes charge of all the meadows, withdrawing them from the lease clover years, and puts up the hay for Mr. Funk. By the terms of the lease Mr. Funk has the use of all the stock fields and stubble fields on the tenant land, and thus utilizes a large amount of valuable feed that would otherwise go to waste, and prevents damage to the grounds by the tramping of live stock when the fields are muddy. Hundreds of sheep and hogs are pastured in the stubble fields on the catch crops of clover.

Mr. Funk is one of the men who sometimes practice July and August cultivation of corn when necessary to save the moisture in the ground. Last summer he used a one-horse cultivator in one field and a planter wheel dragged flat wise in another field in August. Rape sown at the last cultivation in 120 acres of corn provided him an immense amount of sheep feed.

While the dairy train was running through eastern Kansas a dairy train was operating in Iowa also. The dairy train idea originated in Kansas several years ago and the first dairy train was run in Kansas.

Rinse the cream cans with cold water, then boiling hot water. Use a brush to wash them; never use a rag and think that will do the work. It will not; a brush will find every hollow place in the can and do the work better than anything else you can get. Then after the can is washed, expose it to the sun and fresh air. Then you will have a can ready and fit to receive the cream and keep it properly.

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and they keep you
dry while you are
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WHITE WYANDOTTES.
If you want the large Pure White kind, with bay eyes and yellow legs, write me. I have 200 for sale.

E. E. BOWERS, Bradshaw, Neb.

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

ROSE AND SINGLE COMB RHODE ISLAND REDS.

Good breeding and exhibition cockerels now ready to send out. Don't wait until show time or spring and take just what you can get. We are crowded for room and are making low prices. Few S. C. Pullets in pairs, trios and pens. No R. C. hens or pullets for sale.

H. A. SIBLEY, Lawrence, Kan.

FOR SALE—100 CHOICE GOLDEN Wyandottes; also a few pure bred Bronze Turkeys from prize winning birds; prices reasonable. **MRS. E. B. GRANT,** Emporia, Kansas.

FOR SALE.
Pure bred White Wyandotte cockerels, \$1 each.
MRS. H. S. ADAMS, Wichita, R. R. 8, Kan.

FOR SALE 50 CHOICE BUFF ORPINGTON COCKERELS.
These birds are extra good; all from my prize winning pens. We guarantee every one to be first class. Prices reasonable.
WHITE BROS., Buffalo, Kan.

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

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WHITE PLYMOUTH ROCKS

Exclusively.

A few good cockerels for sale.

Kansas' 1909 Crops

Secretary Coburn Issues First Official Statement on Season's Products.

The official statement by the Kansas State Board of Agriculture, giving the acreages and yields of winter and spring wheat, corn and oats and their home values, just issued, contains the first figure emanating from the Board on this season's products.

Never before in the history of the state have the three crops of wheat, corn and oats been worth so much, in the aggregate, as in 1909. Their combined value this year amounts to \$169,262,323, an increase of \$15,615,870, or 10 per cent, over the next best record, which was in 1908.

Summarized, the showing of these crops for 1909 is as follows:

Product,	Acres.	Bushels.	Value.
Winter Wheat.....	6,384,875	80,226,704	\$75,338,254
Spring Wheat.....	65,859	732,036	602,935
Corn.....	7,711,879	147,005,120	83,066,905
Oats.....	962,004	25,588,220	10,254,229

This year's yield of fall wheat, 80,958,740 bushels, exceeds that of 1908 by over four million bushels, ranks fourth among the state's annual productions, measures 40 per cent more than the annual average for the preceding twenty years, and has an aggregate value greater than that of any previous crop, although its area was less than in the year before by 488,600 acres. In only one year since 1873 have prices been higher, and reports indicate that the crop is being marketed rather freely, while many are holding for higher prices. Quite a number reporting volunteer to say that this is because they "don't need the money."

The bulk of the crop was grown, as usual, in the central third of the state from east to west, and of the 31 counties raising one million or more bushels each, 30 are in this portion. These 31 counties had 63 per cent of the winter wheat area, and raised nearly 70 per cent of the crop. It is in these, too, and the counties in the northeastern part of the state, where the highest average yields are reported, Shawnee and Brown leading, each with 22 bushels, Riley next with 21 bushels, followed by Doniphan and Pottawatomie, each with 20 bushels, and Chase, Wyandotte, Nemaha, Clay and Cloud each with 19 bushels. The lowest yields are in the western counties.

In aggregate yield Barton county leads with 3,915,120 bushels of winter wheat, Reno second with 3,259,393 bushels, Stafford third with 2,922,800, Pratt fourth, 2,837,623; Pawnee fifth, 2,746,926, and McPherson sixth, with 2,411,820 bushels, followed by the one-time premier wheat-grower, Sumner, with 2,384,564 bushels.

Results in wheat this year strikingly illustrate the folly of anyone, however gifted, attempting to predict yields months before crops are harvested, as it will be remembered that in May this year so-called "crop experts" visited Kansas and afterwards confided to a much interested public that the state would raise not more than 40 to 50 million bushels of wheat and that the output would aggregate "one of the very small crops."

Owing to the fact that at the time of making their reports to the Board last month many were then sowing, no authentic data are available as to the area of winter wheat that will finally be sown this fall. Generally, however, on account of dry weather, seeding has been later than usual.

Spring wheat shows another falling off in area, the decrease this year amounting nearly to 39 per cent, and after three or four years of rather extensive experiments with macaroni, which increased the inconsiderable area phenomenally, the industry seems again in a rapid decline. Through their progressiveness, and alacrity to adopt promising crops recommended by presumably competent authorities, the farmers of Kansas were quick to give the durum wheats a trial, and following long-range advice these spring wheats were sown in many counties beginning about 1905, but it soon became apparent that there was small, if any, place for them in the agriculture of Kansas, so long, at any rate, as her famous hard red winter wheats, of known quality and produc-

tivity, and world-sought, could be raised in their present perfection in each of the state's 105 counties. Spring wheat has never been prominent in Kansas, and practically all the merchantable crop is raised in five or six counties in the northwestern corner of the state. Of these, Cheyenne and Sherman are the leaders, and this year they had, together, over 60 per cent of the spring wheat area for the state.

While this year's area in corn was over 9 per cent more than in 1908, the yield is less by 3,635,000 bushels; but it is worth more than any previous crop, the price per bushel ranging higher than at any time in the past 35

years, averaging 56.5 cents. The corn of this year is worth \$7,125,716 more than the combined value of winter and spring wheat; its value exceeds by \$424,443 that of the corn crop of 1908, which heretofore was the greatest income bringer. The corn of 1897 aggregated a little more than a third as much in value.

Twenty-seven counties, each having two million bushels or more, produced 52 per cent of the year's output, and these are comprised in a V-shaped territory, the bottom of which is indicated by the counties of Sumner and Cowley, and from these extending diagonally to the extreme northeastern corner of the state and northwest to the junction of the western line of Smith county with Nebraska. Sumner, famed in the past for its record-breaking wheat crops, leads in aggregate yield of corn with 4,043,558 bushels, followed by Reno with 3,862,491 bushels, Nemaha with 3,739,120 bushels, Marshall with 3,671,460 bushels, Washington with 3,628,158 bushels, Sedgewick with 3,568,152, and Jewell with 3,546,558 bushels. Cowley and Brown counties also have over three million bushels each.

The counties with the largest average yields are Riley, 31 bushels, the highest; Jefferson and Doniphan, 30 bushels each; Chase and Leavenworth and Wyandotte, 29 bushels each, and Brown, 28 bushels.

Oats yielded better this year on the average than in any since 1902, the output from an area 15 per cent larger is 53 per cent greater than in 1908, and it is the most valuable oat crop since 1892. Although ranking nineteenth in volume, there have been but four oat crops that exceeded in value that of this year. The principal oat counties are Sumner, Sedgewick and Marion, producing 1,826,892 bushels, 1,300,563 bushels and 1,180,256 bushels, respectively.

Meeting of the American Breeders Association.

One thousand men who have given the world in a few years more knowledge of heredity than all the libraries contained before the twentieth century; scientists from the United States, Canada and Hawaii will participate in the annual meeting of the American Breeders' association which opens in Omaha, December 8, and continues four days.

A dozen years ago the subject of heredity was not usually taught in colleges, because not enough was known of the subject to justify teaching it.

Divided into more than a score of committees, the leaders of the American Breeders' association have been making a sweeping investigation of the laws of nature as applied to heredity. While one committee is investigating fish breeding, another experiments with roses; still another committee of scientists seek information on breeding fur-bearing animals that they might be improved while David Starr Jordan heads a committee on Eugenics to investigate and report on heredity in the human race.

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.



It Will Pay You To Ship Us Your HIDES

YOU can have a warm, serviceable fur coat made from your cow or horse hide that will wear you for years.

We tan and make them up into soft and pliable coats, robes and rugs, moth and waterproof and guarantee the work. Write us today for our **FREE BOOKLET** It tells you all about hides.

Des Moines Tanning Co.,
Dept. F Des Moines, Iowa.

HIDES TANNED FOR COATS AND ROBES

Send us your horse and cattle hides, as thousands of other farmers and stockmen are doing, and let us tan and make them into coats and robes for you. Don't sell your hides for a few dollars; we can make them worth \$10 to \$15 to you.

The great savings we make our customers, which makes every customer a pleased one, has built us up the largest custom tanning business in the country. No name is so well and favorably known to farmers and stockmen as the name COWNIE, which for fifty years has stood for fair and square dealings.

We will be pleased to send you an attractive booklet giving prices for doing our work, and showing the saving we can make you; also, telling you how to care for hides, how to ship, and much other valuable information. Sent Free. Write today **COWNIE TANNING CO., DES MOINES, IA.**



Trappers-- Fur Traders

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., 206 Main Street, St. Louis, Mo.**



PROTECT YOUR AUTO TIRES WITH WOODWORTH TREADS

Tires so equipped will last from 25,000 to 50,000 Miles.

1910 Treads Now Ready. Prepare for the hard frozen roads of Winter and the snow and slush of Fall and Spring. Equip your machine with Woodworth Treads and save tire bills. The hardest and roughest roads have no terrors for the autoist using our patent treads. They prevent punctures and skidding and save wear and tear of tires. Woodworth Treads are tire protectors made of chrome leather, treated by a new process, studied with large head steel rivets. The new treads have an improved spring adjustment that makes them easy to put on and automatically holds them always at the right tension—never requiring adjustment of any kind.

Tires are higher in price. It pays to save them. Sold by dealers or sent prepaid to all parts of the United States or Canada.

Send today for circular and prices: **Leather Tire Goods Co., Niagara Falls, N.Y.**

Leather Tire Goods Co., Niagara Falls, N. Y. Send circulars and prices to

Blacklegoids

Simplest, Safest, Surest Vaccination for the prevention of

BLACKLEG IN CATTLE

NO DOSE TO MEASURE. NO LIQUID TO SPILL. NO STRING TO ROT.

Just a little pill to be placed under the skin of the animal by a single thrust of the instrument. You cannot afford to let your cattle die of blackleg when a few dollars spent on Blacklegoids will save them. Write for circular.

PARKE, DAVIS & COMPANY

HOME OFFICES AND LABORATORIES, DETROIT, MICH.

NOTICE.—For a limited time we will give to any stockman an injector free with his first purchase of 100 vaccinations.

At the meeting to be held in Omaha next month these committees will report. They will show how heredity, like electricity, is coming rapidly into man's hand to increase production. They say it is an energy, which when harnessed will give the United States two billion dollars of new wealth each year on the farms of the country alone. Electrical energy has given the world billion—heredity is a force capable of giving the world more wealth than electricity, say the committees of this association.

Secretary of Agriculture James Wilson, heads this organization, while Willet M. Hays, the assistant secretary, is one of the organizers and its executive secretary. William George of Aurora, Ill., gives it his influence and financial support; Luther Burbank contributes to the reports while James J. Hill, builder of the northwest, is one of the speakers at the coming meeting.

These are some of the committees which will report and the men who will be in attendance to give the reports to the association:

The Breeding of Corn, Dr. L. S. Klinck, Quebec, Canada.

Hereford-Shorthorn Crosses, P. E. Fogle, Jefferson, N. S.

Bibliography of Animal Hybrids, Dean F. B. Mumford, Columbia, Mo.

Cow Testing Association, Collin C. Lillie, Copersville, Mich.

Breeding Milking Shorthorns, Dr. Andrew Ross, St. Paul, Minn.

Types to be Followed in Breeding for Meat Production, Professor W. R. Graham, Guelph, Canada.

Facts About Breeding for the 200-Egg Hen, Dr. Raymond Pearl, Orono, Maine.

Some Principles of Heredity, Prof.

W. J. Spilman, Washington, D. C.
Problems in Plant Improvement, Dean H. J. Webber, Ithaca, N. Y.
Influence of Nutrition on Animal Type, Pres. H. J. Waters, Manhattan, Kan.

Breeding of Barley, Prof. J. H. Shepherd, Fargo, North Dakota.

Plan for Breeding and Use of Tree Crops, Prof. J. Russell Smith, Philadelphia, Penn.

Grape Breeding, Dr. T. V. Munson, Denison, Texas.

Hybridization Methods in Corn Breeding, Dr. George H. Shull, Santa Rosa, Calif.

Breeding of Cotton, Dr. D. H. Shoemaker, Washington, D. C.

Methods of Tree Seed Selection, Rauphael Zon, Washington, D. C.

All meetings of the association are to be open to the public and one of the objects of holding the meeting in Omaha at the time is to spread the information to as many farmers as possible. For this reason the meetings are held in the auditorium of the National Corn Exposition, which will be open from December 6 to 18 and attract more than 150,000 farmers to the city as it brought 105,000 last year.

At this exposition the members of the American Breeders' association will show exactly how science has made better grains and grasses, large exhibits being prepared showing the parent stock and the improved varieties some of which have pedigrees running back fourteen years.

Length and bone with good scale should be maintained in our swine if we are to produce the greatest amount of weight from a given amount of feed from an economical point of view.

THE ORCHARD

E. F. STEPHENS, Crete, Neb.

Brief Suggestions for the Care of Trees and Plants.

The old orchard, that is trees 12 to 15 years old and older and already in bearing, will be benefitted by heavy applications of stable litter or other fertilizer. To the extent that stable litter can be procured, we have been in the habit of using about five hundred pounds for each tree of the age of fifteen years and upward. This litter distributed about the tree, never in contact with the trunk, increases the stock of humus in the soil, lessens the winter evaporation and injury from dry freezing.

In the last two years, we have hauled in some three million pounds of stable litter or manure from the town stables and stock yards. Careful observation for thirty years, indicates a benefit of \$1 per load for each of the first two years following the application and that the beneficial effect is not wholly lost during a period of eight years. We prefer to use stable litter rather than straw to the extent that we can secure the same. An application of three inches of stable litter is better than ten or twelve inches of straw.

Where stable litter can not be had in sufficient quantities to mulch the row to a width of eight or ten feet, straw stacks may be used to excellent advantage. The hauling of stable litter and straw is suitable work for the month of December and January. Where the applications of litter and straw is confined to the width of eight or ten feet and the remaining portion of the ground between the rows kept under annual cultivation, the roots of the trees are not brought to the surface of the ground as would be the case if the entire surface of the orchard was heavily mulched and this mulch allowed to remain on year after year.

RABBITS.

Rabbits usually do little harm to an orchard after it has attained the age of ten years, but orchards recently planted and orchards up to the age of perhaps eight years should receive protection. In our branch orchards, we have used about twenty-five thousand wooden veneers; these veneers costing \$5.00 thousand, can be tied about the young trees and form a fair protection against rabbits, during the first three or four years after planting. If the veneers are of excellent quality, they may perhaps last four years.

Where it is not convenient to secure veneers, we have protected thousands of trees by the use of corn stalks. Cut a suitable number of corn stalks of a length of 24 to 30 inches, tie top and bottom to the trunk of the tree. The gradual decay of the corn stalk allows the tree room to expand and it is rarely necessary to take the trouble to go around and cut them loose, as they will ordinarily rot out and drop away. We have also used rye straw and slough grass.

In case the number of fruit trees to be protected is so large that it is not convenient to tie up each tree, then it is well to remember that the rabbit has a sensitive nose and can be kept away by applying a combination of blood, soap and tobacco juice, using a swab. Sometimes we have added red pepper, crude carbolic acid or any other offensive ingredient. The use of a slight amount of flour in the combination makes it more adhesive and less liable to wash off.

The cheapest tobacco can be procured in the form of leaf stems from the cigar maker. We steep these tobacco stems and then to that add the blood, soap and any other ingredients convenience may suggest to use. This will be less disagreeable to apply, if used while warm, otherwise it is a cold job on a chilly day.

Many thousands of trees are annually lost from the depredations of rabbits and trees can be protected at a less cost than 1c per tree.

PRUNING.

While the commercial orchardist will commence work during the sunny days of December, because he has so many trees, it will take the whole winter to prune his orchard, yet the farmer or planter who has only a family orchard should defer pruning until March. The reason therefor being that if pruning is done just before active circulation of sap starts in the spring, the cut surface dries and

checks less and the wound heals over more quickly.

In pruning, in the case of young trees, start the trees with a sufficient number of branches to make a rather open head. From season to season, prune sufficiently to keep the head of the tree well balanced and reasonably open. A tree with an open head can be sprayed more thoroughly than when the tree is allowed to grow at will. It is usual to cut out the suckers or water sprouts, the dead wood and the broken branches.

It should be remembered that the cherry tree requires very little pruning. The cherry is more sensitive to the loss of wood or the cutting away of any portion of its top than other varieties of fruit trees and rarely requires more pruning than to remove the branches which interfere with each other by crossing.

Plum trees require comparatively little pruning. In the case of young trees, shorten in the strongest shoots which outgrow the others to the extent of unbalancing the form and symmetry of the tree.

Considerable amount of pruning might be done in the month of June, if there was at that season of the year, time for the work. The average planter, however, finds the season crowded so full of duties that he must prune in winter or not at all.

THE VINEYARD.

While the grape vine is reasonably



T. I. Wooddall and two of his favorite Herefords in a field of alfalfa on the Wooddall farm at Fall River, Kan.

hardy throughout Kansas and southern Nebraska, yet the aridity of our winters is such that there is a lessened evaporation and a stronger and more vigorous vine, if in our trying climate, it can receive some winter protection. In case the winters should be very, very dry, there is danger of root killing. In the vineyards belonging to the late ex-Governor Furnas at Brown ville, Neb, some years ago, ten thousand vines were lost by root killing. This by reason of a severely cold and very dry winter, therefore, we have found it well to trim our vineyards each autumn. The fruit next year is formed on the new wood of the present season's growth. The object of pruning is to shorten the new growth, leaving approximately the amount of fruiting wood which the vine can safely carry. It will be found wise to shorten the laterals to three, four or five buds, depending on the varieties and to some extent, on the age and vigor of the vine. The buds left on the laterals develop next season's fruit. The main canes are shortened to suitable length depending also on the age and vigor of the vine.

After pruning, we cut the vines loose from the trellis, drop them on the ground, put two or three forks full of straw over each vine and over that place sufficient amount of soil to keep the straw from blowing away.

We would figure the expenditure of 3c per vine as being sufficient for pruning, hauling the straw, covering and protecting the vineyards for winter.

MULCHING THE SMALL FRUIT PLANTATION.

Currants, gooseberries, raspberries and blackberries should be heavily mulched before winter. Stable litter is usually the most convenient for mulching currants and gooseberries. For many years, we have used straw in the raspberry and blackberry plantations. In these plantations we al-

low the straw to remain on the rows the entire season, with the result that it checks the growth of weeds, and retains the moisture for the benefit of the plantation. Since adopting this method we have never failed to secure a crop of fruit.

About the time the ground commences to freeze, the strawberry plantation should be thoroughly covered with old hay. Why? Because old hay is free from weed seeds. A covering of an inch is sufficient. In very windy districts, it is sometimes necessary to confine this covering by occasional weights, lest it should be blown off by high winds, but after it is matted down, it usually sticks the winter through. We have often times used stable litter, preferably litter from stables where prairie hay was fed, since it is liable to result in a considerable amount of clover springing up within the plantation. Failing to get either hay or stable litter, use straw, selecting that which is as free as possible from weed seeds.

HOME GROUNDS ORNAMENTAL SHRUBBERY.

At this season of the year, it is not difficult to collect a great quantity of leaves. Leaves have been blown into ditches and sheltered places and can be gathered very rapidly. They will be found very useful as a covering about ornamental shrubbery, roses bulbs, one of Nature's own and best protections.

A heavy mulch of leaves or fine litter will be found a great protection to the root system of ornamental plants. In Nebraska and northern Kansas our winters are likely to be very dry and this soil cover lessens the soil evaporation and the danger that the ground will freeze dry during the winter.

winter, first it should have a considerable growth of its own grass allowed to remain through the winter instead of being cut late in the fall by the lawn mower. Second, a mulch of any vegetable matter, leaf mold, leaves, rich manure applied in early winter will protect the grass roots from the trying arid winter's cold and bring the lawn through in condition to give a much more vigorous growth of grass the coming season. I noticed today that about our office where the grass has never been cut short late in the fall, that we have a much better sod than about the residence where the lawn has been run a month or six weeks later than is judicious.

FALL PLANTING.

It sometimes happens the planter has more leisure for planting in late autumn than in early spring, during which season, he is rushed with the seeding of farm crops. In case the ground has a suitable amount of moisture or water can be conveniently secured to make it sufficiently moist, then certain varieties of small fruits may be planted in late autumn. We have found that grape vines planted in early November, after the wood was well ripened and matured in the succeeding season made a stronger growth than when planted in the spring time. We however, always take the precaution to heavily mulch and thoroughly cover and bury each vine so planted.

Raspberries and blackberries may be planted at the same season and the current also, if heavily mulched and thoroughly protected.

It is rarely wise in Nebraska or northern Kansas to plant fruit trees, shade trees or forest trees in the fall, since under ordinary orchard or field conditions, there is too great risk that the trees may suffer from drying out before the opening days of spring.

It is legitimate however, to fig the trees in the fall of the year and bury them root, body and branch, carrying them over the winter in readiness for early spring planting. Tens of thousands of trees are lost every year by planters who receive trees and simply heel them in instead of burying the roots, body and branch. In the case of fall planting or fall burying of trees, it is wise to have trees and plants properly and thoroughly ripened before digging.—E. F. Stephens, Crete, Nebraska.

An Illinois Ration.

An Illinois feeder of large producing dairy cows feeds 30 pounds of corn ensilage, eight pounds of good clover hay, five pounds of wheat bran, four pounds of ground oats and two pounds of oil meal make a good liberal ration for average dairy cow. Some cows require more feed than others, and he studies each individual and feeds according to her appetite and capacity. It is never best to feed every cow the same quantity, for some will get enough, while others will not. In Kansas a liberal quantity of alfalfa hay would take the place of a large part of this grain ration. Corn chop of Kafir chop would supply the required grain.

Where is the Gain.

A Kansas City outfit is advertising the sale of a recipe by which a pound of butter, a pound of ordinary water and ten drops of an emulsion churned together make two pounds of milk. The Kansas City Star says the housewife, who has all sorts of trouble making her allowances go a week, could invest half a dollar in a crockery churn, put in her pound of butter, a pound of water and ten drops of this emulsion and produce seventy cents' worth of butter. Any woman with a churn and the emulsion can cut her butter bills in two.

Mrs. John Kleinhans, the wife of one of Kansas' food inspector, tried the recipe and sent samples of the product to half a dozen persons who supposed to know first class butter and every one of them pronounced the watered butter to be extra high class.

Under the federal and Kansas law, the creameries and farmers could not sell this watered butter, but any woman who wants to cut down the butter bills could purchase the emulsion and cut down her butter bills. The hotels would not dare serve this watered butter. Since the butter can't be sold why make it? Does any housewife want to fill the stomachs of her family with water? Why go to the trouble of working the water into butter? Better be careful about the use of this recipe.

THE LAWN.

The lawn needs shelter during the

FASHIONS

8347. Ladies Dressing Sacque.

Bordered eiderdown was used to make this model, which is also suited to flannel, silk or wash fabrics. The back is semi-fitting. The fronts are loose and laid in broad plaits that are stitched to yoke depth. At the waist line the fulness is held to position by a belt. The sleeves are of the bishop style and finished with a band cuff.



8535

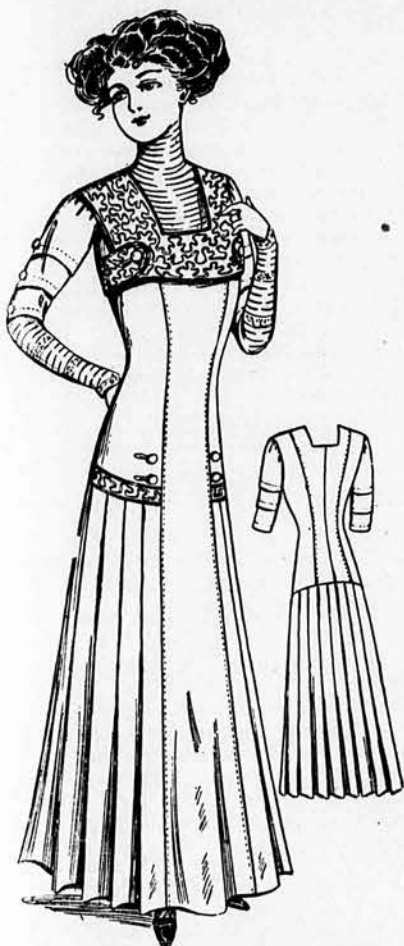
The pattern is cut in 6 sizes from 32 to 42 inches bust measure. It requires 4 1-4 yards of 27 inch material for the 36 inch size.

8576. A Smart Princess Model.

Heliotrope cloth combined with cream white satin for trimming will develop this model effectively. The design shows the long waistline of the "Moyen Age" and has the pleated skirt portions now so fashionable. The pattern is cut in 6 sizes, 32 to 42 inches bust measure. It requires 6 3-8 yds of 44 inch material for the 36 inch size.

8463. A Chic Blouse for a Young Girl.

There are no styles in shirtwaists more generally liked or more becoming to young girls than the tucked



8576

models. This one is unusually pretty and suited to any of the washable waistings as well as voile, taffeta and pongee. The square cut neck is filled

in by a chemisette topped by a high standing collar, although if desired, this may be omitted. The pattern is cut in 3 sizes—14, 16 and 18 yards. The 16 yd. size requires 3 1-2 yds. of 24 inch material.

• 8535. Little Girl's Box Pleated Dress.

Cut in sizes 4, 6, 8, 10, 12 years. 8-year size requires 3 1-2 yds of 36-inch material. This little box pleated dress of white pique is cut in one piece from the shoulder to the lower edge, and is both stylish and simple. The closing is made invisibly on the left side under a box pleat and the neck opens over a removable shield finished by a high standing collar. The sleeves may be full length or short, completed by turned back cuffs.

8613. Girl's Dress With Guimpe.

This is an exceptionally pretty and becoming frock. The design is simple and one that will give little trouble to the home dressmaker. The fronts are lapped to simulate a side closing, and the closing is cut in over-blouse style, and is worn with a guimpe that may be of lawn, or of material contrasting in color to that of the dress. Brown and green mixed fancy suitings was used for this model, with facings of green velvet. The guimpe was of brown silk in a shade lighter than that of that fabric. The pattern is cut in 4 sizes, 6, 8, 10, 12 years and requires 3 1-2 yds. of 27-inch material for the 8 yr. size.



8347

8546. A Neat Work Apron.

A large work apron that comes well over the waist, is indispensable to the busy housewife. This one of white linen, is not only a protection to the dress, but is neat and attractive as well. The waist is in jumper effect and broadens out over the shoulders in a most becoming way. The skirt is cut circular fitted in at the waist by darts. Gingham, percale and lawn are all used for the making. The pattern is cut in 3 sizes, Small, Medium and Large. The Medium size requires 4 1-2 yds. of 36-inch material.

The Wonder of the Soil.

"Let no man imagine for a moment that he ever owned a piece of land of inexhaustible fertility. Neither let him imagine for a moment that by any kind of farming he can absolutely exhaust any soil that was once reasonably fertile. The Lord won't let him, but will lock up the fertility until some man comes along who understands the laws of nature, and by obeying conquers."—HENRY WALLACE.

Stick to Farming, Anyway.

If the boy must leave the farm urge him to get a thorough education along agricultural lines. It will lead him into walks of life not at this time crowded by fortune seekers as is the law, medicine, literature, etc. There is a demand for capable young men educated to the farm. C. S. Knight, a graduate of the College of Agriculture

of the University of Wisconsin in the class of 1906, and until recently employed as assistant in agronomy in the Kansas Agricultural College, has been elected head of the agronomy department of the University of Nevada at Reno at a very good salary.

Feeding Value of Straw.

Every year, even on the small farms, thousands of tons of straw are burned. On most farms straw is considered of little value outside of affording bedding and litter for the



8546

stock, but during the past few years opinion seems to be more favorable toward straw as a feed for horses, sheep and cattle. To a large extent this has been brought about by the use of the silo in preserving the corn crop and also by the shortage of hay during the same period. With the silo to provide the animals with plenty of succulent food silo owners have been enabled to feed cattle straw to a very profitable advantage. The animals are apparently more fond of straw when fed with ensilage than either grain or hay. Just think what a waste we permit each year. Our



8463

corn stalks as handled at present have small feeding value. In a silo they are valuable feed. Straw without ensilage has small feeding value, with ensilage eastern farmers are feeding much of it.

In the Gold of Autumn Days.

Over the browning hills away
In the bright October days,
Down in the vales of sweet decay
In the midst of golden haze;

Way to the woods where leaves fall fast
And the pines faint murmur make;
Out in the plain sky o'ercast,
Where the dawn of day doth break;

Long by the brook whose tinkling sound
It as play with stones beneath;
Cross by the place where buds are found
When the spring gives forth its wreath;

Off to the mounts whose changing tints
Are lost in their crescent form;
Close by the stream whose silver glints
Are caught in its bended arm;

Round by the path which winds away
And down in the woods again;
Under the birds whose roundelay
Is echoed in distant glen;

Far in the fields where bob-whites hide,
In fear of the hunter's call;
Back by the path which runs beside
The brook and the waterfall;

Home again and a bright woodfire
With promise of other days,
When I may roam to my heart's desire
In the gold of autumn days.
Lily Tyler in Taylor-Trotwood Magazine.

Recipes

HAM AND BEAN LOAF.

One cup boiled ham and one cup baked beans; put through meat grinder; one-half cup fine bread crumbs, one beaten egg, one tablespoon melted butter. A little milk or water, if needed, to make the ingredients hold together. No salt will be needed, but a pinch of mustard and a little onion juice may be added if liked. Pack in baking powder cans and bake half an hour.

DROP COOKIES WITH SOUR CREAM.

Use half a cup of butter, one cup of sugar, one egg, beaten light, half a cup of sour cream, one fourth a teaspoonful of soda, two cups and one-half of flour and three and one-half level teaspoon-



8613

fuls of baking powder. Mix in the usual manner, stirring the soda into the cream. Mix the whole together very thoroughly; the mixture will be quite stiff. Drop from a spoon upon buttered tins, shaping each portion into a smooth round. Dredge with granulated sugar. Bake in a moderate oven.

CUP CAKES.

Cream one-half cup of butter and one and one-half cups of sugar; add two eggs, one at a time, and beat; then one-half cup of milk, one and one-half cups of our and two teaspoons of baking powder. Bake in gem pans.

SOFT GINGER COOKIES.

Put a level teaspoonful of soda in a measuring cup, add three tablespoonsful of boiling water, one-quarter cupful of melted butter or lard, a salt-spoonful of salt, a level teaspoonful of ginger and enough sifted pastry flour to make a dough as soft as can be handled. Shape small bits of dough, lay in the greased baking pan and press out half an inch thick. Bake carefully.

EACH PATTERN 10 CENTS.

The Kansas Farmer, Topeka, Kan.

Please find enclosed cents, for which send patterns as follows:

Size Number

Name

P. O. R. D. State

Greetings from the Public Schools

by Hon. E. T. Fairchild, State Supt. Public Instruction at the Inauguration of Pres. H. J. Waters, of the Kansas Agricultural College.

Mr. Chairman, members of the Board of Regents, the faculty, ladies and gentlemen:

It is a matter of much moment that on this auspicious occasion every friend of the Agricultural College shall take pause and inquire carefully into the history of this institution in the past, examine its work in the present and consider fully its plans for the future.

The twentieth century demands upon our public schools and colleges seem startling and even revolutionary to those trained under the system of two or more decades ago. The curricula of all our schools have indeed greatly changed in the past generation. Courses have been broadened and multiplied; subjects and requirements once thought absolutely essential and of first importance are now subordinated or eliminated entirely. The modern and well equipped public school of today with its diversity of courses, its manual training, its domestic science and household art is a tardy and a partial recognition that the youth must be trained, not for a segment of life, but for the whole circle of human experiences. Our higher institutions have been somewhat slower to grasp this latter day view; never-the-less at this moment all of our great universities and colleges are offering instruction in an increasingly large list of social activities.

This evolution of educational principles and their application seems only to have awakened the masses to the need of further advance and to the necessity of extending to all the people a more liberal and a broader training.

The demand of the twentieth century is for a system of education that will develop and bring to the point of highest efficiency the whole boy.

In all this process of change it is most pleasing to note that the agricultural colleges have ever been in the van. The present and widespread call for industrial training has been anticipated and met, in varying degree, by these institutions.

From the beginning they have exerted a profound influence in fostering and promoting the doctrine that education does not begin and end with the head but extends to the hand. They are the pioneers in formal industrial training.

Such, in brief, is the attitude of the people toward our schools and such is the answer of the agricultural colleges.

It was my fortunate privilege to be associated with this institution as a member of the board of regents for a period of eight years. In that time the number of buildings was doubled, the faculty was greatly increased in numbers and the enrollment advanced more than 125 per cent. The number of graduates of the institution during this period of eight years was more than the total number of graduates in the entire previous history of the institution. I came to know of the wonderful work it had accomplished in the past and of the valuable service it was then performing for the state. I discovered that out of the splendid raw material it received there was here fashioned a type of citizen that under any and all circumstances made good. I learned to appreciate, to a degree impossible to forget, the conscientious and helpful work of the faculty, the rare and responsive spirit of the student body, and, above all, the value of a training that combines the cultural and the industrial.

This college occupies a field peculiar to itself. It is the rival of no other institution but is an important and powerful educational activity of the state. It represents an investment that yields returns of a thousand fold. But, however much it has done in the past and is accomplishing in the present still more will be demanded of it in the future. This wonderful and complex age in which we are now living requires a kind and character of training on the part of its citizens such as the world has never heretofore known.

To accomplish this I sincerely hope that the entrance requirements may not be increased for many years to come. Let the doors of admission to this college swing widely and freely

to every Kansas boy and girl and let the exit be so narrow that none but those who are worthy and well qualified shall receive the diploma of this school. I would lengthen the period of graduation for a degree if necessary, but never would I add to the difficulty of entrance. It is the glory of this institution that the sturdy sons and daughters of Kansas who may not enter other institutions of learning, because of lack of high school training, may here freely come and receive a training that shall be of inestimable value to them and to the state.

A splendid and a notable characteristic of this school is the democratic spirit that prevails. I have observed with great satisfaction the simple and rational standards of its students in the past, and I sincerely trust that wholesome and sane rules of conduct shall govern in the future.

I congratulate the state, too, on the minimum of cost of her institutions. It is a wonderful showing when compared with other states. We cannot afford to quibble as to expenditures when we realize that the results represent an investment yielding the richest possible returns in intelligent and capable citizenship.

I trust, too, that the governing

body of this institution will always stand ready to enlarge the sphere of the college activities as occasion requires.

Every gainful occupation involving the interests of a considerable number of our people may well be the subject of investigation and instruction here.

Important, however, as are the material interests of the student and the state the highest function of this and every other institution of learning is to make for good citizenship. It is just as important to provide for the leisure hours of man as to see to it that he is an efficient machine during the hours of labor. Culture must go hand in hand with productive power. Nor must it be forgotten that the supreme test, the fruition of all effort is character.

In full faith that the guidance and direction of this institution has been given into competent and capable hands, I take great pleasure in presenting to you, Mr. President, the greetings of 500,000 youth of this state and of the 13,000 teachers of our public schools. All unite in the confident expectation that under your administration the Kansas State Agricultural College shall go forward surely school of the people and may it be

This institution is only on the frontier of its possibilities. As time goes on may it become more and more the school of the people and may it be your happy privilege, sir, to realize your every ambition to perform for the youth of this state an inestimable service.

deep; some say two inches deeper than they grew, I say a foot deeper if the tree will allow that much; if not, half way from former ground line to top. After planting, fill the hole half full of soil, using surface soil, tramp the ground firm and hard. Plant all trees leaning slightly to southwest. Give each tree six gallons or more of water. When it has all soaked away fill the holes, leveling it around where you have used the surface soil, and watch them grow.

Any kind of trees can be transplanted, but I think it better to raise your own trees. If the fruit trees do not please you, any farm paper tells how to bud or graft. You can get bud stocks or grafts from any nursery and work on them as you have time.

If you buy, do not order more than you can plant, or plant more than you can tend right. I believe you will get better results by cultivation than by irrigation.

Now comes the constant care of trimming. If you want your trees to grow tall, trim off the lower branches; if low, trim the tops and snip off ends of upper limbs. Keep all shoots and sprouts from the trunk. Some say trim in the fall for growth but in June for fruit, but circumstances alter cases. I have had best results from trimming in the heat of summer, even in August. Then the wounds heal readily. Trim a little at a time and often, cutting out branches and those that hang down. I learned to trim in August by accident. A mountain ash having three branches was split by the wind. We drove a nail through the tree, clinched it, and cut off the broken branch, being over one third the tree. All it did was to grow taller than any of the others. That was two years ago. Last year a cow horned a cherry tree, leaving only two small limbs. It was in the dark of the moon in August, the sign in the heart. We trimmed the tree as well as possible, leaving all cuts smooth. It is all right and bore cherries this year, in spite of frost and bad luck.

Trees from cuttings are tamarack, cottonwood and mulberry; if you don't believe it place a few cuttings in your hotbed. From seeds are locust, walnut, mountain ash and box elder, and of fruit trees the plum, cherry, peach and pear. It seems too windy yet for the apple. When we have more windbreaks I think the apple will do well also.

My choice of plum is the Snyder. With cherries my best luck has been with Dyehouse. In peaches seedlings do best, though the Elberta does well.

As for my experience, we have three rows of tamaracks from cuttings, 300 feet long, standing four inches apart in the row, for wind-break on the north, also three rows of currants and five of plums. These are sand plums, which do best of all, growing wild along streams. Then eight budded plums, one pear and three apple trees. In another place we have 7 seedling peach trees set by above plan and only lost one, also 15 mountain ash, of which all grew, also one oak, one mulberry and 11 walnuts, having raised eight of these from eight walnuts gathered last September.

In closing let me say; plant your trees deep, getting the roots down where it never gets dry—did I hear some one say "wet?" I have heard it said the ground here has not been wet two feet deep since the flood. I will go them one better and say the ground here has not been dry two feet deep since the flood.

Do Not Sell Brood Mares.

Farmers owning brood mares should not sell them at any price, but breed them regularly and in a few years they will find they are in a business that pays. The present demand and high prices for draft teams show the supply below the demand. It takes four or five years to develop a draft team and three or four years to unfit them for city work on the paved city streets. Some farmers have the idea that high priced horses do not pay on light priced land. You may have observed on light priced land which has high priced stock on it, pays better than the land which has scrubs and cross breeds on it. \$175 land and \$250 horses sounds better than \$175 land and \$100 horses.

The hog, as compared with other live stock, is generally the safest proposition and he generally pays his way and with a good profit; besides as for mortgage lifters we owe much to the credit of the hog.

Tree Culture in Western Kansas

Prize Article by MRS. JOHN L. AYERS, Modoc, Kansas

When I first became interested in western Kansas, over seven years ago, I was impressed by the desirability of more trees, and also with the success which had rewarded those who had in earnest attempted cultivating them.

This fall I offered a prize for the best paper on Tree Culture in Western Kansas, at the Wichita County, at Leoti, October 1 and 2. This prize was awarded by the judges to Mrs. John L. Ayers, of Modoc. This paper is based on the personal experiences of the writer, and I believe will prove valuable to anyone planting trees in western Kansas. Should it result in greater interest in and more intelligent study of the question of tree culture in western Kansas, I am sure that the writer of the article will feel that her work has not been in vain.—R. S. BEALL, Mount Ayr, Iowa, October 20, 1909.

In the care of trees the first thing is soil and location; the soil should be stirred as deep as it can well be, the deeper the better, but never less than twelve inches, using ground that has been in cultivation a good while, well enriched with stable or hen manure but never trashy stuff. Let the plot be low or level with as little slope as possible, having tree row lower than surrounding ground. After trees are planted growing crops do not hurt them for two or three years, but never allow weeds to grow on the ground or near the trees. If we have cultivated crops between the rows this is easier to do, but never plant close enough to trees for cultivator or singletree to bark them. If such a thing happens, cover the bruise at once with grafting wax made by melting six ounces of beeswax and six ounces of rosin in a pint of linseed oil. It will keep indefinitely and is handy for many things in the tree line.

Time for planting varies with the soil and weather, but follow Mother Nature as closely as possible. The first step is to plant forest trees and let their more rugged natures tone down the air and stop the winds before the more tender fruit trees can be expected to grow. All kinds of forest trees do well here if cultivated early and often, using cultivator and hoe in connection with other crops, but disk and harrow if trees alone occupy the ground.

In planting seed follow nature again. Some forest tree seed and most fruit tree seed should be planted in the fall, locust and apple being exceptions; walnuts should be planted hull and all or nature would not have made it so bitter. Peaches just the opposite for the opposite reason.

I always spade the ground full depth in the fall and turn the hose on and wet the plot until the water runs off; let it dry two days, then plant fresh seed down deep, and seldom fail to get a good stand. Apple seed should be soaked two weeks and planted in

well dampened ground in the spring after danger of hard freezing is over, but I like cuttings best of all. They should be planted in February if possible or as soon after as ground can be worked. We always run a lister furrow, stick six-inch cuttings in the bottom, leaving two buds above ground. As they grow rake the soil to them. Don't be afraid of getting them too deep.

When your trees are large enough to transplant, generally in one or two years, mark off your ground, putting fruit trees 16x20 feet and forest trees even further. They will look lost at first, but time works wonders.

Then dig your tree holes. Forget you are going to plant a tree and imagine you are going to bury the largest horse on the place, and dig accordingly. Next day make it one foot deeper and another spade full from the edge all around. Remember it is the last chance you will have to loosen up that soil, so do a good job. This should be done in the fall or winter. Pile all the dirt to one side and drain the surface water into the holes. I do not like to plant any trees in the fall on account of wind, but get to work as early as you can in the spring. Mellow the dirt in the bottom of the holes, then dig your trees a few at a time and do not allow the wind to strike the roots, which can be helped by a little care. If you have sent away for trees unwrap them (if not frozen), put in water or heel in the ground in such a manner as to reach a few at a time and in the order wanted. If you are working without a plan, don't plant any trees in western Kansas. If you put in water do not leave more than two days; better heel them in but be sure soil is damp. Trim the tree, top and root, the peach most severely. Trim into a nice shaped tree, the roots until they look even and firm, and if you grow your own trees be sure to get plenty of roots. Do the trimming out of sun and wind. Don't be afraid of setting them too

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The Kansas City Weekly Star ..	.25
The Peoples Popular Monthly ..	.25
The Western Poultry Journal ..	.50

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The Kansas Farmer.....	\$1.00
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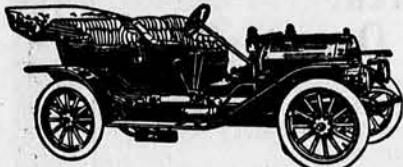
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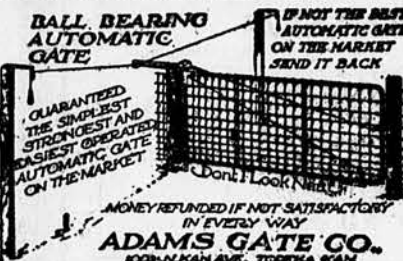
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Report of the State Good Roads Association.

The State Good Roads Association just closed a very interesting session, Mayor Brooks of Fort Scott, delivered the address of welcome, and J. M. Meade, engineer Santa Fe system, gave a very interesting and practical talk.

The work the State Agricultural College is doing for permanent road improvement was discussed by W. S. Gearhart, highway engineer. A. C. Jackson, president National Good Roads Association, gave an able address on State and National Roads.

H. W. McAfee, president State Good Roads Association, read an interesting paper on county and local roads. J. M. Hodge, superintendent of Road Construction United States Office of Public Roads, gave a very instructive talk on Our Public Highway.

A. J. Sherman, commissioner of the Special Road District of Fort Scott, presented in a very interesting manner the difficult problems they had to solve and the strenuous opposition that had to be overcome in establishing their present system of excellent permanent rock roads.

A special feature of the meeting was the automobile ride over the permanent roads. At the business meeting the following officers were elected for the ensuing year: President, H. W. McAfee, Topeka; vice president, A. J. Sherman, Fort Scott; secretary-treasurer, W. S. Gearhart, Manhattan; district vice presidents: 1—V. R. Parkhurst, Topeka; 2—C. F. Miller, Fort Scott; 3—T. W. Oliver, Girard; 4—J. W. Mabity, Osage; 5—H. J. Waters, Manhattan; 6—George K. Helder, Hays; 7—Emerson Cary, Hutchinson; 8—C. A. Messer, Wichita.

The county engineers of the state effected an organization, the object being to secure more uniform methods of doing work, establish closer relation between the county engineers, and advance the technical knowledge of road building and maintenance and promote all matters of interest pertaining to the welfare of the public highways of Kansas.

The following officers were elected: V. R. Parkhurst, president, county engineer Shawnee county; W. S. Gearhart, secretary, highway engineer, Manhattan.

RESOLUTIONS.

We urge every community to adopt a system that shall have in view the betterment of their roads and urge that every community adopt a starting place for improvements that shall for all time to come establish proper grades and proper drainage. We appreciate the necessity of employing men for road service because of their fitness and preparation and not because of any association of politics, good fellowship, religion, race or color. We appreciate the support given the good roads movement by our governor, Walter Roscoe Stubbs, and his efforts to secure actual results in road-building.

Since it requires about one-half the amount of road and bridge taxes collected annually to build and maintain the small bridges and culverts, the structure that have been and are being constructed in many places of wood or steel legs and other temporary materials the State Good Roads Association strongly urges that all the spans under 60 feet be built entirely of concrete, either plain or reinforced, or first class stone. And since a very large percentage of the bridge failures are due to poor foundation that the abutments and wing walls be constructed of concrete or good stone instead of the temporary steel legs and tubes so commonly used at the present time. Also that the plans and specifications for all bridge work be prepared by a competent engineer so that all contractors are required to make their proposals on the same plans and specifications. Also that the engineer or his assistant superintend the work from the time it starts until it is completed.

We appreciate the support and active service and valuable space given by the daily and weekly press of the state.

We re-affirm our faith in the road drag as being the most effective agent in making dirt roads passable and getting a firm foundation for better surfacing.

We urge every farmer to consider the road making power of wide tires and suggest that a movement to re-

tire the road destroying narrow tires be inaugurated.

We urge the construction of a permanent state and national highways by the state and nation. We urge the use of all available state and national convicts to aid in such construction. We believe in more money for good roads than for battleships.

We request our senators and representatives at Washington to actively take up and vigorously push this matter of permanent highway construction.

We believe in the co-operation of the army in this work. We urge that the United States Bureau of Statistics be given a sufficient appropriation to collect all available information in regard to highway and bridge work.

Resolved, That we consider it a gross neglect of duty for any board of commissioners in counties having the requisite population to refuse to appoint a county engineer, and we urge that counties not having such population use every effort to plan their roads and bridges under the supervision of some competent engineer.

Resolved, That the State Good Roads Association extend a vote of thanks to the people of Fort Scott as an expression of their appreciation of the courtesies shown and the opportunity afforded us to observe the good roads of Scott township.

We congratulate the people of Fort Scott township upon being foremost in this most important work.

Raising Automobile Prices.

The praises of the automobile industry have been sounded so loudly and the lightning-like rapidity of its progress has become the subject of so much exuberant description in all quarters that the casual reader of this editorial may be apt to regard the following sober contemplation as a piece of pessimism—which, of course, it isn't.

The demand for automobiles is greater than ever. The plants of the various manufacturers are busier than at any previous time, and the output will be far in excess of that of former seasons.

In spite of this unrivaled activity we are willing to go on record as the authors of the prediction that the man who justifies his hesitation about the purchase of a car with the mental reservation: "I'll wait until they are still cheaper," will be doomed to disappointment.

This should not be interpreted as an undue urging of the prospective buyer to send in his order and check sooner than he intended because so far as the representative makers are concerned such urging will hardly appear necessary in view of the certainty that even a vastly increased production will fall short of meeting the entire demand.

No doubt, right here the reader might interpose: "Well, if that is the case, why does the manufacturer not increase his output?"

The answer is: "He can't."

The demands of the automobile industry for raw materials have reached a point where the resources of allied industries have become inadequate. For some of the raw materials the demand has grown at a rate that has almost completely exhausted the visible supply, with the inevitable result that the prices of these commodities have soared to unaccustomed heights because of the strain imposed by the demand on a depleted market.

Take the item of rubber. We can still recall the time when crude Up-River Pure gum could be bought in the open market at thirty-five cents a pound. Only about a year ago the price was well below the dollar mark. Today crude rubber sells at two dollars and ten cents with no prospect of a decline and with an almost appalling scarcity of the material. Yet wheels must be shod with rubber tires and the automobile manufacturer is compelled to purchase his tire equipment at a much higher cost than was ever exacted of him before; the hey-days of the rubber pool arrangement pales into significance when the present-day price of rubber is considered.

The increase in the demand for special steels owing to the unusual requirements of the automobile industry is without parallel, again with the consequence that the 1909 prices of steels show a rise over the figures of



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1908 of from 15 to 25 per cent. Here, too, the needs of the automobile industry have brought about a scarcity of raw material, so that it has become a matter of absolute fact that the automobile manufacturer is governed in his plans not by the amount of business he can command but by the amount of raw material he is able to obtain. When it is considered that the pig iron production in this country rose from 15,936,018 tons in 1908 to 25,283,346 tons for 1909 an idea may be had of the unprecedented increase in demand for raw materials.

That the steel market will remain stringent for some time to come may be conjectured from the renewal of the buying of rolling stock by the railroads and from the enormous sales of steel rails, which lately have amounted to 100,000 tons per week.

It is unfortunate for the automobile industry that the increasing signs of general prosperity have not only brought increasing demands for raw materials from other quarters, but are also responsible for new industrial combinations in various lines, which, by consolidating their interests, are able to maintain a high price for their productions of raw materials.

Owing to the demands of the automobile builder the visible supply of trimming materials and stuffing hair is practically exhausted. Before the advent of the automobile industry the meat production of the country produced enough hair to satisfy all needs. But animals are killed not for their hair and hides, but for their meat, with hair and hides as a mere by-product, which now commands a larger profit for its sellers than ever.

Not a bit less in importance than the condition of the raw material market, is the present situation of the labor problem.

Nor are these conditions confined to the automobile manufacturer proper; they are also found in all establishments making the accessories forming part of the complete motor car. The scarcity of good labor and the difficulty of securing raw material also contribute to the reasons which make for increased prices in these lines.

Of course, even this chaotic upheaval of resources will ultimately right itself, though relief is not in sight yet.

But it would be unwise for the public to expect the prices of cars to pursue a downward course at the same time when the price of nearly every part going into their manufacture keeps constantly rising. Indeed, it should be the cause for small wonder if the selling figures of automobiles were to accommodate themselves to the changing conditions under which the cars themselves must be made; in other words, we believe it very likely that not very long hence automobiles, instead of costing less, will cost more.

In fact, as it now looks automobiles must go up in price, and they will, very soon.—The Co-Operator.

Dry Farming Good.

The Campbell dry farming methods applied to corn have proved a success in western Kansas, says a Decatur county paper. Applied to wheat, they have proved for years that they were correct in principle, but farmers were slow to apply them to corn.

There is nearly always more than sufficient rainfall in western Kansas, but the great problem has been to keep it in the soil until the crops are made. The Campbell method is designed to do this, and the results that have followed its application were made evident to a traveler who drove through this section recently.

Many times there were fields side by side with like soil, as favorably situated as to drainage, and without any difference so far as the opportunity for a good yield was concerned, which differed so much and presented such a contrast that one could not fail to see at a glance the different class of farming which had been done by the two types of farmers. While not the rule, there was too much bad farming. All of those observed as an illustration of all.

One farmer had "scratched over" his farm, using a disk when a plow was needed and had listed in his corn into last year's weedy, sun-baked, crusted and moisture-sapped field. The weeds had soon gained the ascendancy, and the corn having no reserve moisture, being surrounded by weeds, was dwindling and badly scorched.

Immediately adjacent and except for a barbed wire fence would have been a part of this field, was another where the dry farming method had been used. It was evident that the most

careful thought had been given to the question of how to secure the very best results. Not only thought, but judicious and careful work had been done. This corn was of the best, of good color, sturdy, stout and with large ears which gave promise of a bountiful crop. The soil looked rich and productive. There were no weeds, but there was a good dust mulch, and it was plainly evident on the face of everything about the farm why one failed and the other succeeded.

Use Good Stallion.

If a mare is fit for breeding purposes she is worth the trouble of taking her to a pure bred stallion. The few dollars difference in the fee as compared with a grade stallion will be several times repaid in the greater value of the colt sired by the pure bred. When the preference is given to a grade stallion it is almost invariably because of greater convenience, or on account of a smaller fee. Under ordinary circumstances these reasons cannot be regarded as sufficient. In fact whatever the quality of the mare may be the only reasonable hope that she will produce a really fine colt lies in mating her with an animal that has received his good qualities from a long line of ancestors in which they were strongly marked, and that on account of this inheritance, is able to powerfully stamp his breed characteristics upon his offspring, a capacity that is lacking in the grade.

New England Saving vs. Illinois Waste.

A Bloomington, Ill., man who took a trip through Vermont, New Hampshire and Maine a few weeks ago, says that a New England farmer would make a fortune out of what an Illinois farmer wastes, and he was particularly attracted by the neatness of New England farms. White paint, looking as fresh as though just applied, is in evidence everywhere, covering any piece of wood or metal exposed to the weather. "In my trip I did not see a loose fence board, a gate hanging by one hinge or any machinery housed in nature's big shed."

But returning through Illinois from Chicago to Bloomington this man observed the farms closely and was struck with the contrast to New England methods. He saw a great deal of farm machinery under worthless old apple trees and in dilapidated fence corners, disreputable looking pig pens and tumble down stacks of hay and straw. In the northeast all forage is housed; none was seen out in the weather. "It seems to me that the lesson which the Illinois farmer needs to learn most of all is that of preventing waste. The Illinois farmer, with his rich soil, certainly can learn much of profit from the New Englander with his stony and short season." Wonder if any of this would apply in Kansas?


Yield Shows Stand of Corn.

As corn husking proceeds and yields are known, it is a good time to figure back to the stand of plants and the doing of each hill, writes Arthur J. Bill, who reports matters of farm interest from Illinois Experiment Station.

With hills three and one-half feet apart each way there are 3,556 hills per acre. With one stalk per hill and an 8-ounce ear on each stalk the yield would be 23½ bushels per acre, worth \$14.25. A 12-ounce ear per hill would make 35½ bushels per acre, equal to the average yield for the state of Illinois. A pound ear per hill would yield 47½ bushels per acre, worth \$28.50.

But if each hill had two ears of only 14 ounces each the yield would be 83 bushels per acre, while three 12-ounce ears per hill would yield 106½ bushels per acre. Many other items were shown in the table, as that a pound ear and a 6-ounce nubbin per hill would make 65¼ bushels per acre worth \$39.15.

Our corn lacks much of being a perfect stand or else the production per hill is low. Some careful work this winter selecting seed corn, testing the seed, grading the kernels, and the careful adjustment of the planter next spring to drop just the desired number of kernels per hill, will add greatly to the stand and yield of the next crop. It is the missing hills, hills of one stalk, barren stalks and nubbins that cut down the yield, and most of these factors are largely under the farmer's control.



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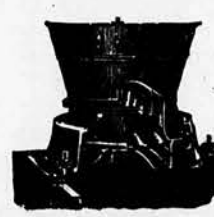
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FARM INQUIRIES



ANSWERED BY
Prof. A. M. Ten Eyck

Mixture for Permanent Pasture.

What mixture would you advise for permanent pasture in Labette county, Kansas? Would Bermuda thrive sufficiently to make pasture during July and August, or would some other forage probably give better results?—J. P. Kavanagh, Hettick, Ill.

Bermuda grass is being grown quite successfully in certain localities in Southern Kansas. I think it is well worth trying as a pasture grass in Labette county. At present, however, probably the safer pasture grasses for Labette county are: English blue-grass, Orchard grass, and Kentucky blue-grass. English blue-grass and Orchard grass will not make a "permanent" pasture, but the sod should be broken every four or five years and the land planted with other crops for a few seasons. Also, to maintain the fertility of the soil it will be necessary to manure the land.

If Kentucky blue-grass is sown with white clover and a good stand is established, this combination may make a nearly permanent pasture, requiring perhaps, in order to make it productive, an occasional dressing of manure or the application of other fertilizers. The fault with the Kentucky blue-grass is that it furnishes little summer pasture, but it will make good spring and fall pasture. Bermuda grass, on the other hand, is not valuable for early spring and fall pasture but is particularly well adapted for summer pasture, being, on the whole, more productive than the Kentucky blue-grass.

In establishing a permanent pasture with Kentucky blue-grass I would advise to sow the Orchard grass and English blue-grass, including a little Kentucky blue-grass and white clover, also some Alsike clover; say 10 pounds of each of the first two grasses named, with 4 or 5 pounds of the Kentucky blue-grass, 4 pounds of Alsike clover, and 2 pounds of white clover seed per acre. Bermuda grass is usually propagated by planting root cuttings. I am mailing you circular letter giving further information on the subject of Bermuda grass.

Seed-Bed Preparation for Oats.

I would like to ask you the way to plant oats to get the best crop and to do the ground the most good. The ground has been "corned" for a great many years. I would like to know the right time of year to disk alfalfa ground and should it be disked heavy or light?—H. F. Ayers, Mankato, Kan.

Oats require fairly fertile land and a well prepared seed-bed in order to make a good crop. In too fertile land the oats may lodge but I take it that the land which you describe as having been in corn for a great many years will not be too fertile; rather it is likely to be somewhat low in fertility and may not produce a very good crop of oats without fertilization. A light dressing of barnyard manure this fall plowed under as early as possible would put this land in better condition for oats. Usually I would prefer fall plowing to spring plowing, although in fertile land a common practice, and a good one, is to plant the oats in the corn stubble, preparing the land for seeding by disking and harrowing in the spring, and this method often gives good results. I am mailing you circular 9 giving information regarding "Seed-bed Preparation For Wheat." The seed-bed for oats should be prepared in a similar manner as that described for wheat. In general its condition should be mellow at the surface and moist and well pulverized beneath making a good connection with the subsoil. Usually prefer to plant oats with a drill sowing about 2 1-2 bushels of good seed per acre. Do not plant too deep but cover well. The seed-bed should be thoroughly prepared before planting.

Prefer the Kherson, Sixty-day or

Red Texas oats as the varieties best adapted for growing in northern Kansas. We can supply seed of the Kherson and Red Texas oats which has been bred and grown at this Station, at \$1.50 per bushel for graded seed. Oats of these varieties may also be secured from seedsmen.

I prefer to disk alfalfa ground quite early in the spring before the alfalfa starts much. Set the disk to run about two to three inches deep and cross disk if necessary finishing with the straight tooth harrow in order to level the ground and break the clods. If the soil is fairly mellow single disking and cross harrowing may be sufficient cultivation. If the common disk harrow is used set the disks rather straight and weight the harrow to make it cut the required depth. The rotary spike tooth harrows now being made and sold are especially adapted for cultivating alfalfa. These do not ridge the ground as does the common disk and do not cut off or injure the plants.

I am mailing you circular letter giving further information regarding "Disking Alfalfa;" also refer you to our bulletin No. 155, a copy of which you may secure by writing to E. H. Webster, Director of the Experiment Station.

To Supply Nitrogen.

I have been sowing cow-peas in corn and clover with wheat, on a small scale, in Labette county, Kan., to supply nitrogen. Would it be profitable to buy raw rock phosphate to increase phosphorous, and if so where could it be purchased and at about what price? Do not think it pays to buy bone dust. Will rock five to 15 feet below the surface permit of the growth of alfalfa, the soil being fertile? I wish to bring the soil into as high a productive state as is profitable with general farming.—J. P. Kavanagh, Hettick, Ill.

It is a difficult question to say whether it would be profitable to buy raw rock phosphate for the soil upon your farm in Labette county or not. We are not sufficiently familiar with the soils in Labette county to answer that question directly. It would undoubtedly be necessary for you to try the raw rock phosphate upon a small area and determine from the results whether or not its application was profitable. There is no question but that certain soils in your section of the state are in need of phosphoric acid fertilization, especially those soils which have been cropped for many years without returning to them manure or other organic matter. It is possible that such soils might be renewed in fertility by plowing under crops for green manure or by the direct application of organic matter in the form of barnyard manure. Barnyard manure would carry in itself considerable phosphoric acid and the decay of the organic matter in the soil would set free from the soil itself more phosphoric acid which would be available to succeeding crops. It is possible that the simple addition of organic matter would be sufficient to place your soil in a good state of fertility. A soil, however, lacking in phosphorus would be greatly benefited by a direct application of phosphorus in some form such as bone dust or rock phosphate. If raw rock phosphate was used it would be advisable to apply the fertilizer with manure or some other organic matter since the phosphorus in raw rock phosphate is insoluble and will not become available as plant food unless acted upon by organic acids. The manure or other organic matter would furnish the organic acids to set free the plant food in the raw phosphate rock.

There should be no difficulty in growing alfalfa successfully on a fertile soil, even though the rock came within five feet of the surface. We have grown successful crops of alfalfa upon the Station farm where the rock was not more than five feet below the surface. However, the nature of the

underlying rock will have considerable influence upon the successful growth of this crop. If the rock is more or less shattered or broken the alfalfa roots will extend in among the rocks and obtain much moisture and plant food from the crevices of the rock themselves. While with a solid rock underlying, this would not be possible. With fifteen feet of soil there should be no danger whatever of securing profitable crops of alfalfa, providing the other soil conditions were favorable. In dry seasons the nearer the rock extends to the surface the smaller will be the crop of alfalfa.

Seed Corn Selection in Mexico

Hacienda de San Fernando, Lerdo, Durango, Mexico. I have some 400 acres in corn this year that we are about harvesting. The usual condition is one or two ears per stalk, but this year I notice some stalks with as many as five. Do you think it would be well to select ears from the stalks with five or select best ears irrespective of the number on the stalk? In other words is seed from a stalk which produced five ears, likely to give the same number another year?

I have some land which has been planted with cotton for several years, which has this year developed a good deal of "root rot." The Agricultural Department at Washington, D. C., recommend changing crops, and I would like to plant alfalfa, but fear alfalfa is subject to the same disease. I might find it difficult to get a good stand in case the land was infected. I should be glad to have your opinion.—B. F. Butler, Hacienda de San Fernando, Lerdo, Durango, Mexico.

If it is desirable in your country to grow two or more ears per stalk then I would advise to select seed ears from the stalks having the largest number of ears. Like produces like, with corn the same as with animals. Throughout the corn belt in the states one good ear to the stalk is usually preferred to more than one ear; hence, the practice is to select the good ears for seed without particular reference to the number on the stalk. I believe you grow a smaller eared variety of corn than we grow here; hence, may require more ears per stalk to produce maximum yields. It is true also with some varieties of corn in our southern states that the ears are small and the practice is to select seed from the stalks having the largest number of ears, since it is desirable to produce more than one ear per stalk with these varieties under the conditions which they are grown.

Alfalfa is attacked by root rot in some soils under some conditions, but I am not aware that the disease is the same as the disease which attacks the roots of the cotton plant. I would advise to try seeding alfalfa on cotton ground since there is no better rotation for the land than to lay it down to alfalfa for a few years. I am requesting the director of the experiment station to mail you our bulletin No. 155, giving a great deal of information regarding "The Seeding and Culture of Alfalfa." Have also mailed you a copy of bulletin No. 139, "A Study of Corn," and also circular 12, giving information regarding "Seed Corn Distributed by this Station."

Cropping for Sandy Loam.

Having rented a farm of 160 acres for cash rent for five years, I am anxious to find out the best plan of farm management. The farm is of a sandy loam nature and when well farmed has given the best yields in the neighborhood. Would you suggest any improvement on the following plan? First, I might add, previous to the last year it has been in wheat for a good number of years, but the last year it was all put in corn. There will be 135 acres for spring crop. I intend to plow now some 20 or 30 acres for oats and barley to plant in the spring and as soon as they are off the ground to list in cow-peas. The balance of the corn ground being light, I thought it had better be left till spring and then plowed about six inches deep, harrowed and put in corn with a planter with furrow opener attachment. Not plowing until spring I gain in two ways; get the stalks for pasture and have stalks to catch snow if any. What data have you in regard to putting in corn with furrow opener? Is it any advantage in yield over the lister? I would be very much pleased to receive any in-

formation on the subject.—S. G. Roach, Salina, Kan.

The cropping plan which you propose for one year may be as good as any which you could carry out on the farm which you describe, unless you care to grow some special crop which might bring more money per acre, such as potatoes or other truck or garden crops. I would suggest, however, that you prepare the 20 or 30 acres which you sow to special grains for alfalfa, sowing alfalfa next fall instead of planting the cow-peas immediately after harvest. Since you have a five-year lease on this farm you will secure at least four years' crop of alfalfa providing you are successful in establishing a good stand next fall. This will allow you to handle hogs profitably and the alfalfa if sold for hay will bring in more income per acre than any other standard crop which you can grow. If you propose to grow corn on the small grain land another year the planting of cow-peas after harvest may be recommended; however, there will be very little income directly from the cow-peas, the purpose of this crop being more for fertilizing the soil. You would hardly be able to produce a crop of seed from cow-peas planted so late in the season.

I am mailing you bulletin No. 160, giving further information regarding "Cow-peas," also bulletin No. 155 on "Alfalfa Seeding and Culture." For general information on the subject of farm management and soil management I have mailed you one of my farm management pamphlets.

Doubtless your plan of plowing the corn ground in the spring is preferable to plowing in the fall on the light soil, which is apt to blow. Prefer to begin the work as early in the spring as possible, even plowing in the winter if there is open weather.

The furrow opening method of planting corn at this station has given larger yields than planting without the furrow opener on plowed land in well prepared seed-bed, and in some seasons this method has given better results than listing, the average yield being in favor of planting with the furrow opener.

If you can use the stalks for pasture I would not advise you to plow them under this fall. You might pasture one field during the fall and early winter so as to have it ready for winter plowing. It occurs to me, however, that there may be some danger of your light soil drifting, even if you plow it in the winter. Provided you plant with the lister a better method for you to practice perhaps in preparing the seed-bed for corn will be to list in the winter and split the ridge at planting time. This method of preparing the seed-bed has given, as an average for five years, about five bushels more corn per acre each year at this station, when compared with no preparation of the soil previous to furrow opener method of planting as planting with the lister. While the furrow opener method of planting may give good results with you yet your light soil is particularly well adapted for planting with the lister and in a dry season on such soil in your part of the state listed corn will be apt to give the better yield as compared with the surface planted corn, even though the furrow opener be used on the surface planting.

Oleomargarine Fraud.

Until the Groat bill was passed about ten years ago, oleo was sold everywhere at the price of butter and as butter. The consumer never heard anything about oleo—"the poor man's butter." It was simply called butter and that was all there was to it. The Groat law compels the oleo manufacturer to pay 10 cents tax on every pound of colored oleo and 4 cents on uncolored oleo. Many state laws compel the retailer and manufacturer to brand the goods with its true name so the consumer can tell what is being bought.

There's the rub. If no one could tell what he was buying the manufacturers of oleo wouldn't care a rap about the 10 cent tax, only of course they could make more profit if it were less. There's enough profit in the business to make it worth while to counterfeit butter by evading the laws.

We have no desire to see the price of real butter go higher than it now is. It has reached the limit. When the price goes too high consumption ceases. So it is better to sell lots of butter to the consumer at 30 or 35 cents than have the business demoralized by a prohibitive price. We don't want the oleo fellows to have a chance to create the consumer's prejudice

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DUKE OF DUNDEE 285352, 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. MCLEARY, Beloit, Kan.**

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

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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. 2 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.

A FEW HEREFORD bull calves got by Hobson 977221 and out of dams tracing through Lamplighter to Anxiety 4th, priced later. Berkshire boars, spring farrow, for sale. **W. B. & J. M. RODGERS, Beloit, Kan.**

50 HEREFORD CATTLE comprising the H. B. Woodburg herd. Some famous cows in this herd. 8 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 259475, 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. **ROY C. BIRT, 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 Vidoque (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 42539 by Cosaque by Theidus, who sired Calipso and Casino. Visitors welcome. **C. J. JOHNSON, Solomon Rapids, Kan.**

THE HOME OF JACQUE W. 41659 by Tiatrey, dam Imported Risette. Inspection of my Percherons invited. **RALPH G. McKINNE, 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.

LAWDALE 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. H. 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.

HAMPSHIRE HOGS. 40 spring pigs, both sexes, for sale. Write for prices. **A. B. DOYLE, Rural Route 1, 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 **T. C. WRENCH, Beloit, Kan.**

AUCTIONEERS.

COL. H. H. VANAMBURG, General and Live Stock Auctioneer. Phone 434. **BELOIT, KAN.**

COL. F. L. SMITH, General and Live Stock Auctioneer. Phone 943. **BELOIT, KANSAS.**

against real butter, and that is what happens when butter gets very high. But you will notice that the consumer pays within two or three cents as much for oleo as for butter. It isn't "poor man's butter" in price if it is in quality.

The packers and oleomargarine manufacturers will in the next session of congress make a desperate effort to get the law into such shape that their fraud on the public can be practiced with practically no limitations. The dairymen must fight for the dairy cow and for butter for the people who want it. The dairy cow is the only manufacturer of butter-fat. So because she is a mother she only has a license to make the principal constituent of butter. She must be protected and so must the public which is willing to pay butter prices for butter but not butter prices for a substitute.

KANSAS FARMER has urged farmers to arrange for institutes, attend the meetings and take an active interest. Unquestionably the farmers' institute is a great educational institution. Kansas has an institute system which is causing other states to take notice although we are spending but a pittance as compared with other states. Kansas is getting more for her money expended on institute work than any other state on twice the amount. This condition is due to the enterprise and

good judgment of J. H. Miller, institute superintendent. He has a capable corps of assistants and these, with the help of Kansas Agricultural College instructors make a corps of speakers not excelled. Some 300 or 400 institutes will be held in Kansas between this time and June 1 next year. Every county in the state will have several and the gospel of good farming will have received a big boost. The value of this number of institutes cannot be estimated in dollars. The results of these meetings will not be so noticeable in the farming of next year, but in the few years following the seed now sown will begin to tell. One or two farmers will take home from each meeting a few thoughts and the determination to test them. The test will be applied and the results watched by other farmers. Success will mean the following year a few more disciples and the next year more and so on until the entire neighborhood is imbued with the new spirit. Farmers are beginning to realize that brains are needed in the plowing and sowing. Farmers have the right quality of gray in their heads and when a business proposition is presented convincingly they, like the Irishman, will try most anything once. A thorough trial of a practical agricultural principle is all that is needed to start a neighborhood on the right track.



WINCHESTER
.22 CALIBER CARTRIDGES
 Winchester .22 Caliber Cartridges both Black and Smokeless powder are unequalled for accuracy and uniformity in shooting. The Smokeless powder cartridges are loaded with Winchester Greaseless Bullets which makes them clean to handle and prevents the powder from losing its strength. Try them next time. Ask for Winchester make—the Red W Brand.
SOLD BY DEALERS EVERYWHERE.



WHEN BUYING A CORN SHELLER
 Insist on Clean Shelling, Thorough Separation, Large Capacity and Lasting Qualities. These are Distinctive Features of
The NEW HERO
 2-hole and 4-hole Custom and 2-hole Farmers' Positive Force-Feed Shellers
 They have Chilled Working Parts and other points of strength and convenience. We make Horse Powers, Wood Saws, Huskers, Farm Trucks, Manure Spreaders, etc. We guarantee our Goodhue Wind Mills for five years.
APPLETON MFG. CO.,
 19 Fargo Street, Batavia, Ill., U. S. A.



Simple Reliable Powerful
 Getting the most engine for your money does not mean buying the cheapest—it is a matter of securing an engine that will give reliable results year in, year out—the speed must be steady and uniform—absolute interchangeability of parts assured—actual power must equal rating. Every requirement of the man who wants a simple, reliable engine is met by the
WEBER GAS or GASOLINE ENGINE
 Sold Under Our Absolute Guarantee
 Will lighten the labor of pumping, grinding, shelling and all kinds of farm work.
 Write today, telling us for what you need power and we will send you our new handsomely illustrated catalog fully describing the Weber Engine best suited to your requirements.
Sheffield Gas Power Co., 185 Winchester Pl., Kansas City, Mo.
Let It Furnish Power for You



Mayer's Special Merit SCHOOL SHOES
"WEAR LIKE IRON"
 They wear best where the wear is hardest. Made of selected leather specially tanned to resist exactly the kind of wear a healthy boy or girl will give them.
 Two layers of leather are sewed in at the tip instead of one, to prevent the toes kicking out. The soles are of extreme toughness.
Mayer Special Merit School Shoes
 are made to fit a child's foot in a comfortable, natural way that will prevent foot trouble in later years, yet they are stylish and good looking. Only the genuine have the Mayer Trade Mark stamped on the sole.
 FREE—If you will send us the name of a dealer who does not handle Special Merit School Shoes, we will send you, free, post-paid, a handsome picture, size 15x20, of George Washington.
 We also make Honorbilt Shoes for men, Leading Lady Shoes, Martha Washington Comfort Shoes, Yerma Cushion Shoes and Work Shoes.
F. MAYER BOOT & SHOE CO.
MILWAUKEE WISCONSIN
THEY WEAR LIKE IRON



Tear Tag for FREE Pair of Shoes
 Your dealer has a tag for you—it's a little Buffalo Calf made from the same leather as our Buffalo Calf Shoes. If you can tear the tag, you'll get a pair of Bentley & Olmsted Company's best Buffalo Calf Shoes, absolutely free. They're made from the hides of young, inside-raised, well-fed, summer-killed cattle, and combine all that's good in other work shoes with many valuable features found in no other shoe.
B. & O. Buffalo Calf Shoes
 Our leather is all specially tanned to set the fibre closely together, add to the wearing qualities and at the same time get the highest degree of smoothness and flexibility without the use of powerful chemicals and artificial greasing. The soles are made from best grade Hemlock tanned Texas steer hides. Send us your dealer's name if he doesn't handle our shoes, and we'll send the tag and also the shoes if you tear it. **BENTLEY & OLMSTED CO., Des Moines, Iowa**
\$3.00 Buys the Best
 us your dealer's name if he doesn't handle our shoes, and we'll send the tag and also the shoes if you tear it. **BENTLEY & OLMSTED CO., Des Moines, Iowa**

PUBLISHERS' NEWS

An Excellent Investment.
 Mr. Neal A. Pickett, the enterprising real estate man located at Arkansas City, Kan., starts an advertisement with this issue. One of his many farm bargains is listed. He offers to sell 560 acres of good bottom valley land, fine alfalfa land located in southern Kansas. This farm is modern in every way. Mr. Pickett, who is familiar with every tract of land in that section, says that it is one of the best farms he has ever listed and pronounces it a rare bargain at \$65 per acre. The owner of this land is very old and is unable to operate same any longer. This is a snap at the price and we would advise that you go see this farm at once. See regular advertisement for more complete description.

Entries at the International.
 The great International Live Stock Exposition will open its doors at Chicago Stock Yards on Nov. 27 and continue until Dec. 10. The pure bred entries include 306 Shorthorns, 242 Aberdeen-Angus, 205 Herefords, 68 Galloways, 121 Red Polls, 55 Polled Durhams, 209 Shropshires, 76 Hampshire, 76 Cotswolds, 84 Shorthorns, 12 Cheriots, 58 Dorsets, 62 Oxford, 23 Leicester, 39 Lincoln, 12 Suffolks, 120 Ramboulllets, 105 Berkshires, 63 Poland Chinas, 71 Chester Whites, 109 Duroc Jerseys, 32 Tamworths, 28 Yorkshires, 74 Hampshire, 258 Percherons, 122 Clydesdales, 143 Shires, 103 Belgians, and 50 draft horses in harness. In Grade and Crossbreeds the cattle number 88 sheep 142, swine 77. In the fat classes the entries number 316 sheep and swine 211. These with the car lot exhibits and the carcass exhibits will serve to make of the International one of the greatest shows on earth.

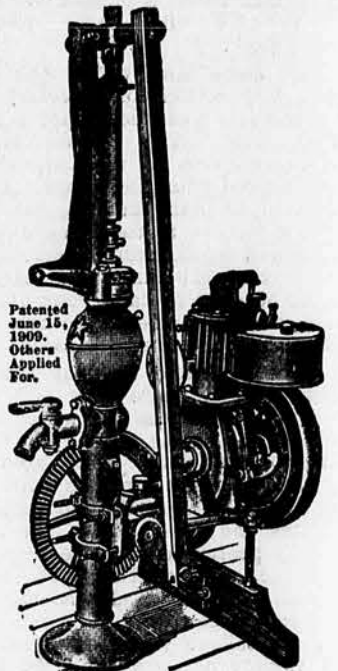
The Wilshusen Corn Sled and Disk.
 We wish to call the attention of our readers to the advertisement of the Wilshusen Mfg. Co. at Stafford, Kan. This is the machine that made the reputation of the Wilshusen line of implements, and has always been a favorite with dealers and farmers everywhere. While not reversible, it permits of a wide range of adjustments and as a ridge buster it has no equal anywhere. It is simple and strong in construction and never wears out. The sleds first put out seven years ago are still in use, requiring a renewal of some of the wood parts about once in three or four years. The slogan of the Wilshusen sled is "Any Farmer Can Repair Me," and this is literally true. All necessary repairs can be made with the tools and material found on any up-to-date farm. This machine is also made in double-row. The shipping weight of Wilshusen Sleds and Wheel Cultivators, single row, is 250 pounds. We invite our readers to send for sample booklet giving full description of this corn sled and disk. It is a valuable tool on the farm and every farmer should own one. Kindly mention Kansas Farmer when writing.

National Association Meetings.
 To be held in connection with the International Live Stock Exposition at Chicago.
Saturday, November 27.
 American Society of Animal Nutrition, Exposition Hall, 8 p. m.
Monday, November 29.
 Percheron Society of America, Exposition Hall 8 p. m.
Tuesday, November 30.
 International Live Stock Exposition Association, Assembly Hall, 8 p. m.
 Continental Dorset Club, Red Cross Office, 2 p. m.
 American Hampshire Swine Rec. Assn., Exposition Hall, 7 p. m.
 American Rambouillet Sheep B. Assn., Wool Office, 8 p. m.
 American Tamworth Swine Rec. Assn., Clydesdale Office, 8 p. m.
 American Oxford Down Rec. Assn., Red Cross Office, 8 p. m.
Wednesday, December 1.
 American Shorthorn Breeders' Assn., Grand Pacific Hotel, 8 p. m.
 American Aberdeen Angus Breeders' Assn., Grand Pacific Hotel, 8 p. m.
 American Southdown Breeders' Assn., Wool Office, 9:30 a. m.

The National Corn Exposition.
A "Kalamazoo Direct to You" Warehouse.
 This interesting picture shows the interior of the Kalamazoo warehouse, where your "Kalamazoo direct to you," is shipped from. Your first impression when entering the door is the immensity of the building. Fol-

American Shropshire Assn., Assembly Hall, 10 a. m.
 American Poland China Record, Assembly Hall 1 p. m.
 Red Polled Cattle Club of America, Wool Office, 2 p. m.
 Hampshire Down Breeders' Assn. of America, Wool Office, 8 p. m.
 American Clydesdale Assn., Clydesdale Office, 8 p. m.
 American Shetland Pony Club, Saddle & Siroin Club, 7:30 p. m.
 American Shire Horse Assn., Exposition Hall, 7 p. m.
 American Berkshire Assn., Red Cross Office, 2 p. m.
 National Lincoln Sheep Breeders' Assn., Assembly Hall, 8 p. m.
Thursday, December 2.
 Polled Durham Breeders' Assn., Wool Office, 2 p. m.
 American Galloway Breeders' Assn., Galloway Office, 8 p. m.
 American Suffolk Flock Reg. Assn., Red Cross Office, 8 p. m.
 American Cotswold Reg. Assn., Wool Office, 8 p. m.
 American Yorkshire Club, Red Cross Office, 2 p. m.

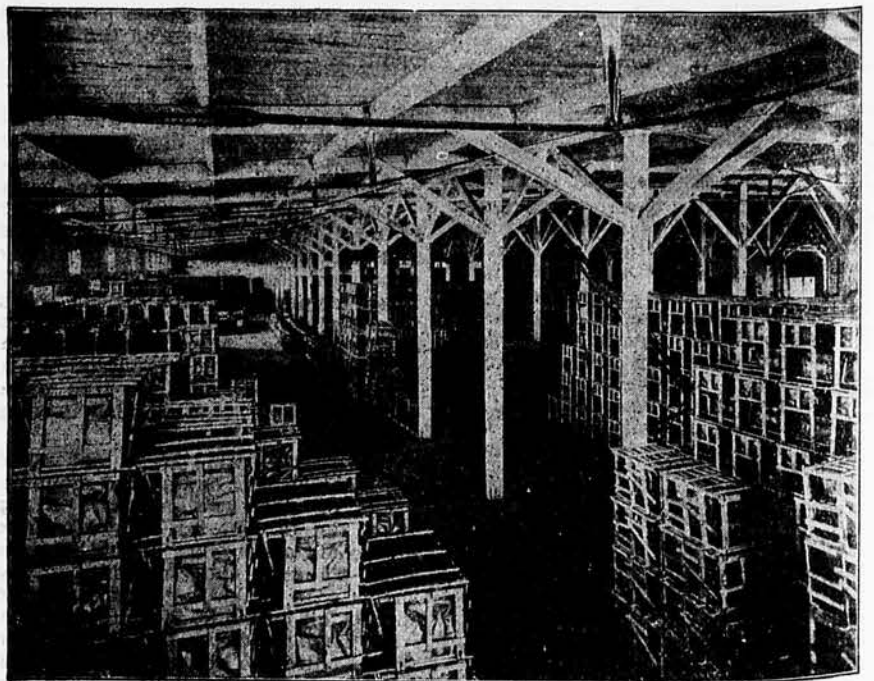
Wonderful Farm Pump Engine.
 The Fuller & Johnson Farm Pump Engine, which was brought out less than a year ago, has been a wonderful success. It fits any pump and makes it a complete power pumping plant. The Farm Pump Engine is of the same high quality as the larger engines.



The verdict of power users in every state is that Fuller & Johnson Engines have advanced the standard of gasoline engineering to the highest point yet attained in the field of cheap power production. The new catalog of Fuller & Johnson Engines is the best we have ever seen, as it explains the whole engine proposition with wonderful clearness. The first edition went so fast that they had to get out a second edition. Send your name and address to the Fuller & Johnson Mfg. Co., Madison, Wisconsin, and they will send you a copy of the new catalog.

The Illinois Hall of Fame Commission.
 The commemoration of the achievement of men who have rendered exceptionally useful services in promoting agriculture is the object of the commission appointed by

produces an impression never to be forgotten. The Kalamazoo warehouse has storage room for 30,000 stoves. And every foot of space and every one of the 30,000 stoves is needed, too, many at a time. The big Kalamazoo factories cover five acres of ground. They have facilities for turning out one stove every two minutes of the day.



lowing close upon that comes the thought of the bigness of the enterprise. You look at the ranges, heaters, gas stoves, wood stoves, stoves of every kind and for every purpose piled tier upon tier and the effect is stupendous. You never knew there were so many stoves in the world before and to find this enormous quantity all under one roof, all made by one concern, all SOLD ONE AT A TIME, from that one warehouse

1200 to 1400 stoves and ranges every week. All up to the same unquestioned standard of high grade material and workmanship. The personal word of the vice president, William Thompson, Kalamazoo, Mich., several times Mayor of Kalamazoo, is back of every statement they make, as well as a \$20,000 Bank Bond. An enterprise built upon a foundation so solid as that must succeed and the Kalamazoo Stove Company is proof.

the governor to select candidates for the Illinois Farmers' Hall of Fame. The commission is composed of Hon. A. P. Grout of Winchester, Ill., the farmers' representative on the board of trustees of the University of Illinois; Hon. John M. Crebs of Elgin, Ill., the president of the Illinois State Board of Agriculture; J. P. Mason, of Elgin, Ill., the president of the Illinois Farmers' Institute; Prof. Eugene Davenport of Urbana, Ill., the dean of the State College of Agriculture; Colonel Charles F. Mills of Springfield, ex-secretary of the Illinois Department of Agriculture. The first name to be thus honored is that of Cyrus Hall McCormick, the inventor of the reaper, and this nomination will be celebrated with appropriate ceremonies in the Illinois Farmers' Hall at the Agricultural College at Urbana on Dec. 15, 1909.

J. M. Nielson, Route 5, Marysville, Kan., owner of the Maple Heights Berkshires announces that he will part with one of his herd boars. This boar is King Robin Hood 111675. He was farrowed Oct. 10, 1907 and is very smooth with a deep brood back, extra well sprung ribs, short legs and best of feet. He has good hams, as neat head and is a sure breeder. He stood second in class at the State Wide Fair at Topeka which was the strongest show of Berkshires made in Kansas. He won first at Manhattan and will weigh in his work clothes, better than 500 pounds. Here is a bargain for some one. He is just in his prime and is sold for no fault. Mr. Nielson has so many of his gilts that he cannot use him any longer. Wouldn't you like to own a Black Robin Hood? If so, write to Mr. Nielson and mention Kansas Farmer.

"Tell me what you eat and I'll tell you what you are," will go down to posterity as one of the most apt epigrams of the last century. Those who eat of the recipes compiled in the Maple Leaf Cook Book could have nothing but good told them. While we confess that we have not tried all the good things mentioned in this unique book, a cursory reading is sufficient to convince us of their merit. Perhaps our failing for Southern cookery has something to do with our enthusiastic approval of the Maple Leaf recipes—for the book is the work of a Maryland woman—but however that may be, we do not believe anyone can read the instructions for making North Carolina Chicken Stew of Checkerberry Novelty, for instance, without wishing to go at once and try them. Not everything in the Maple Leaf book is about good things to eat. Considerable space is devoted to some very interesting information about the best ware to use for preparing and keeping food. This is shown to be Maple Leaf Stoneware, because of its cleanliness, long service, and safety in keeping permanently sweet. Maple Leaf Stoneware is made by the largest manufacturers of stoneware in the world. They guarantee every piece. Every woman should know how Maple Leaf Stoneware will save her time and work, and insure more wholesome food. By writing to the Western Stoneware Co., 1150 6th Ave., Monmouth, Ill., you can get a Maple Leaf Cook Book free. It gives full particulars about the ware, as well as many tested recipes that will interest you.

Chapman's Offering.
On Nov. 4, H. S. Chapman & Sons, near Pawnee City, Neb., sold at auction an offering of Poland Chinas, 25 sows and 20 boars that was decidedly the best offering the writer has seen this season and does not remember ever seeing a better offering sired by the same boar in all his experience as a fieldman. The sire of this remarkable offering was Look Grand by Grand Look. The 20 boars brought \$795 which was an average of \$39.75. The 25 gilts sold for \$748 which was an average of almost \$30. The entire 45 head brought \$1543, which was an average on the whole offering of \$34.25. There was a nice crowd out and a number of prominent breeders were in attendance from a distance. A dandy dinner was served by Mrs. Chapman assisted by her neighbors. Coles L. W. and N. E. Leonard did the selling in a highly creditable manner. Well known Poland China breeders who were there were all agreed that this offering was the best they ever saw sired by one boar. Among well known breeders who attended were H. C. Dawson, Endicott, Neb.; H. B. Walter, Effingham, Kan.; Bennie Bell, Beatrice, Kan.; E. F. Orley, Oregon, Mo.; J. M. Ross, Valley Falls, Kan.; S. A. Budd, Hampton, Mo. The Chapmans have sold their fine farm about six miles east of Pawnee City and have bought another farm in Oklahoma where they will move in the spring. This does not mean that they are going out of the hog business by any means and we will give this tip right now to farmers and breeders in Oklahoma and southern Kansas that the Chapman herd will be a mighty good pace to buy Poland that are right. Mr. Chapman is one of the oldest breeders in Pawnee county, Nebraska and while he has been somewhat modest in his claims and not as noisy as others the fact remains that his standing as a hog man is of the very best both at home and abroad. The Leonardos who are well known auctioneers in both Kansas and Nebraska told the writer that the pure bred hog sales they were conducting this fall were in average of prices paid above those of recent years. They have conducted four pure bred Poland china sales in Pawnee county this fall so far and in the four sales have sold 178 pigs and out this number only two sold below \$20. The average on the 178 would be better than \$35. Col. L. W. Leonard who now devotes all his time to the auction business and more especially the selling of pure bred animals is one of the very oldest and best known Poland China breeders in Nebraska. He has had charge of the swine department at the Nebraska state fair for the last ten years but has recently resigned that honor and his son N. E. was chosen in his place. Mr. Chapman was well pleased with the prices received and while it is a fact that Poland that was not as desirable have sold in that part of the state recently for more money it should be a source of much satisfaction to Mr. Chapman and his sons when they recall the praise their Poland received on sale day and especially the remarkable offering on sale that day. Poland China breeders will be glad to know that Look Grand 48384 the great sire of this offering and other animals, many of which will go with the Chapmans to Oklahoma along with the sows that have been reserved is not to leave Pawnee county but will remain in that county at the head of Geo. Haymaker's popular herd at Pawnee City. Remember the Chapmans as breeders at their new home which will be Marshall, Ok.

Another Record-Smashing Stock Show at Hand.

Once more the International Live Stock Exposition, which will be held in Chicago from Nov. 27 to Dec. 10, has accomplished the seemingly impossible by again showing a most phenomenal increase in entries. Once more all past records have been demolished and once more we are brought to realize that interest is growing in this, the greatest of live stock shows, this leading

exponent of the live stock industry, and that this great annual event is becoming more popular from year to year. Even though feeding operation have been exceedingly light during the past year, we still find an increased number of entries in the cattle department. The draft horse exhibit will be the greatest ever seen in this or any other country. Horses, whose lineage dates back into the dark ages, will be seen in the ring beside the most splendid specimens of the English and Scottish types, whose equals have never before been brought together in such numbers in the history of the show ring. The number of exhibitors in the sheep department exceeds that of any previous year, and in quality their exhibits will far surpass anything ever seen here in the past, as the entries show them to contain some of the choicest importations made to this country in recent years. In the swine department all the leading types will again be represented and the quality will be superior to that of any show ever seen on this continent. All these and many other new features give promise of making the coming exposition the greatest in the history of the splendid series of events, and no one, be he ever so distantly connected with live stock, the right arm of our basic industry, agriculture can afford to miss this exceptional opportunity for education, entertainment and a pleasure trip in one.

JUDGES—Cattle.

Shorthorn (Breeding and Fat Classes)—C. E. Leonard, Bunceton, Mo.; Frank Van Natta, Fowler, Ind.; C. D. Bellows, Marysville, Mo.

Aberdeen-Angus—Chas. Echtr, J., Botna, Iowa.

Hereford—E. J. Taylor Fremont, Mich.; Robt. Mousel Cambridge, Neb.; T. J. Wornall, Liberty, Mo.

Galloway—Prof. H. R. Smith Lincoln, Neb.; Marion Parr Harriestown, Ill.

Polled Durham—Prof. W. L. Carlyle, Soda Springs, Ida.

Grade and Cross-breds and Champion Steers—William Heap, Manchester, Eng.

Carload Fat Cattle and Short Fed Specials.

Carload Feeder Cattle—Harry Schirding Petersburg, Ill.

Steers Entered for Slaughter Alive—John G. Imboden Decatur, Ill.

Carcass Cattle—Samuel T. White Chicago.

SHEEP (Breeding and Fat Classes).

Shropshire—Prof. W. J. Rutherford Winthrop, Man., Robt. Miller (alternate), Stouffville, Ont.

Hampshire—E. M. Benham Canandaigua, N. Y.

Cotswold—Prof. E. L. Shaw Washington, D. C.

Southdown—H. L. Sompton Kyle, O. Cheviot—Prof. E. L. Shaw Washington, D. C.

Dorset—Arthur G. Drinks, Allamuchy, N. J.

Oxford Down—Prof. G. E. Day Guelph, Ont.

Leicester—C. E. Wood Freeman, Ont. Lincoln—Herbert Lee, Highgate, Ont.

Suffolk—George Allen Burford, Ont. Rambouillet—Nace Burnham Woodstock, O. A. G. Butterfield Weiser, Ida., C. E. Lockwood Washington, Mich.

Grade and Cross-Bred and Champions—David McKay Fort Wayne, Ind.

Carloads Sheep—Wm. F. Monia U. S. Yards, Chicago.

Carcass Sheep—H. L. Hastings, U. S. Yards, Chicago.

Swine.

Berkshire (Breeding Classes)—N. H. Gentry Sedalia, Mo.

(Fat Classes)—Prof. W. L. Carlyle Soda Springs, Ida.

Poland China (Breeding for Fat Classes)—J. M. Kemp Kenny, Ill.

Chester White (Breeding and Fat Classes)—M. E. Newborn Hennepin, Ill.

Duroc-Jersey—(Breeding and Fat Classes)—J. G. Fuller Madison, Wis.

Tamworth Breeding and Fat Classes)—E. N. Ball Ann Arbor, Mich.

Yorkshire (Breeding and Fat Classes)—Thos. H. Canfield Lake Park, Minn.

Hampshire (Breeding Classes)—J. M. Craven Florence, Ky.

(Fat Classes)—Henry Booth U. S. Yards, Chicago.

Grade and Cross-Bred and Champions—Prof. W. L. Carlyle Soda Springs, Ida.

Carloads Swine—A. E. Whitaker U. S. Yards, Chicago.

Carcass Swine—H. Boore U. S. Yards, Chicago.

Horses.

Percheron (Committee)—William Bell Wooster, O. Chas. R. Kirk So. St. Joseph, Mo.; Prof. C. F. Curtis Ames, Ia.

Clydesdale—Prof. W. B. Richards Fargo, N. D.; Andrew McFarlane Polo, Ia.; Geo. Hutton Madison, Wis.

Shire—A. Latimer Wilson Creston, Ia.; J. F. Meyers Herbert, Ill.; Edwin Hobson Clifton, Ill.

Belgian—J. G. Truman Bushnell, Ill.; A. B. Holbert Greeley, Ia.; Eli Sprunger Decatur, Ind.

Draft Horses in Harness—Prof. W. L. Carlyle, Soda Springs, Ida.

Superintendents.

Cattle—Thomas Clark Beecher, Ill.; W. A. Harris Lawrence, Kan.

Horses—J. S. Cooper U. S. Yards, Chicago.

R. B. Ogilvie U. S. Yards, Chicago.

Sheep—Richard Gibson Delaware, Ont.

Prof. W. C. Coffey (assistant superintendent), Urbana, Ill.

Swine—A. J. Lovejoy Roscoe, Ill.; C. A. Kurtze (assistant superintendent), Indianapolis, Ind.

Carloads—J. W. Marton Richland City, Wis.; John Clay Chicago, Ill.; E. H. Ingwersen U. S. Yards, Chicago.

Carcasses—Prof. C. F. Curtis Ames, Ia.; Prof. W. Dinsmore Ames, Ia.

Students' Judging Contest.

STOCK.

Superintendent, Prof. J. H. Sheppard, Agricultural College, N. D.

JUDGES.

Horses—Prof. W. B. Richards Fargo, N. D.; Robert Graham Claremont, Ont.; Fred Pabst Oconomowoc, Wis.

Cattle—Prof. R. S. Shaw Ann Arbor, Mich.; John Latham Lake Geneva, Wis.; O. E. Bradfute Cedarville, O.

Sheep—W. F. Renk Sun Prairie, Wis.; Prof. L. L. Shaw Washington, D. C.

Swine—Prof. W. B. Richards Fargo, N. D.; Ed Kiver Bloomington, O.; Geo. H. Heyl, Washington, Ill.

Judges for College Classes.

Most Instructive Carcass—Samuel T. White, Chicago, Ill.; H. L. Hastings U. S. Yards, Chicago; H. Boore U. S. Yards, Chicago.

Feed and Forage—G. Howard Davison Millbrook, N. Y.; Prof. R. A. Moore Madison, Wis.

Clay Robinson Classes.

Cattle—Wm. Heap Manchester, Eng.

Sheep—David McKay Fort Wayne, Ind.

Swine—Prof. W. L. Carlyle Soda Springs, Ida.

Best General Exhibit—David McKay Fort Wayne, Ind.; Prof. W. L. Carlyle, Soda Springs, Ida.

Committee on Judges or Exposition—W. E. Skinner Denver, Colo.; G. Howard Davison Millbrook, N. Y.; A. J. Lovejoy Roscoe, Ill.

A Cheap Way To Insure Healthy Hogs

You believe in insurance,—don't you? In fact, you are paying out your good money right now to protect your house, barn and other buildings from loss by fire, because you wouldn't feel safe for even a day without such insurance.

Are your hogs insured? If not, why not? We don't mean fire insurance, but life insurance—"Merry War" Lye insurance—which will keep your hogs always fat and healthy and insures your getting them to market in prime condition to bring top prices.

How To Prevent And Cure Worms and Cholera

Here's a simple, sure, safe way to keep your drove in a perfectly healthy condition and render them immune to contagious diseases:

Tablespoonful "Merry War" Lye mixed with slop for ten hogs, or one-half can with barrel of swill for larger quantity. Stir well, feed night and morning.

Do this, and no matter how sick your hogs may be, in a few days you will see a marked improvement. "Merry War" Lye cleanses the system, tones the digestive organs, makes sick hogs well and insures your pork profits.

Take No Chances!

The time to act is NOW, before worms, cholera and other hog troubles get in their work. It will be too late when Mr. Hog slinks off into some corner, gives a feeble grunt, stiffens out his legs and passes away.

That kind of a dead hog will never fatten your bank account. What you

want is prime hams and bacon—not soap fat! So, take no chances, but insure your porkers against an untimely death by taking out a "Merry War" Lye Policy. And do it today. Don't delay!

The Cost Is A Trifle

"Merry War" Lye is the least expensive as well as the best protection against hog losses ever discovered.

Its action is sure, and the cost for constantly keeping your drove in prime condition is so small that you will hardly notice it.

A fair trial will convince you beyond all doubt that "Merry War" Lye will do everything that its thousands of Farmer Friends over the country claim for it.

Ask Your Dealer For "Merry War" Lye

While most up-to-date dealers handle "Merry War" Lye, some dealers may offer you some other brand. If so, don't accept it, but explain to the dealer that while there are brands of Lye that are good for certain uses, yet there is only one kind—"Merry War" Lye—that is safe and specially prepared for use in preventing and curing sick hogs.

So if your Dealer can't supply you, write us and we will give you the name of one who can; and will also send you a valuable book on "HOW TO GET THE BIGGEST PROFITS FROM HOG RAISING." Send for this book today.

"Merry War" Lye comes in 10c cans, or 24 for \$2.00, at Grocers' or Druggists'. Accept no substitute.

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

"KNODIG" PITLESS SCALES AT LOWEST PRICE EVER NAMED

SAVE \$20 TO \$40 on this famous high grade scale. Company has changed management and to rapidly sell 100 scales in 30 days will quote an amazingly low price. We will name this price only in direct letter to you.

Here's the greatest opportunity you ever had to own a fully guaranteed high grade scale at actual factory cost. The "Knodig" is the best known scale in America. Used by U. S. Government. Best made, most economical and useful. Unlimited guarantee. Write us quick for special 30-day bargain price and full descriptive literature free. • NATIONAL PITLESS SCALE CO., 2004 Wyandotte St., Kansas City, Mo.



Something New! AUTOMATIC EGG BEATER



Is Operated
With only
One Hand
No Wheels
No Crank
No Cogs
Is Practically
Automatic
Can Operate In
Any Dish or
Bowl
Guaranteed
to Give
Satisfaction
By Short Up and
Down Stroke of
the Handle
Simple
Sanitary
Durable
Built to
Last Long
A Wonderful
Labor Saver
Cut One-Fourth
Size

The accompanying cuts only give you a faint idea of this wonderful spiral spring egg beater, cream whip and mayonnaise mixer, the latest and most useful kitchen utensil invented.

How to Get this Egg Beater Free.

Send us the names of five of your friends for a ten weeks' trial subscription to KANSAS FARMER at 10c each (50 cents in all) and we will send you one of these egg beaters for your trouble.

That is all there is to it! You can get the subscriptions in a few moments if you will only try. If you wish to make a present to some of your friends what could you get for 10 cents that would equal a 10 weeks' subscription to KANSAS FARMER. Address,

CIRCULATION DEPT. KANSAS FARMER,

Topeka,

Kansas.

Kansas Farmer Ads Bring Results



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. Wiley & Sons, Elmdale, Kan.

IMPORTERS AND BREEDERS OF

Percherons, French Draft, Shires and Coachers

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.

ROBISON'S PERCHERONS



—FOR SALE NOW—

Several good young stallions and mares.

J. C. 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 Enid Fair and Live Stock Assn.'s sale, Enid, 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.

BEST IMPORTED PERCHERON, BELGIAN, English Shire, Suffolk Punch and German Coach Stallions. \$800 to \$1,000 your choice. Imported mares, home-bred horses, \$250 to \$6,500.
A. LATIMER WILSON, Creston, Iowa.

Frank L. Stream, of Creston, Iowa, is selling young, choice imported Belgian, Percheron, English Shire, Suffolk Punch and German Coach Stallions at \$1,000. Home bred registered draft stallions, \$300 to \$600.

PERCHERON HORSES, HOLSTEIN-FRIESIAN CATTLE.

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

H. N. HOLDEMAN, Meade, 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, Box 82, Palmyra, 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. H. HEDGES, Chase, 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

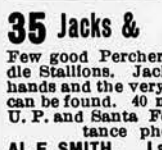
All ages up to seven years old.

Guaranteed as represented and priced reasonable.

Special Prices for fall trade.

Come and see me.

PHIL WALKER, Moline, Kansas



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.

LEARN TO RUN AND REPAIR AUTOMOBILES



Demand for Trained Men far exceeds the supply. Work pleasant. You can learn all in six weeks. Every man wanting to own an Automobile, become a chauffeur, expert repairer, agent or desiring to learn any branch of the Automobile business should take our practical course. Splendid opportunities for young men. Write today for our Free Catalog.

KANSAS CITY AUTOMOBILE SCHOOL, 2109 E. 15th St., Kansas City, Mo.

When writing advertisers please mention Kansas Farmer.

Frank Knopf of Holton, Kan., has some fine White Plymouth Rocks for sale. Last fall he sent four birds down to the American Royal and won first on cockerel, second and third on pullet and third on hen. Mr. Knopf has about 100 birds for you to choose from and is offering them at tempting prices. Notice the change in his advertisement and write him your wants.

Chas. O. Parsons is offering fifteen choice spring boars, mostly sired by Ideal Keep On 120693, the boar that has been used so successfully in the Ideal herd of Poland Chinas for over four years. These young fellows are the kind that make good. The prices asked will surprise you, but these boars must be sold. Address Clearwater, Kan., and mention Kansas Farmer.

J. T. Bayer, President of the Woodson county Breeders Association at Yates Center which has made such a stir in breeding circles of late, says that his Berkshires are coming on in fine shape. He now has for sale a choice lot of sows and spring and summer gilts and boars that are the best he has ever raised. He also has several very choice yearling boars for sale that are in fine condition for heavy service. These will be offered at reasonable prices and are well worth going after. Mr. Bayer has made a great success as a breeder of Berkshires and Shorthorns and has made the Woodson County Breeders Association a grand success by the example he has set and the energy he has put into his work.

John Regier, the good Shorthorn breeder and owner of Alfalfa Leaf Stock Farm at Whitewater, Kan., offers some bargains in his advertising card this week. Among these are 4 young bulls. One of these is a 2 year old son of Archer 205740 and out of a Victoria cow who is a full sister to the grand champion of Kansas and Oklahoma for 1909. Three were sired by Nonpareil Star. One of these is a Victoria, one out of Imp Edelweiss and one out of Christmas Gift. There are also several good heifers that will be sold open or bred to Good News the present herd bull. This bull carries the blood of Choice Good, Lavender Viscount and Imp. Collynie and was undefeated in the Kansas and Oklahoma circuits in 1909. The Alfalfa Leaf herd has been headed by Nonpareil Star 188488 and Odin 259623 by Imp. Lord Bank out of Imp. Edelweiss. One of the choice matrons, Lady Goodness, dropped a pair of extra heifer calves recently. Here is a good place to buy. Write to Mr. Regier and mention Kansas Farmer.

T. I. Wooddall Duroc Average \$17.35.
On Thursday, Nov. 11, T. I. Wooddall of Fall River held his annual Duroc sale. Thirty head mostly spring pigs sold for an average of \$17.35. The prices received was about what Mr. Wooddall expected. A large part of the offering was a little under size. The sale was conducted by Col. Reppert, Cols. Snyder and James.

Tilley's Poland China Boars.
Perhaps no boar of the breed has made a better reputation than Lalls Perfection and Mr. S. W. Tilley of Irving, Kan., seems to be offering a bargain in those March boars of his that were sired by this great herd header. These young boars are out of Mr. Tilley's best sows and, just because he needs the room, he is going to offer them at farmers prices. Get busy now and write Mr. Tilley what you want or go up to Irving and pick them out for yourself. Please mention Kansas Farmer when you write.

Secretary Wilson on the Chicago Stock Show.

The Honorable James Wilson, Secretary of Agriculture, in speaking of the International Live Stock Exposition, which is to be held this year from Nov. 27 to Dec. 10, said: "The International Live Stock Exposition as an educational factor has carved a niche for itself. Producers are confronted with the problem of increased cost of every commodity that they use, greatly enhancing their expenditure. Obviously this necessitates rigid economy, and the man who reduces cost of production to a minimum insures maximum profits and his own survival where others fail. During the period of cheap feed and feed lot extravagance such education was not valued, because its benefits were not realized at the time. Under new conditions, the man who produces beef, pork and mutton cannot afford the use of inferior machinery in his business. Economy requires that he handle the very best types of the most improved breeding; and these lessons can be obtained at the International Live Stock Exposition, which is acknowledged to be an educational institution of the highest order in its line."

Losses \$100 to a Trick Horse Dealer.

The oldest horse tricks are new to some people—at least one of the good old ones was sufficient to make Charles Randol of Hoboken, N. J., give up \$100 to get out of a trade. Randol decided he needed a new team of horses, and seeing an advertisement in a newspaper that a trucking company of New York was going out of business and wanted to sell its effects, he visited the stables in question and looked at an apparently fine team of horses. Asking the price he was astonished to learn that they would be parted with for \$300. He snapped at the bargain and was told he would have to deposit \$100 down and pay the balance after he has given the horses a week's trial. The horses were led from their stalls and as soon as he started out with them he was stopped. "Hey! Come hand up \$200 more!" he was told, and any argument to the effect that the agreement was to pay the \$200 balance in a week was not listened to. Randol finally put the horses back in the stalls and went to get the other \$200. This he paid and no sooner had he done so than a man lounging around the stable called him aside and informed him that the horses were wind-broken and unsound and a careful examination proved this to be true. According to Randol the men who had sold him the horses agreed to buy them

back for \$200 and Randol was compelled to accept this offer. While this victim has had the sharpers arrested, he has not, so far as known, recovered his \$100. Had he read Horse Secrets he would have been on the lookout for such knavery. Horse Secrets is the most sensationally truthful exposure of horse trickery and dopes ever published. The entire edition has been offered with every five year subscription at \$1.00. Address Farm Journal, 1028 Race St., Philadelphia, Pa.

M. L. Ayers' Great Sale Percheron Mares.

On Nov. 30, at his well known farm, near Shenandoah, Ia., that pioneer importer and breeder of Percheron horses, M. L. Ayers, will make a public sale of forty head of registered mares. This is Mr. Ayers' second annual sale and it promises to be one of the great offerings of the year. Mr. Ayers made a sale a number of years ago and at that time he offered what was considered to be the best bunch of mares that was ever sold in the west. Between these two sales he has never sold a mare off the farm, and he has had some of the most tempting offers. His herd has become so large now that he is compelled to let go of some of these and he has therefore selected 40 head of the very best that he has had on the place. The name of M. L. Ayers has been familiar to everyone who has been interested in the draft horse business in the west, and no other man has done more to promote the industry than he has in the west. For years he has had the great stallions, Blande 29259 and Massena 26143, at the head of his stud and many of the mares that will be sold in this sale will be sired by them. The top mares in his last sale were sired by these two horses and they have been worth a fortune to him in the stud. Many of the mares that will be sold in this sale will be bred and safe in foal to the big roan Percheron stallion, Jadin 32873, and this horse Mr. Ayers considers to be one of the greatest stallions today in the state. Most of the mares that he will sell in this sale will be broke to work and there will not be a barren mare in the entire offering. There will be matched teams in the sale, both blacks and grays, so that anybody who wants to buy a team will find them in this offering. While there will be a great many young mares that will weigh right around a ton and they are good in every way. The offering that Mr. Ayers will make this time is a strictly first-class lot of mares in every way, with the best of pedigrees, and there will not be a cull in the entire offering. There has not been a better draft horseman than Mr. Ayers in the country. Ask him for a catalog and mention Kansas Farmer.

Enid Live Stock Show

They do things in Oklahoma. In preparation for the great live stock show to be held at Enid, Okla., Dec. 11-19, Manager F. S. Kirk announces that they now have entered more than five times as many draft horses, three times as many coach horses, twice as many road horses, almost three times as many hogs, and about five times as much poultry as was shown at the great American Royal at Kansas City. They still have room for more cattle, however, and will not close their entries in the cattle classes until December 4. The Association is offering a total of \$2,000 in cash premiums for Shorthorn cattle. This is a larger amount than was ever offered at any show ever held in America under like conditions. These conditions include free entries, free stall rent and free admission for exhibitors. The first premium on aged bull is \$50. The premiums on senior and junior champions are \$25.00 each with \$50.00 on grand champion. This is more money than is offered on aged bull classes by any show or fair association in America. Complete classification is offered on Shorthorns, Herefords, Galloways, and Aberdeen-Angus cattle. More entries are needed in the cattle classes to bring this department up to par with the other departments.

As Enid is in the center of the breeding section of the country, and as the local association has erected the largest cement show pavilion in the United States, there is no reason why this should not be the greatest show of breeding cattle in the Union. Although it occurs somewhat late in the season it is none too late in the climate of Oklahoma.

In connection with this show will be a series of great sales in which are entered already about 100 head of Percheron and Shire horses. Of this number about one-half will be young imported stallions. The cattle sales and the sales of Poland China and Duroc Jersey hogs will be full of quality. C. S. Nevius of Chiles, Kan., has consigned some of his best Shorthorn cows that are safe in calf to Champion Searchlight and J. F. Stodder of Burden, Kan., who topped the American Royal Shorthorn sale has also consigned a number of his best cattle. The sale and the showing for Herefords are not yet filled so strongly and Mr. Kirk announces that he will be glad to receive some entries in this breeds. He hopes to have about 600 head of pure-bred stock to sell at this time.

3-STROKE SELF-FEED HAY PRESS.



All Steel and Iron
Two Men can run it.
The Auto-Feed Hay Press
1544 W. 12th St. K. C. Mo.
Ask for Catalogue No.



For Sale
27 Missouri
Mammoth
Jacks and
Jennets, 3
stallions and
Hereford
cattle.
J. T. Watson
New London,
Mo., Mo.

Hides are Valuable

and you cannot afford to run chances by shipping to anyone but the firm at the head of the trade in KANSAS—THE PIONEERS KANSAS HIDE TRADE—established 1865—Forty-five years business existence must prove—our prices the highest—service the best—so ship to us.

Write for shipping tags

HIDES

Postal card is sufficient

Topeka **JAMES C. SMITH HIDE COMPANY** Kansas

SEND US YOUR HIDES.



We will tan and make them into Coats and Robes at a great saving to you. Do not sell your hides for a few dollars and then buy a coat or robe made from scraps and pieces. But send us a horse or cattle hide and we will make you a Coat or Robe from the whole hide and save you 50 per cent.

Write for Free Catalog.

MONARCH TANNING CO., Des Moines, Ia.

OVER 1000 AUTOS ON SALE

at Bargain Prices
HIGH GRADE USED AUTOS

ARE SUPERIOR TO CHEAP NEW CARS AND COST LESS—THEY ARE MADE OF SOUND MATERIAL—BUILT TO LAST AND IT IS A PROVEN FACT THAT HIGH GRADE CARS ARE BETTER AFTER RUNNING A YEAR THAN WHEN NEW. We buy constantly, all over the country, good cars (with spot cash and quick deal as an inducement for low figures) from owners getting new cars of advance season models and thoroughly overhaul them in our own works. We also buy in enormous quantities.

FROM OVERSTOCKED MFG'RS.

NEW and "traded in" cars, which by our method of prompt deal and spot cash we get at unbelievably low figures.

ALL THESE CARS WE PLACE On Sale at our four big houses, New York, Chicago, St. Louis, Kansas City.

At Marvelously Low Prices as The Largest Dealers in the World in New and Second Hand Cars

We can afford to accept small profits on individual sales and rely on the enormous volume of our business make a fair profit.

A LIST OF OUR BARGAINS ON HAND would require pages to print so we will ask you to send for our bulletin containing an immense array of the most popular and reliable Cars Manufactured at Less Than

ONE THIRD OF ACTUAL VALUE

We have constantly on hand **LARGE AND SMALL RUNABOUTS AND ROADSTERS FROM \$100 TO \$1,200**
SMALL TOURING CARS \$250 TO \$1,500
LARGE TOURING CARS \$500 TO \$3,000

We are sure to have the car you want and at your own price. Do not fail to write to our nearest branch, stating your requirements. We guarantee every car we sell to be exactly as represented.

References: Dun's or Bradstreet's Commercial Ratings, N. Y. City and bank references in any city.

**TIMES SQUARE
AUTOMOBILE CO.**

New York City 215-17 West 48th St.

Chicago 1332-1334 Mich. Ave.
St. Louis Cor. Pine and 18th St.
Kansas City 1701-1703 Main Street

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, Wayne, Ill.

MARKETS

Kansas City Stock Yards, Nov. 22, 1909.—Cattle supplies last week were of about the same volume as previous week, although receipts on Monday were very light. Range cattle came in freely, and railroads deliver these cattle on the market when it suits their convenience, without regard to special market days. Prices did not make much net change during the week, although the feeling was firm all week on killing grades and the outlet good. Stockers and feeders sold higher first of the week, but closed very little different from close of previous week. The run today is 20,000 head here, including 2,000 calves, almost twice as many cattle as were here a week ago, and the liberal supply, together with excessive runs at other markets, naturally has to sell a little lower, steers around 10c lower, she stuff 10c to 15c lower. The heavy run of range cattle now coming and the desire of parties in nearby territory to dispose of as many cattle as possible before winter sets in accounts for the liberal supply today. Buyers complain of lack of quality in cattle from native territory, indicating anxiety of owners to unload hastily. Prime fed steers have been an unknown quantity here the past ten days, good to choice fed steers selling at \$6.25 to \$7.75; some steers and heifers mixed today at \$6.85; fair to medium fed steers, \$5.00 to \$6.00; heavy fed cows, \$4.00 to \$4.75; cows, \$3.25 to \$4.75; bulls, \$2.90 to \$4.20; calves, \$4.00 to \$7.25; stock steers, \$3.00 to \$5.00; feeders, \$4.25 to \$5.25. One or two lots of fancy Colorado stockers reached \$5.25 lately, and high bred heifer calves weighing around 300 pounds sell at 4.25 to \$5.25.

Hogs are coming sparingly, run last week less than previous week, although packers persist in predicting a heavier run. The market has had an upward tendency, although not without interruption, and the 13,000 head here today is selling 5c to 10c lower; top, \$8.10; bulk, \$7.60 to \$8.05, including all weights, those above 200 pounds at \$7.80 and upwards. Investment buying of provisions dropped off last week, and lack of this prop partly accounts for whatever weakness there is in hogs. With the half-hearted support provisions are now getting and the probability of fairly good runs of hogs this week, a moderate decline in prices should not occasion surprise.

Sheep and lambs held about steady last week, but the market is 10c lower today, supply 10,000 head. Range shipments are falling off, and more fed stuff is coming. Top lambs today, fed westerns, at 7.40, and fed yearlings, 71 pounds, selling at 7.65. Wethers are worth up to \$6.50, ewes, \$5.00. Feeding stock is in demand, lambs worth \$6.25 to \$6.50, and breeding ewes always wanted at prices up to \$5.25.

Hide and Fur Market
For Week Ending November 27:

Hides	No. 1	No. 2
Green Salt Cured	12 1/2c	11 1/2c
Green Salt Cured, Side Brands		
40 lbs. up	10 1/2c	
Green Salt Cured, Side Brands,		
40 lbs. down	9 1/2c	
Green Salt Cured Bulls and		
Stags	11 1/2c	10 1/2c
Green Salt Cured, Glue	6 1/2c	
Green Salt Cured Deacons	25c	50c
Slunk	15c	20c
Tallow	5 1/2c	4 1/2c
Bees Wax	25c	15c
Horse Hides	2.50@3.25	1.50@2.25
Ponies and No. 3		.75c
Dry Horse, half price of Green		
Green Salt Sheep pelts	25c@1.00	
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	17@18c
Dry Flint, Culls	10c
Dry Salt, Heavy (18 lbs. and up)	14c
Dry Salt, Light (under 18 lb.)	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
Opposum, large cased No. 1	.35@.50
Opposum, medium	.25@.40
Opposum, small	.10@.15
Muskrat winter	.25@.30
Muskra, fall	.25@.30
Kits	.25@.45
Civet	.05@.10
House Cats	.60@1.00
Fox gray	3.50@4.50
Fox, red, prime	3.00@3.50
Wolf, prime mountain	1.00@2.00
Wolf, prairie	.25@.75
Wild Cat	5.00@
Beaver, large, each	3.50@4.00
Beaver, medium	1.50@3.00
Beaver, small	.50
Badger, No. 1	10.00@12.00
Others worthless	
Otter prime, large	
Unprime furs at value.	

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.

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.

Wyandotte County, Clerk. COWS—Taken up, October 7, 1909, by A. D. Phelps, 1718 Freeman Ave., Kansas City, Kan., one dun or brindle cow, rather large, large branching horns, white head, white underneath, all four feet white; valued at \$40. Also taken up by the above, one young black cow, small curved horns, white spot underneath and on left hip; valued at \$30.

Shorthorns, Percherons
AND

Poland Chinas



Lancaster, Kan.,

Wednesday, Dec. 8

In the sale will be 20 cows bred to Moorish Duke, by Imported Royal Pride, and Victor Archer, by Victor. Five Victor Archer bulls, one by Scotchman and two by Moorish Duke, and eleven 2-year-old heifers by Moorish Duke.

15 head Percherons include two 3-year-old stallions, two 2-year-old stallions and a big yearling and one suckling stallion colt. Balance are mares, all ages. The Percheron horses are the property of W. H. Graner.

50 head Poland Chinas—10 tried. Sows bred to Guy's Monarch, On the Watch, Big Chief, etc. Write today for catalog.

H. C. GRANER,
LANCASTER, KAN.

JAMES W. SPARKS, Auct. JESSE JOHNSON, Fieldman

DE CLOW'S

Fourth Blue Ribbon Sale

OF IMPORTED

PERCHERON AND BELGIAN
MARES

WILL BE HELD AT

Cedar Rapids, Ia., Thursday, Dec. 9

50 HIGH CLASS MARES 50

A top offering from 172 head imported this year, and comprising the finest line of imported Percheron and Belgian Mares in the United States.

40 PERCHERON & 10 BELGIAN MARES

will be offered on their merits at this time. They are big, smooth, and good boned. Among them are show mares and fine match teams. All are a good, useful lot of young mares, and they are bred to the



best of stallions.

Do not miss this great and last opportunity of the year to secure money-making brood mares from the largest and best collection of mares imported this year.

The sale will be held at the barns, located on the street-car line between Cedar Rapids and Marion.

Write for the sale catalog, mentioning Kansas Farmer.

W. L. De CLOW, - CEDAR RAPIDS, IOWA

COL. CAREY M. JONES, Auctioneer

BARGAINS IN LANDS

NEBRASKA LAND

DON'T MISS THESE LAND BARGAINS. 320 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.**

FINE NEBRASKA FARM. 320 acres, 3 miles from Chester, with good improvements, good orchard 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.**

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 35 acres alfalfa now growing, 135 a. cultivated; finely improved. Write for particulars. **Red Cloud Real Estate Co., Red Cloud, Neb.**

262 1/2 acre farm, in Franklin Co., Neb., 2 1/2 mi. from Bloomington, Co. seat. About 200 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.**

CHASE COUNTY, NEBRASKA. Farms and Ranches for Sale. Ranches from \$5 to \$12.50, good level farm 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 unknown, the undersigned has lived here 22 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, Imperial, 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 new growing, 100 acres bottom and 40 acres upland cultivated, balance pasture; well watered, some timber and abundance of choice fruit trees, bearing. Actual value of land over \$20,000, but belongs to non-resident, who will take \$16,000 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 \$16 per acre. For other snaps in farm and ranch lands write or see **ACKERMAN & STEPHENS, McCook, Neb.**

FOR GERMAN LUTHERANS AND OTHERS 320 a. smooth rich soil, 8 miles to station, Dundee Co., Neb., Ger-Lutheran settlement, 1/2 mile to church and school. "Choice of choice." 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.**

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. Incumbrance \$2,000; long time if sold quick. Price \$50.00 per acre. Write **GUARANTEE LAND & LOAN CO., Wynnewood, Okla.**

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.**

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 may price.

WM. HEMBROW

Immigration Agent Rock Island Lines.

Caldwell, Kan.

FOR SALE.

Several thousand acres good agricultural prairie land near R. R. town; price \$17.00 to \$37.50 per acre, owing to location and improvements.

G. T. REINHARDT, East Barnard, Texas.

WYOMING LAND

BIG PROFITS IN WYOMING IRRIGATED LAND. \$35.50 to \$75 an acre, including reservoir, perpetual water right, Easy payments. Big profit is sure—it's near—it's almost here. It will pay you to investigate at once. Free trip to the Laramie Valley, Wyoming, Tuesday, Dec. 7, 1909. Write today for literature. **GEO. R. HAWKINS, 101 Scarritt Bldg., Kansas City, Mo.**

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. POCHET, 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.**

EASTERN OKLAHOMA FARMS FOR 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.** Branch Offices, Pryor Creek and Nowata, Oklahoma.

800 BUSHELS CORN GOES with 310 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.**

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.**

"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.**

A SNAP

160 acres, 5 miles of Ponca City; 110 acres in cultivation. \$6,800 if sold in 30 days. **TRUMBLY & BARRETT, Ponca, City, Oklahoma.**

KANSAS LAND

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.**

SUMNER COUNTY BARGAIN.

240 acres, 125 in cultivation, balance pasture, good living water, 6-room house; price \$45 per acre. Write **APPLING, HORTON & MEEK, Wichita, Kansas.**

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. **MANVILLE & BAILEY, Holton, Kansas.**

NESS COUNTY KANSAS LAND. 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.**

80 ACRES NEAR HALSTEAD, KANSAS. 72 acres now in wheat, excellent alfalfa land, fair improvements, R. F. D., telephone, new school and church. Price \$4,500. Write **McDERMED & GETTER, Hutchinson, 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.**

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. BOSH, 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 \$15 per acre. Good bottom land not over 5 miles from market at \$25 to \$35 per acre. Well improved and running water, plenty of timber. See us, or write us at La Crosse, Kan.

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.**

SMITH COUNTY, KANSAS, LAND. 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. **CARL G. ANDERSON, Athol, Kansas.**

TWO REPUBLIC COUNTY SNAPS. 800 acres, 3 1/2 miles from Wayne, 9 mi. county seat, 1/2 good farm land, balance pasture, 200 a. cultivated, fair house, 2 good barns, 75 a. alfalfa, 60 a. hog tight, timber, running water. Price \$45 per acre. Consider smaller tract near Kansas City, 160 a. 2 mi. Wayne, fair improvements, timber, running water, some alfalfa. For other bargains write or see **B. J. GEORGE, Wayne, Kan.**

FARM BARGAINS NEAR WICHITA. 120 acres, 3 miles from Wichita, sub-irrigated alfalfa land in Arkansas river valley; over 50 acres in cultivation; 28 acres orchard; well improved, 1/2 mile to school and church, \$100 per acre. We have no traveling agents, herders or boosters. We sell at the owners' price. Write for our list of improved farms in the vicinity of Wichita. **V. L. MOORE & CO., Real Estate and Loans, Opposite Postoffice, Wichita, Kan.**

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.**

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. **JOHN E. SULLIVAN, Effingham, Kansas.**

KANSAS LAND

ROOKS COUNTY LAND

One Hundred Farms for sale. Write for lists. **C. H. DEWEY, Stockton, Kas.**

A HOME.

For you at a bargain price, 320 acres fine level land. For particulars write to **WINN REALTY CO., Jetmore, Kansas.**

160 ACRES 9 miles Healy, 40 acre good alfalfa land, 80 acres plow land, balance pasture land, no improvements, running water, a snap at \$1,600. Write for my bargains in land. **WARREN V. YOUNG, Dighton, Lane Co., 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.**

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, Minneola, Kansas.**

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.**

160 Acres—\$50 Per A.

160 acres well improved, 100 acres in cultivation, 30 acres pasture, balance mow land and timber, 1/2 mile from school on R. F. D., two good wells, creek runs on land. Price \$50 per acre. Write the owner, **Box 315, Neodesha, Kan.**

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 \$37.50 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.**

Manitoba Farm for Sale

780 acres. Price, including horses, stock, implements, \$30,000. In one of the most choice districts in southern Manitoba, 100 acres plowed and ready for crop season of 1910. Good buildings. Well fenced. Abundant supply of water and fuel. Beautifully situated. For further particulars apply to **HARRIS & CHISHOLM, Insurance and General Agents, 503 McGreevy Block, Winnipeg, Man.**

EXCHANGE COLUMN.

If You Want

a quick deal, list your trading property with us. We trade while the other fellow sleeps. We have exchanges for land, merchandise, live stock, or anything of value. Try us. **NEFF REALTY CO., Olathe, Kansas.**

TO TRADE FOR MDSE.

160 a. farm, improved, 4 mi. Chandler, Okla., city of 5,000 inhabitants. 120 a. tillable, 40 a. timber and pasture. Close to school and plenty of water. Also 720 a. of wheat land in Barber Co., Kan. Clear of incumbrance. Price of Okla. farm \$5,000. Mort. \$950. Price of Barber Co. land \$7.50 per a. Make propositions to owner. **C. E. TINKLIN, Cornsling, 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. 70 acres orchard. 35 acres in cultivation, part 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 \$30 per acre. It is a splendid home and nicely located. Write me about this. **C. E. CENTRAL, Fredonia, Kansas.**

KANSAS LAND

HALE, THE LAND MAN,
can sell you Saline and Dickinson county
farms for \$30 to \$95 per acre. Also cheap
farms in Caddo Co., Okla.
T. E. HALE,

BARGAIN IN WASHINGTON county 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.**

CO. HIGH SCHOOL PRIVILEGES FREE with our farms. We have farms of all sizes, improvements to suit. Many we can sell on small cash payments. For a special bargain we offer 120 acres 2 miles from Altamont, 4-room house, fair barn for 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.**

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.,
 523 Commercial St., Emporia, Kan.

MONTGOMERY COUNTY FARMS.
Montgomery county is second in population and 5th in wealth in Kansas. Write for list of choice farm bargains and prices.
W. J. BROWN & CO., **Kan.**
Independence.

EASTERN KANSAS FARM BARGAIN.
166 a., 3 1/4 miles from town, 75 a. cul-
tivation, 2 a. orchard, balance native grass.
5-room house, good cellar, barn for
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. RAPEL,
Owage City, Kansas.

CORN, ALFALFA AND WHEAT LAND
160 acre farm in Republic, banner corn
and alfalfa county of Kansas, only 10
miles from Belleville; 6-room house, new
barn and other improvements, nicely located.
35 acres alfalfa, \$12,500. Another 16
far improvements, 1 1/4 miles from Bell
ville, \$10,000. These are two of the main
chole bargains we have to offer. Write
for information or call on

HALL & CARTENSON,
Belleville, **Kansas.**

SPLENDID FARM IN WILSON Co.
Within a few miles of city, 142 acres first class land, 2 sets of improvements consisting of frame house and large barn, new brick house and large barn, pea in cultivation, balance alfalfa and clover never failing water. Come and see the farm or write for particulars. Can be bought for less than actual value. Price \$12,500.

Neodosha, W. T. DEWEESE, Kansas

Bargain Near Ottawa

120 acres, very fine soil and well improved, natural gas in house, plenty of water, 4 mi. to Ottawa, rural route and telephone. Price \$80 per acre and worth money.

MANSFIELD LAND CO.
Ottawa, Kan

Good Bargain

acre and 160-acre and so on up to 640 ac and several large ranches. WM. FORE Fall River, Kan.

A dandy half section, 5 miles out, 120 acres, 4 miles out, fair improvements, mostly smooth, black soil at 5 miles from Salina, half in cultivation, n

ly all could be farmed, black loam, lies plenty good water, 2 windmills, a lot of fencing, fair improvements. A bargain at 40 per acre. We have others. Come and write.

SHEPARD & HOSKINS.

AN IDEAL FARM FOR SALE
Kansas farm of 300 acres, adjoining

flourishing railroad town, forty miles of St. Joseph, Mo. The soil, naturally has been made more fertile by twenty years of judicious crop rotation, and by the liberal application of manure; well watered with fine walnut timber, finest blue grass.

tures, alfalfa, timothy and clover meadows; fine corn and wheat land; well furnished hay, cattle and horse barn for a large amount of live stock; large silo, vats, tanks, granary, fine mill, etc. A number of stacks of grain farm ready for use. An

WICHITA BARGAINS.
146 acres, well improved. 4 1/2 miles

in the splendid bottoms. All smooth except a little near river. This farm is beautifully conditioned for a farm close to city. 50 acres heavy land, 50 acres or 12 acres blue grass, 14 acres alfalfa, 6 acres and some of the best truck

grapes and some other fruit for garden stuff. owner has 1,500 bushels of sweet potatoes this year. 7 room house. 1000 bushels of hay in barn 16 head, hay barn for 50 tons and 1000 bushels of corn. Fruit farms here. all of all is the price. Fruit farms here. worth about \$200 and \$300 per acre, and about this one if we move up 800

can buy this one if we can get it for
\$125 per acre. It is so close to the
that it will sell in 5 acre and 10
patches for twice this not far in
months.

I. B. CASE & CO.,
102 W. Douglas, Wichita, Kan.

GOOD HOME, CHICKEN AND GARDEN RANCH.
20 acres in city of Wichita, 1/2 mile of the packing houses and stock pens. Will make a fine good timber.

most all set to airfare, \$500 and
proved with good 8-room house, barn
houses, all kinds fruit, near street car
This is a fine tract of land, could be
into town lots and sold at good
Price \$10,000. This is a bargain.
NICHOLSON REAL ESTATE & IMCO

THE NELSON REAL ESTATE CO.
137 N. Main St., Wichita, 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.

10 CHRISTMAS POST CARDS FREE

Beautiful embossed designs in rich colors. Not the cheap kind. Send only 10 cents for four months subscription to splendid fashion, household and story magazine and receive 10 Christmas cards free. Send today.
People's Popular Monthly.
Clerk 21, Des Moines, Iowa.

TOO LATE TO CLASSIFY.

PEKIN DUCKS, BUFF PLYMOUTH ROCKS. Dudley, Lawrence, Kan., R. 1.

CHESTNUTS GUARANTEED FORMULAS for Roup and Poultry Food. \$1.00. H. W. Chestnut, Centralia, Kansas, (breeder of White Faced Black Spanish Chickens.)

BIG CITY CORNER INVESTMENT—SIX houses two opposite street corners, room for three more houses, rents \$85 per month now. Would yield twelve per cent. Price \$9,500. Always rented. W. M. Forbes & Co., Topeka, Kan.

100 EXTRA GOOD BARRED PLYMOUTH Rock Cockerels. They are of the E. B. Tompkins strain, large birds and nicely barred, have won over 50 premiums in last three years, satisfaction guaranteed. Paul Oliver, Danville, Kan.

FOR SALE—THE CHEAPEST RANCH IN Eastern Kansas; 1120 acres, 90 miles southwest of Kansas City; joining railroad station; all tillable land. Well fenced, subdivided and watered; 800 acres in cultivation. Excellent and extensive improvements. A complete ranch, in good order. Can sub-divide. Price \$45 per acre. Daniels & Martin, 23 Columbian Bldg., Topeka, Kan.

ALYSDALE SHORTHORNS — HERD headed by Archer's Victor 292012. For Sale. Prince Consort 187008, beautiful dark red, 8 years old, sired by Imported Prince of Perth, dam full sister to "Lavender Viscount." Is a straight Scotch bull of the finest breeding. Also four fine yearling bulls, red in color, and about 8 richly bred cows and heifers, all at a bargain. Come and see them. Chas. W. Merriam, Columbian Building, Topeka, Kansas.

READ THIS, HOMESSEKERS — THE cheapest farms in the United States today are in the Ozarks of Missouri; lovely climate; close to good markets, St. Louis and Kansas City; for health, wealth, clover, timothy, blue grass, timber, fine fruits, beautiful streams, fine fishing and hunting. If you want to see the cheapest and best farms you ever saw priced in your life for the money write for our list and be shown. A. D. Roberts & Son, Richland, Mo.

BRONZE TURKEYS.

Choice toms and hens from pen headed by 40 lb. tom; 25 fine Rose Comb Brown Leghorn cockerels; reasonable prices.
MRS. H. B. WALTER,
Effingham, Kansas.

GET INTO BUSINESS FOR YOURSELF. I have a new clothing and gents furnishing stock for sale. Was put in new eighteen months ago. This is located on Central branch R. R. in town of 600 population and is the only stock in town, and is doing a good business. There are very few fixtures and expensive ones that will not be used. The stock is absolutely clean and new. Will invoice about \$4000. Any one wanting a business of this kind will do well to investigate. Call or write for further particulars.
C. E. TINKLIN,
Corning, 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 fair pigs, \$25 each. One Jersey bull calf for sale.
ROBT. I. YOUNG,
R. F. D. E., St. Joseph, Mo.

WHITE IVORY STRAIN WHITE PLYMOUTH ROCKS.

Kan. State Show at Newton, 1909, I won 1st cock, 1st cockerel, 1st pen; Wichita Fair, 1909, won every 1st. If you want over weight birds, white as chalk, deep bay eyes, yellow legs, low well spread tails and grand in shape, write. 200 early cockles, and pullets from \$1.50 up. Fine show birds with scores from 95 to 97 points.
CHARLES C. FAIR,
Blue Ribbon Farm, Sharon, Kan.

AN EXCEPTION BARGAIN.

The Kansas Farmer..... 1.00
The Western Poultry Journal..... .50
The Review of Reviews..... 3.00
The Woman's Home Companion..... 1.50
McClure's Magazine..... 1.50

Total Actual Value..... \$7.50
Our Price..... \$4.00
This great group of magazines is a whole library in itself. The home supplied with this literature for a year will enjoy the greatest treat in reading matter possible to secure. This offer may not appear again.

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.

PERCHERONS, SHIRES, SADDLERS & JACKS

WE have for sale 28 head of registered jacks and jennets, 12 head of registered Percheron stallions and mares, one imported English Shire stallion, and one combination saddle and harness stallion. We will make prices to quick buyers that will be sure to move them. Come and see them or write to **F. W. POOS, POTTER, KAN.**

sides these prizes which may be competed for only by farmers of this state, the grains from here may be entered in zone and world classes, making it possible for Kansas to win—if the grains beat those of other states, more than \$10,000 and several trophies worth from \$500 to \$1,500. For instance an oak's trophy is offered by Colorado for the best peck of oats in the world. No better oats are grown than those in Kansas. A trophy is offered by a cereal food manufacturer worth \$1,500 for the best ear of corn in the world and another by Indiana worth \$1,000 for the best ten ears. The Wichita Eagle offers a prize worth \$300 for the best bushel of wheat grown in Kansas in 1909 and also a \$50 prize for the Farmers Institute sending the largest number of entries, while another \$50 awaits the farmer who exhibits from Kansas the best bushel of soft wheat.

Never Again!

You will never beat the clubbing offers we are making you in this week's issue of Kansas Farmer. If there are any papers you want not in these clubs, write us and we will make you the lowest club price possible.

Missouri Jacks.

It gives us unusual pleasure to call attention to the advertisement of J. T. Watson, which appears in this issue. Mr. Watson is offering for sale 27 head of splendid Missouri jacks and jennets, also three stallions and some pure bred Hereford cattle. Mr. Watson has the kind of stock the Kansas Farmer is looking after. Our Mr. Johnson, who inspected the stock that is being advertised, is enthusiastic in praise of the big mammoth jacks. He says they are as big as Kansas mules. Mr. Watson has been in the breeding business for years and knows every detail. Any transaction made with him is sure to be satisfactory. When writing mention Kansas Farmer.

Absorbine Does Great Work.

Barney Ogan, Somerset, Ind., under date of June 3, 1909, reports to Mr. Young as follows: "I have this to say of your Absorbine—that it has done great work for me in a short time. I began using it on a Friday morning and Saturday my horse could put his foot to the ground for the first time in three months. It was a bad case, but I was surprised to find what the Absorbine had done so soon. I thought that she would have to be killed almost any time, but it looks as if she were going to get along now." Absorbine for all kinds of Lameness, Bruises, Soft Swellings, Bog Spavin, Big Kneecaps, Poll Evil, etc. \$1.00 at druggists, or sent express prepaid upon receipt of price. W. F. Young, P. D. F., Temple St., Springfield, Mass.

Oak Grange Annual Institute.

TUESDAY EVENING SESSION.
7:30 p. m.—Music; "Some Advantages of a Mechanical Education," Roy Buckman; "Educating the Farmer Boy and Girl," Wallace Corbett; "Investments for the Young Man on the Farm," J. B. Sims, Jr.; "The Effect of Women's Work in the Grange," Alice Buckman; "Something About the Boys' Corn Contest," August Engler; "Some of the Pleasures of Country Life," Opal Corbett.
WEDNESDAY MORNING SESSION.
10 a. m.—Music; "Farm Orchard," J. F. Cecil; "The Silo," Clark Witwer; dinner.
AFTERNOON SESSION.
Music; "Burbank's Work," Mrs. Ward Page; "Nature and Art," Mrs. Geo. A. Huron; "The Road Law," V. R. Parkhurst; "The Farm Dairy," T. A. Borman.
EVENING SESSION.
7:30 p. m.—Music; "The Dairy Cow," Prof. J. C. Kendall, of State Agricultural College; Reading, Lillian Stone; "Domestic Science," Prof. Mary P. Van Zile, of State Agricultural College.

The Modern Kind of Roofing.

There was a day when the words "ready roofing" meant some kind of painted paper which was only good enough for hen coops. Later it meant a tough felted fabric which would last for 5 to 10 years, provided it is covered with a heavy coat of paint at regular intervals. The third step in the progression is the advent of Amattite Roofing, which is made with two heavy layers of pitch (the material which forms the basis of most roofing paints), and a top surface of mineral matter. A roofing so constructed naturally requires no paint to protect it; and accordingly Amattite Roofing is intended to be left unpainted. It may reasonably be expected to last for 10 years or more and in all that time will require no attention whatever. The price is low and our readers should become acquainted with its merits. A sample will be sent free for the asking to any inquirer. Address nearest office of the Barrett Mfg. Co., New York, Chicago, Philadelphia, Boston, St. Louis, Cleveland, Pittsburgh, Cincinnati, Kansas City, Minneapolis, New Orleans, London, Eng.

Jacks and Percherons.

In this issue A. E. Smith, of Lawrence, Kan., starts an ad for his jacks and stallions. Mr. Smith has just returned from Kentucky and Tennessee with a car load of fine two and three year old jacks, one of the best bunches of young jacks ever brought to Kansas by any one breeder. They are the large heavy bone kind and of the

KANSAS LAND

A FEW SNAPS IN ABSOLUTELY LEVEL LAND.

320 a., perfectly level, 200 a. in wheat, 4 miles from two towns.....\$20.00 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.

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.
IKK W. CRUMLY.

SPLendid IMPROVED FARM.

\$8,000 will buy 78½ acres of good second bottom land, 60 acres in cultivation, good new 5 room house, cellar has sand 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.

RICE COUNTY FARM.

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, Kansas.

Sterling, Kansas.

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.

Every Man is Entitled to a Slice of This Good Old Earth.

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.

MORE BARGAINS FOR POOR MEN.

Did you read our ad in last week's Farmer? Go look it up. Here are two more.

No. 1, 160, lays nice, all tillable and good, close to nice school where church and Sunday school is held, 3¼ miles to town, 2-room house, surrounded by farms priced at \$50 and \$60 an acre. Price, \$4,500 and \$2,000 cash all needed.

No. 2, 21 quarter nice rich black soil close to station and market, 3 miles to this city, 5-room house, big barn, one-third crop made \$450 this a dry year, adjoins \$60 farm, \$6,000 buys it and \$2,000 cash will handle it. Land is going up every day, get a farm while you can. Write for list.

DONAHUE & WALLINGFORD,
Mound Valley, Kansas.

Mammoth breeding, nice smooth fellows Black with mealy points in fact some of the best two and three year olds we have had the pleasure of seeing in a long time. On this farm can be found jacks that will please any one looking for a first class jack. Their ages are just right and all broken to service, sold under an absolute guarantee. Mr. Smith also offers high-class Percheron and Belgian stallions, standard-bred trotters and saddlers, so that he can furnish to our readers a jack, a draft, a standard trotting bred or a saddle stallion. For the fall trade Mr. Smith is making special low prices and places an absolute guarantee on every animal he sells. The railroad facilities at Lawrence over both the Santa Fe and the Union Pacific are good, as both are main lines, and several branch roads are accessible. See ad on another page and when in the market for a jack or stallion or any of the lines of stock he advertises go and see what he has to offer. Notify him of your intended visit and you will be met at the train. Call by both long distance phones either the Bell or home phone. Kindly mention the Kansas Farmer when writing.

A Great Book Free.

"Great Crops of Strawberries and How to Grow Them" for 1910 has reached our desk. This annual edition sent out by R. M. Kellogg Company of Three Rivers, Mich., has come to be a standard work of highest value to strawberry growers, and the number now before us excels in this respect, if possible, any previous issue. We know of no better evidence of the advance of intensive horticulture and the growth in popularity of the strawberry than is afforded by the expansion which has taken place in this company's business during the last few years. This is the silver jubilee of the company, and it is especially celebrated by the offering of 110 acres of strawberry plants of the very highest quality. When E. M. Kellogg established this business 25 years ago, the area given up to plants was less than 10 acres, and when he removed the seat of operations to Three Rivers, his entire holdings of land were but 90 acres. Today the farm consists of nearly 250 acres of land, and we have said, the area devoted to plants this year reaches the enormous total of 110 acres. However, we wish every reader of this paper to take advantage of the offer of a free copy of this invaluable book, and so shall make no further attempt to speak of its value here. Address R. M. Kellogg Co., Box No. 79, Three Rivers, Mich. Mention the Kansas Farmer and a copy of this splendid book will come forward to you free.

KANSAS LAND

BUTLER COUNTY RANCH BARGAIN.

760 acres Butler Co., 200 acres first class corn and alfalfa land, 40 acres timber, balance meadow and blue stem pasture; 2 miles to shipping point. R. F. D., telephone, good 5-room house, 2 large barns, never failing running water. Price \$35.00 per acre. For further particulars write
L. L. KISER,
Eldorado, Kan.

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.

SUMNER COUNTY BARGAIN.

160 acres, 4 miles to good town, good improvements, 100 acres fine wheat, 30 acres corn. If sold soon all the crops and possession for only \$50.00 per acre; good terms. Owner wants to put the money in his store business. See or write
WM. GODBY LAND & AUCTIONEERING CO.,
Arkansas City, Kansas.

MINNESOTA LAND

LAND BARGAIN

If you want a quarter or half section of good land for dairying or agriculture, at a low price, in northern Minnesota, write to
J. I. COFFEY,
Mentor, Polk County, Minn.

COLORADO LAND

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.
BELL & WHITE,
Lamar, Colo. Civil and Irrigation Eng'rs.

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.

Big Bargains in Irrigated Land.

For sale, 2,500 acres of the best irrigated land in the famous Rocky Ford Cantaloupe belt, in the great Arkansas Valley of Colorado. One hundred and thirty acres alfalfa and 175 in other crops all fenced. Dark, sandy loam, good water right, large private canal and reservoir, 4,300 feet above sea level, finest climate and good roads all year. Land is free from alkali, rocks, and sage brush and is ready for the plow. Twelve to fourteen miles from thriving town of 1,600 on the Santa Fe Railroad, 35 miles from Pueblo, 50,000 population.
Schools, rural route and telephone line near.
To close partnership will sell ¼ tracts of forty acres up, to suit purchaser, at extreme low prices of
\$45.00 TO \$55.00 PER ACRE.

according to improvements; one-fourth cash, balance equal payments; one, two, three years, 6 per cent interest, 5 per cent discount for cash above first payment. See railroad agent for low excursion rates first and third Tuesday of each month.
W. D. PURSE,
Rocky Ford, Colorado.

WE SELL THE BEST IRRIGATED LANDS.

\$450 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 8-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.

A 20th Century Improved Sewing Machine.
The free sewing machine, which represents many years of hard and conscientious effort on the part of its inventor, Mr. Wm. C. Free, is adequately and fully described in his booklet, "In the Day's Work," tell-tale in his graphic style the many points which help to make the Free sewing machine the only perfect sewing machine manufactured or sold. This interesting shuttle method of picking the shuttle out with a method of thereby bending the delicate shuttle springs, spring and spooling the stitch. It also tells of the revolving spool pin, which prevents breaking of thread, together with many other improvements, found only in the Free sewing machine, and the Free has all the good points of all the other machines now, and none of their bad ones. Every woman reader, and man, too, should send for "In the Day's Work," which is sent with Mr. Free's compliments. You will place yourself under no obligations whatever in writing for this handsome and interesting booklet, for The Free Sewing Machine Company has no agents or canvassers to annoy you, as they sell only through the best dealer in each town. You should call on your dealer and inspect the Free, it would really be an education to you to study perfection in sewing machines. Write your name on a postal card now, mention "In the Day's Work," address it to The Free Sewing Machine Company, Dept. Z, 35 Randolph St., Chicago, Ill., and receive a complimentary copy. "Do it now."

A Southern Cook Book Free.
One of the most interesting pieces of literature that we have seen for many moons is the Maple Leaf Cook Book, edited by Lona M. McCauley, and issued by the Western Stoneware Company, the largest manufacturers of stoneware in the world. This attractive and enlightening work is really much more than it purports to be, for besides the recipes, it is packed from cover to cover with information relative to stoneware, its advantages, uses and value over other kinds of ware. One of the subjects discussed is the sanitary character of stoneware. We learn that Maple Leaf Stoneware is made of choice clay, mined at great depth and carefully sifted, washed and refined, before use. This makes Maple Leaf ware whiter than ordinary, free from lumps or other imperfections, impervious to moisture, and permanently sweet and safe. The glaze used on Maple Leaf ware is made by secret process and burned on at 60 to 80 secret degrees greater heat than any other clay will stand. Miss McCauley has handled her subject in a most entertaining fashion, and if her recipes are as tasty as her writing is clever, the Maple Leaf booklet will deserve a permanent place in every farm kitchen. Miss McCauley is a Southern woman, of old Maryland stock, and those who would know Southern cookery at its best should procure a copy of this book. It will be mailed free on request if you will mention this paper. Address Western Stoneware Company, 1150 Sixth Ave., Monmouth, Ill.

The Enid Fair and Live Stock Show.
Secretary F. S. Kirk of the Enid Fair & Live Stock Association, Enid, Okla., finds a great deal of satisfaction in the following figures which he furnishes. He states that the reports in the farm journals show that draft horses were exhibited at the big fairs as follows: 33 head at Missouri State Fair, 7 head at the State Wide Fair at Topeka, 33 head at the State Fair at Hutchinson, 27 head at the Southwestern Fair at Wichita, 38 head at the State Fair at Oklahoma City, 41 head at the American Royal, a total of 219 head at these six big fairs. The Enid Fair & Live Stock Exposition, which will be held at Enid, Dec. 11-18, has now a total of 239 entries of draft horses, or just twenty head more than the aggregate at these six big fairs. Mr. Kirk says that the saddle road and coach horse departments, as well as those for mules, swine and poultry show about the same proportion of entries, though they are still a little short on cattle, of which they have more than any of the fairs named above except the American Royal. He would still be glad to receive entries for these classes, especially Herefords. Write to F. S. Kirk, Enid, Okla., for catalog and full information, note the big premiums they pay and please mention Kansas Farmer.

The Kansas Exhibit at Omaha.
Under the direction of the Kansas State Agricultural College, more than 200,000 farmers will be shown the productiveness of Kansas soil both under average circumstances and when some attention is given seed selection and methods of cultivation according to the part of the state, when an exhibit is made in Omaha at the National Corn Exposition. The show opens at Omaha, Dec. 6, and closes Dec. 18. Last year 105,000 farmers attended. Kansas will have an opportunity to show the "Corn Kansas farmers have" to the very people whom Kansas wants to show. Kafir corn grown in Kansas will also form a part of the decorative scheme for the entire exposition. The educational features of the exhibit from this state will be along lines of wheat and corn breeding. The plan is to present as far as possible the improvement of wheat in quality and in yield due to selection or head row breeding. The elimination of the yellow berry by breeding will also be a feature. All improved seed grains will be shown—corn, wheat, barley, oats and alfalfa. That the work of the experimental stations in distributing seeds has largely increased the yield of crops in Kansas there is no doubt. The seeds furnished by this state have also had an influence in increasing the profits of farmers in other states of the west. Comparisons will be made which show graphically the results of planting the improved seeds as compared to planting the "scrub" seeds as the average farmer still does. One of the most attractive features of the exhibit will be the collection of sample crops grown at the Fort Hays experiment station in western Kansas. It will demonstrate what crops and what varieties are best grown in the semi-arid west and also demonstrate what methods of planting, culture and under what conditions certain crops should be planted to yield the greatest profits under dry-farming methods.

How Mr. Galloway Advertises.
Buying and placing advertising with the Wm. Galloway Co. is a big job. This firm spends in single months as high as \$22,000. Mr. Galloway says all there is to advertising is simply buying sales for so much per. By the Wm. Galloway Company's methods sales on manure spreaders, cream separators and gasoline engines run only slightly over \$5 each machine, and it has been a race ever since this company was organized between the factory and the advertising department to see which could get ahead. Ever since the organization of this company at certain times of the year it was necessary to shut down on the advertising because the factory could not keep up. Now, however, with the tremendous factory capacity the Wm. Galloway Co. has of 30,000 manure spreaders a year, 7,500 gasoline engines and 10,000 cream separators, it is going to be an interesting tussle for the advertising department to keep ahead of the factory department, because all there is to advertising is simply buying enough sales to sell the goods at so much per sale, and the Wm. Galloway Co. has this down to a science. Every ad is keyed. They know exactly what paper brings the inquiry and makes the sale. If a certain magazine or farm journal does not make good, it is thrown out just

the same as a wholesale house would fire a salesman who could not sell the goods. Advertising salesmen say that this company keeps the best record in this line of any firm in the United States. The most important thing every day is the record of the daily inquiries and sales. After an inquiry is received that is only one-third of the work. The next two-thirds is to land the order, and this is done by follow-up letters and good printed matter.—Waterloo, Iowa, Courier.

A New By-Law of the Percheron Society of America.

Secretary Geo. W. Stubblefield of the Percheron Society of America, Union Stock Yards, Chicago, calls attention to the new by-law recently adopted by that association, and urges all owners of Percheron horses to get their animals recorded before this new by-law goes into effect. The by-law referred to is as follows:

Section 3. The Secretary shall not accept any application for registration of an American bred animal after September 1 of the year following the date of foaling, or an imported animal that has been imported more than three months. When any such applications are filed with him, he shall refer the same to the Pedigree Committee. It shall then be the duty of the Pedigree Committee to thoroughly investigate all the facts concerning such applications and to reject all such applications unless they find the same to be correct in every particular and the party making the same shows good and sufficient excuse for his failure to file same within the time provided by the by-laws of the association. In case the committee accepts any such applications, they shall properly endorse their approval of such applications on the same before referring them back to the Secretary, and it shall be the duty of the Secretary in all such cases to collect in place of the regular fee specified in Section the following special fee for each registration:

For recording American bred animals when recorded after September 1 of the year following the date of foaling:
Members \$9
Non-members 14
For imported animals, if recorded more than three months after their importation:
Members \$15
Non-members 20

The Alfalfa Man's Troubles.

I. F. Bellew & Co. of Wichita, who are selling some of the best alfalfa land in the world, according to their advertising statements, tell of the troubles of the alfalfa grower as follows:

"In May, just at the time you ought to be plowing your corn, you have to go into the alfalfa field and cut the first crop. This worries you, of course, but you have it to do. Then in June, when you have a chance to go fishing, there is another crop of alfalfa to cut and you don't fish. It is blazing hot in July and you feel like you ought to lie in the shade some, but you have to get into another crop of alfalfa. In August you are getting tired of the name by this time and you feel like you want to go to camp meeting, swap yarns, have a good, easy time and imagine you've got religion. But you can't do it. There's that alfalfa again. In September it has always been your custom to visit your wife's kin-folks; but do you do it? Not much. It's alfalfa. In October you are done with most of the other crops and you want to go off to that gambling contraption known as the county fair and spend some of your money, but you have to harvest another crop of that pesky alfalfa. In November, in desperation, you turn your cattle into the field and they graze on it all fall. Are you done with it then? Goodness, no. You've got to spend all winter feeding it up. Markham makes a wall about the man with the hoe. He ought to shed tears over the man with an alfalfa farm. If you want a picture of solid enjoyment watch the man with a hoe rest upon it and see the weeds grow. Is a man a mere machine to transform alfalfa into a bank account? Is his soul to have no higher aspirations? If you are tired and need a rest, if you have all the money you want, if you wish to repose in the deep, cool, inviting shade, beside the still waters, don't be a man with an alfalfa farm."

Don't Forget This Fact About the Care of Hens.

There are a few simple rules about the care of fowls which are necessary for the poultrykeeper to know, as, when and how much to feed; how to shelter a flock and the necessity for cleanliness; but the one essential fact the poultrykeeper must get hold of and hang to is the necessity of giving a small dose of Dr. Hess Poultry Panacea every day in soft feed. Don't resort to condiments, stimulants or any form of excitement which forces unnatural production for a short time and then leaves you without eggs for a long time. Dr. Hess Poultry Panacea is not a stimulant, and does not excite the egg-producing organs. It is a tonic—a scientific preparation formulated by Dr. Hess (M. D., D. V. S.), and its use has become known everywhere among poultry men as "The Dr. Hess Idea." It is compounded of helpful elements—things which the medical profession recognizes as such; and a mere trifle of it given regularly will cause a hen to assimilate so large a proportion of her food that she can't help laying more and better eggs. And, more than that—she will continue to lay as long as her digestive organs get the help of Poultry Panacea. Actually, by its aid to digestion, Dr. Hess Poultry Panacea restores natural, healthy, out-door conditions to the shut-up hen. The mere trifle of this tonic which a hen gets in the morning's feed, gives power to digest from meal, meat, milk, or whatever it may be, so she has abundance for bodily maintenance and an excess for egg production. Dr. Hess Poultry Panacea works wonders in the poultry business. It makes the laying hen a better layer, and is equally beneficial

SHORTHORN CATTLE

Sunrise Stock Farm.

Having sold my farm, will price my cattle at bargain prices. Some good bulls, cows and heifers from 1 head to 3 car loads. 1 extra show cow.

J. W. TOLMAN, Hope, Kan.

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,

Galva, Kansas.

AUCTIONEERS

SOL. 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.

A. C. Manifold, Tarkio, Mo.

Live Stock Auctioneer. Selling for the best breeders in Western states. Still have a few open dates for fall.

W. C. Curphey,

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

T. E. DEEM, Auctioneer.

Pure bred sales a specialty. Get my open dates. Terms low. Address CAMERON, MISSOURI.



LAFB BURGER,

Live Stock Auctioneer. Write or wire me for date. Wellington, Kansas.

Residence Phones. Office Phones. Mutual 114; City 528. Mutual 134; City 626

W. WEIDMIEER, 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. N. Moorman

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.



W. H. TROSPER

LIVE STOCK AUCTIONEER.

References, those for whom I have sold. Choice of dates if claimed early. Large sale tent furnished free to customers. FRANKFORT, KAN.

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 independent. 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. Address

CAREY M. JONES, President, 2856-2858 Washington Boulevard, Chicago, Ill.

SHORTHORN CATTLE

FOR SALE.

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

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 205740 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 & Downs, 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 Wierre, (Imp.). Also the Standard bred stallion, Red Seth 31185. Farm adjoins town. Come and see us. W. T. LOWE, Kansas. Jewell,

GREENDALE STOCK FARM

25 YOUNG BULLS by Imp. Ardatham Mystery and Best of All for sale at bed rock prices. Can also offer some good Berkshire swine and Shropshire rams. Correspondence solicited. COL. ED. GREEN, Prop., Kansas. Florence,

GLENWOOD HERD.

The home of the Scotch bulls Prince Pavonia 207316 and Searchlight 290231. Large type Poland China boars, Designer 39199 and Major Look 48039. The original Designer kind—choice herd boars now ready for shipment. The Designer kind that grow big. See my cattle exhibit at the leading fairs this fall. Write your wants. C. S. NEVIUS, Kansas. Chiles, Miami Co.,

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 condition. 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 Kansas. Herd headed by Violet Prince 146847 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 trains. We can do business. Come and see me. H. F. PELPHREY & SON, Kansas. Humboldt,

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. Pelphrey & Son, R. D. 6, Chanute, Ka.

DUROC JERSEYS

DUROC JERSEY BOARS AND GILTS.

The tops of my spring crop. Sired by the Champion Chief Tattarrax and G. M.'s Carl Col. Dams of the richest breeding. Reasonable prices.

GEO. M. HAMMOND, Kansas.
Manhattan,

SOLLENBURGER'S DUROCS.

Breeding of the very best. Choice boars and gilts of March and April farrow for sale. Write at once if interested.

R. G. SOLLENBURGER,
WOODSTON, KANSAS.

GREENWOOD HERD DUROC JERSEYS.
Herd boar Dandy Duke 64663, few choice spring boars for sale and few extra good spring and fall gilts, few tried sows bred for spring litters. Write or come and see me.

R. D. MARTIN & SONS,
Eureka, Kansas.

WHITNEY'S DUROCS.

Spring boars and gilts of choice breeding for sale. Write for prices and description.

W. C. WHITNEY,
Agra, Kansas.

GOETHE'S DUROCS.

25 spring boars for sale sired by my herd boars Attractive Chief, Big Crimson, Walnut Wonder and others and out of sows by Ohio Chief, Kant Be Beat, Nebraska Wonder, Model Chief Again and King of Col.'s II. Write me.

T. E. GOETHE,
Leonardville, Kansas.

CROW'S DUROC JERSEYS.

Herd headed by Cimax Wonder, he by Missouri Wonder. 100 head to select from. Prices reasonable. The electric car runs within three blocks of farm. Come and see my herd at any time.

W. R. CROW,
Hutchinson, Kan.

PLEASANT VIEW HERD.

Spring gilts and herd boar prospects for sale. Sired by Tattarrax, the Kansas and Oklahoma champion. College Lad and Pleasant View King. Out of such sows as Pleasant View Queen, College Girl, John's Choice and Bob Orion. Prices reasonable.

R. B. MARSHALL, Willard, Kan.

DUROCS "GROWN IN THE OZARKS."

Ohio Chief and Col. Blood. Litters by Muncie Chief, Model Prince King of Models, Inventor, the King, I am Advance; several by Col. Carter my leading bred boar. They are grown right, are good, and we answer all letters of inquiry.

C. L. CARTER,
Cabool, Mo.

HOWE'S DUROCS.

Special prices on boars and gilts sired by Rex K., champion at Wichita fair this year. Also a few by Perfect Improver Grand Champion at Wichita 1907 and 1908. Only a few left, get busy and send in your order.

J. U. HOWE,
Wichita, Kansas.

STANFIELD HERD DUROC JERSEYS.

Choice young stock for sale, sired by Kansas Kant Be Beat and Jersey Wonder. My sows are of best breeding and good quality. All in the 500 pound class. I can please you.

H. C. STANFIELD,
Buffalo, Kansas.

CEDAR LAWN HERD.

Nice lot of spring boars, sired by Long Wonder, Bells Chief, Rose Bell and Top Model, a choice lot of fall gilts open or bred, priced right to sell quick. Write me at once.

F. M. BUCHHEIM,
R. D. 3, Leocompton, Kan.

COPPINS CRIST HERD DUROC JERSEYS.

For sale, a few choice spring boars and one yearling. These are sired by Royal Improver, Perfect Improver, Chief Tattarrax and King Ingomar. Priced right and all first class herd leaders.

H. A. J. COPPINS, Putwin, Kan.

For sale, few fancy spring boars and gilts, 10 fall yearling sows, bred or open, priced right. Gilts are out of Old Variety Maid, she by old Tip Top Notcher. Write your wants. A few bronze turkeys for sale.

J. M. YOUNG, Fall River, Kan.

R. & S. FARM

In their Bred Sow Sale Feb. 3, 1910, at Smith Center, Kan., will offer about 40 selected Golden Ruler Gilts bred to King of Kant Be Beat 88333, and R. & S. Prince of Cois. 88797. Also a few tried cows bred to Golden Ruler 80555. King of Kant Be Beat is 2 years old and weighs 300 lbs. Has a 10-inch bone and stands perfect on his feet. Breeders should "sit up" and take notice of such an offering.

RINEHART & SLAGLE,
Smith Center, Kansas.

GILTS RESERVED FOR MY FEBRUARY 2 BRED SOW SALE.

Big growthy spring boars for sale at bargain prices. Bred right and fed right. Priced right.

E. M. MYERS, Burr Oak, Kansas.

50 DUROC JERSEY BOARS, KING OF COL. 2ND BLOOD 50

I have decided not to hold fall sale and these are for sale privately. They are out of as good sows as the breed affords, and we have them by King of Col.'s 2nd, P. C.'s Col and other good boars. Plenty of herd bred prospects.

FRANK ELDER (Successor to Grant Chapin, Green, Kansas).

25 GOOD BOARS—25 SELECT GILTS.

Durocs by King of Col.'s 2nd, G. C.'s and G. C.'s Col., excellent individuals and out of daughters of Model Chief Again, W. L. A's Choice Goods and other like sires. Also an extra yearling by King out of an Ohio Chief sow.

CHAPIN & NORDSTROM,
Green, Kansas.

ELK CREEK STOCK FARM DUROC JERSEYS

Two valuable mature herd boars or sale. 100 spring pigs to select from. Best of breeding and individuality. Always something for sale. Come and see my herd or write me.

J. E. JOINES,

to all fowl. Try it on the old hens whose usefulness as egg producers is over and see how fast they fat and how profitable they become as market birds. Give it to the tender, growing chicks and astonish yourself by their rapid growth and development. Hess Poultry Pan-a-ce-a will make winter layers out of midsummer chicks and pay you that way over and over again for its trifling first cost. And the moulting period—that time so gloomy to the ambitious hen-man—is so shortened by Pan-a-ce-a that the hens are soon in feather again and laying. In fact, most hens getting Pan-a-ce-a will not stop laying, but drop an occasional egg even when suffering the vital drain of re-feathering. Truly, "The Dr. Hess Idea" and Poultry

DUROC JERSEYS

SPRING BANK HERD DUROCS.

Herd headed by W. H.'s Colonel, the first prize junior yearling boar at Hutchinson fair 1909, and Chief's Orion, the third prize aged boar, at Kansas State Fair 1909. A few choice spring boars and sows bred to either of above named boars for sale. W. H. WILLIAMSON, Raymond, Kan.

FOR SALE—WORTH THE CANDY.

Sows and gilts by Tip Top Notcher, Hanley, Budy K. 4. Ambition bred to 1st prize boar at St. Joe. 15 good boars, sows and gilts all ages, bred or open. Hogs for the breeder or farmer. Write

J. E. WELLER, Faucett, Mo.
(15 miles from St. Joe.)

Fitch's Kant-Chief Improver

A nice line of March and April boars to price worth the money after August 1. Write any time for prices and information.

W. T. FITCH,
Minneapolis, Kansas.

Hanley Strain of Durocs

Write for prices.

PAUL B. JOHNSON, Leavenworth, Kan.

WEST RIVERSIDE STOCK FARM—

Durocs as good as the breed affords. Ohio Chief, Tip Top Notcher, Buddy K. IV, King of Cois., Gold Cloud. Blood lines with the individuality to back up this breeding. Write me for prices and let me know your wants. Mention Kansas Farmer.

H. E. FISHER, Danville, Harper Co., Kan.

The Chester Thomas Durocs

I am now offering 30 head of choice Duroc Jersey boars for sale. Mostly the get of Nebraska Wonder. Herd is very strong in Crimson Wonder blood. Prices right. Call or write.

CHESTER THOMAS, Waterville, Kan.

HOLSTEIN CATTLE

BRAEBURN HOLSTEINS.

Bull calves from dams yielding 10,000 pounds of milk in a year and upward.

H. B. COWLES, Topeka, Kan.

EAST SIDE DAIRY HOLSTEINS.

Our present supply young service bulls is running short, but several of the best ones still on hand, better get particulars about them. Nothing will improve your Dairy herd quicker than one of these youngsters.

F. J. SEARLE, Prop.,
Oskaloosa, Kansas.

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 \$20 and up. A few remain to spare.

"ROCK BROOK FARM,"
Sta. B., Omaha, Neb.

Henry C. Glissman, Prop.

Pan-a-ce-a are a blessing to the poultry man; and there is no reason why every hen owner should not profit by it. It is sold everywhere and always under a written guarantee—if it doesn't "make good" you get your money back.

J. W. Pelphrey Makes Good Sale.

The Poland China sale advertised by J. W. Pelphrey & Son was pulled off November 3, and was one of the good sales of the season. The sale was well advertised and nothing left undone that would help to make it a success. Col. Jas. W. Sparks, the well known live stock auctioneer from Marshall, Mo., opened the sale with a very able talk and did most of the selling. Quite a number of breeders from a distance were present and several mail bids put in their appearance. Pelphrey & Son were well pleased with the results receiving more than they had expected for the offering. Following is a report of the sale:

E. E. Haycock, Hartford, Kan.	\$40.00
Fred Leasmon, Ogle, Kan.	25.00
Chas. Martin, Chanute, Kan.	23.00
W. A. Johnson, Chanute, Kan.	50.00
W. A. Johnson	42.00
B. W. Olsburg, Chanute, Kan.	21.00
Geo. Fetter, Chanute, Kan.	35.00
J. L. Foster, Rose, Kan.	40.00
Clay Knapp, Rose, Kan.	23.00
E. S. Myers, Chanute, Kan.	30.00
A. N. Kyle, Humboldt, Kan.	27.00
E. S. Myers, Chanute, Kan.	50.00
John Holcomb, Humboldt, Kan.	39.00
J. H. Holcomb, Humboldt, Kan.	29.00
J. H. Holcomb	26.00
J. H. Holcomb, Humboldt, Kan.	26.00
Geo. Jordan Leanna, Kan.	38.00
E. S. Myers, Chanute, Kan.	23.00
E. M. Lesman, Ogle, Kan.	33.00
E. E. Haycock	35.00
H. F. Pelphrey, Chanute, Kan.	25.00
Geo. Fetter	26.00
Chas. Martin	25.00
Fred Leasmon, Alpie, Kan.	25.00
Roy Johnston, South Mound, Kan.	224.00
Jewell Bros., Humboldt, Kan.	23.00
Roy Johnston, South Mound, Kan.	30.00
Roy Johnston	37.00
C. S. Fisher, Buffalo, Kan.	20.00

The forty head sold for \$1,116, average \$27.90. This was considered one of the best sales of the season. The demand was keen and several head more could have been sold at good even prices. Pelphrey & Son know how to raise good hogs and the breeders want them, at good prices.

The Shawnee Breeders Association

Sales.

At the state fair grounds at Topeka, on Nov. 16-17, the Shawnee Breeders' Association held a two days' sale, the first of which was devoted entirely to Shorthorns and the second to Herefords. The contributors to the Shorthorn sale were C. W. Merriam, Topeka; Col. Ed Green, Florence, and W. C. Dixon, Carbondale. The contributors to the Hereford sale were Sen. C. A. Stannard, Emporia; Klaus Bros., Bendena, and L. L. Vrooman. These sales were under the management of L. L. Vrooman, who acted as sales manager, and were conducted by Cois. Sparks, Brady and Crewes. It was extremely unfortunate that this association should have attempted to hold its sale during such a stress of weather as was encountered. The conditions under which the sale was attempted were expressed by Geo. W. Berry, ex-president of the Improved Stock Breeders Association, as follows: "The reader who has remained at home the past 48 hours could scarcely conceive of more unfavorable conditions than those that surrounded the sale of Shorthorns held by breeders yesterday at Topeka. Unforeseen sleet, snow and rain with precipitation that threatened large areas in every direction with disastrous floods and danger to travel, were enough to cause doubt as to the success of the sale scheduled on the day that fell in the wake of the storm. Roads that led through sheets of water and mud to the hub were not inviting to local attendance. Notwithstanding the gloomy prospects abroad, with the noonday parting of the clouds and presence of a number of eager bidders, a cheerless prospect to anxious breeders was turned into a fair sale, resulting in 29 head of Shorthorns, brought into the auction under only ordinary fitting, but backed up by excellent breeding, selling at the reasonable average of \$58.38." The White Face sale showed an average of a few dollars greater, though the crowd was not large and their demand soon satisfied. The top of the sale was paid by L. R. Anderson, R. 1, McPherson, Kan., for the splendid young bull Beau Mystic, which he captured from the Sunny Slope herd of C. A. Stannard for \$185. This is a fine young animal and will give an account of himself in the Anderson herd. Too much cannot be said in commendation of the breeders who met with such adverse conditions. They took their medicine like men and saw the fortunate buyers walk off with prizes such as are not picked up many times in public sales.

Horses Sell Well at Kirksville

S. J. Miller of Kirksville, Mo., had a very satisfactory sale of Percheron stallions and mares, trotting horses and jacks. Buyers were present from Kansas, Missouri and Illinois, and the local support was excellent. Most of the buyers were from the home state of Missouri as it was to be expected. The bulk of the sale was made up of imported and home bred mares and the top price was paid for the imported mare Copette who sold for \$1,485. The top stallion was the 5-year-old Consign which brought \$1,000. Col. Geo. P. Bellows conducted the sale, a report of which follows:

6—Consign, 5 years, John C. Mills, Kirksville, Mo., \$1,000.
7—Jill, 6 years, Lee Furnish, Sublett, Mo., \$500.
15—Valerius, 1 year, Charles Taylor, Purden, Mo., \$325.
16—Heslington Warden (Shire), 3 years, D. L. Beurn, La Belle, Mo., \$600.
MARES
19—Xiroquette, 5 years, E. E. Leard, Walnut Grove, Mo., \$895.
20—Candle, 6 years, V. C. Davis, Granger, Mo., \$900.
21—Coquette, 5 years, W. F. Crawford, Greencastle, Mo., \$1,405.
22—Gourmette, 3 years, R. T. Painter, Leavittown, Mo., \$700.
23—Absinthe, 4 years, R. T. Painter, \$600.
24—Nippoune, 5 years, N. S. Cox, Pattonsburg, Mo., \$600.
25—Sonnette, 6 years, H. H. Rice, Will-

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 breeding and individuality. 3 young bulls for sale.

Frankfort, AULD BROS., Kan.

RED POLLED CATTLE FOR SALE.

10 cows and heifers bred to drop calves in spring; all good individuals. One extra good herd bull. Most of the cows belong to the R. two families. Priced right for quick sale.

F. H. SHOEMAKER,
Centerville, Kansas.

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 Roan Hero, the Double Standard champion. Prices reasonable. Write for terms.

Chiles, C. J. WOODS, Kansas.

BELVEDERE X2712--195058

son of the \$1,500 Grand Victor X1685 150364 heads my herd of Double Standard Polled Durhams. A few extra good blocky, thick-fleshed young bulls for sale. Inspection invited. Farm adjoins town.

D. C. VAN NICE,
Richland, Kansas.

JERSEY CATTLE

Lincoff Jersey Cattle

Established 1878. Registered in A. J. C. C.

R. J. LINCOFF, HOLTON, KANSAS.

HEREFORD CATTLE

9 TOPPY HEREFORD BULLS

For sale, sired by Loyalty 16239 by Imp. Majestic, Armour's great bull. Their dams rich in the blood of Anxiety 4th. Cherry Boy, Beau Real and Hesiod. These bulls are good and will be priced to sell.

W. L. WOOD, Strong City, Kansas.

Jacks and Hereford Cattle.

Stocks for sale at all times. Write us what you want.

YATES BROS., Faucett, 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, Eldorado, Kansas.

GALLOWAY CATTLE

SMOKY HILL RANCH.

Galloway Herd, headed by Pat Ryan of Red Cloud 20038, Starlight 2d of Tarbreoch 24478 and Valarius 29038. Bulls and heifers for sale from my herd of 180 registered Galloways.

E. J. GUILBERT,
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,
Bluff City, Kansas.

ANGUS CATTLE

ANGUS BULLS.

Sons of Champion Ito (our show bull) a son of Imp. Prince Ito—cost \$9,100—and out of the \$3,500 champion cow, Queen Mother 7th of Drumfergus, and RUTGER MIKADO 22395, whose get took first prize at the Kansas State Fair last year, and from the best families of the breed. Also a number 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.

OHIO IMPROVED CHESTERS

75 O. I. C. FIGS.

Herd headed by Jackson Chief 2. No. 12285, and Kerr Garnett 2. No. 25488. Boars and gilts not akin for sale. Write or come and see them.

W. H. LYNCH, Reading, Kansas.

mathville, Mo., \$500.
 26—Palmetto, 4 years, W. F. Crawford, \$600.
 27—Hirondelle, 2 years, W. L. Arnold, \$600.
 28—Hursulline, 2 years, D. L. Bourn, \$570.
 29—Historie, 2 years, N. S. Cox, \$560.
 30—Istall, 1 year, J. W. Thurman, At-
 lanta, Mo., \$775.
 31—Islande, 1 year, N. S. Cox, \$780.
 32—Ingrate, 1 year, J. S. Bane, Smith
 Center, Kas., \$650.
 33—Icarine, 1 year, Lee Furnish, Sub-
 ette, Mo., \$405.
 34—Etele, 4 years, L. J. Hazen Gales-
 burg, Ill., \$595.
 35—Bichonnette 1 year, R. T. Painter,
 \$400.
 36—Fannie, 9 years, R. T. Painter, \$395.
 37—Ardella, 2 years, W. L. Arnold, \$405.
 38—Pasourelle, 1 year, W. L. Arnold,
 \$365.

TROTTERS

1—His Majesty (stallion), 9 years, I. A.
 Novinger, Kirksville, Mo., \$305.
 2—Directum Princess (mare), 5 years,
 I. A. Novinger, \$230.
 3—Norma Bismont (mare), 2 years, Lew-
 is Hubbard, Kirksville, Mo., \$160.

JACKS.
 17—Harvey's Mammoth 2 years, G. C.
 Roan La Plata, Mo., \$405.
 18—Mammoth Bob, 2 years, G. C. Roan,
 \$415.

SUMMARY

20 mares sold for	\$12,425.00
Average	621.25
4 stallions sold for	2,425.00
Average	606.25
4 jacks sold for	320.00
Average	80.00
3 trotters sold for	695.00
Average	231.66

The Walnut Grove Dispersion Sale.
 On Nov. 18, M. A. Low of Topeka, made a dispersion sale of all of the live stock on his Walnut Grove Farm, Horton, Kan. In this sale he offered Percheron horses, Jersey cattle and light horses. There was a big crowd in attendance and a brisk demand for the draft horses and the Jersey cattle. The demand for light horses, however, was not so strong, and the 17 head of roadsters, saddlers, ponies and colts went for \$2,575, or an average of \$151.50. In a way this was a pretty fair average when the different classes and the fact that many of them were quite young is considered; but in view of the past history of Walnut Grove Farm, better things had been expected for the light horse classes. This farm has been in existence for nearly a quarter of a century, during which time it has gained a national reputation for the high class of light harness horses that have been bred here. Of course the Jersey cows were in demand, although some of them were not registered. They were all snapped up greedily by buyers and at fair prices. Almost anything in the way of a milk cow will sell nowadays, and these good Jerseys on Mr. Low's farm were appreciated by the bidders, as they were good individually and of much higher quality than one usually sees in the sale ring.

The best part of the sale, however, was that of the Percherons and grade drafters. Buyers were keen for these, especially those who came from a distance. There were 11 registered horses which averaged \$422.95, though this average would doubtless have been higher but for the fact that several of them were young colts. The imported stallion Rapide, whose portrait has appeared in Kansas Farmer, and who is an inbred Brilliant, sold much below his real value. His purchaser came from Missouri and seemed to have the knack

AMERICAN ROYAL WINNERS

1st cockerel, 2nd and 3d pullet, 3d hen, out of four entries. Write me for the best in White Plymouth Rocks exclusively.

FRANK KNOPP, Kansas.

Holton, 5,000

Orpingtons, Rhode Island Reds, Leghorns, Rocks and Wyandottes for sale. Each variety bred on separate farms from prize winning stock. We will send catalog free.

L. M. HARRIS, Nebraska.

Clay Center.

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WM. B. CARPENTER, Pres., Mo.

Trenton.

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., Kansas.

Winfield.

PURE HONEY.

Extracted in cans of 60 lbs. net amber \$7.50, 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, Colorado.

Los Animas.

SHEPHERD PONIES FOR SALE—20 im-

ported 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.

of bluffing out the other bidders to the extent of securing this splendid animal at about 75 cents on the dollar. Mr. Low now plans to sell his splendid farm, which is one of the best in Kansas.

The sale of Percherons was as follows:

Males.
 Lot 1—Imp. Rapide, 4 years, Michael Wogan, Easton, Mo., \$1,000.
 Lot 2—Grenadier, 18 months, Morris Bevin, Muscotah, Kan., \$270.
 Lot 3a—Malgache, 8 years, C. R. Barrett, Baker, Kan., \$800.
 Lot 3—Grayson, 18 months, J. E. Prentice, Horton, Kan., \$200.

Mares.
 Lot 5—Keoto Matilda, 4 years, L. M. BaBrd, Marquette, Kan., \$455.
 Lot 6—Geota Nellie, 4 years, J. H. Peak, Manhattan, Kan., \$400.
 Lot 7—Keota Tressie, 4 years, L. M. ard, \$500.
 Lot 8—Alberta, 5 years, J. H. Peak, \$490.
 Lot 9—Walnut Grove Nellie, 7 months, A. D. Walker, Holton, Kan., \$165.
 Lot 10—Walnut Grove Tressie, 7 months, L. M. Bard, \$210.
 Summary: 11 Percherons, \$4,652.50; average, \$422.95; 10 grade draft, \$1,675.00; average, \$167.50; 17 light horses, \$2,575.00; average, \$151.47.

The Lakewood Percheron Sale.

The recent sale of imported and home bred Percherons made by H. G. McMullan & Sons, owners of Lakewood Farms, Rock Rapids, Ia., was a decided success. While some of the horses did not bring all they were worth, perhaps, the sale was generally satisfactory. The average was good, but it must be remembered that many of the horses offered were young and this served to reduce the average below what it would have otherwise been. The crowd was a fine one and most of the horses sold into the north and west. There was a special demand for Calypso stallions and mares, as there should be. The sales of \$400 or over are here given:

Lazelle 51321, H. E. Sanders, Worthing, S. D., \$1,105.
 Rise 61033, Geo. Gable, Merrill, Ia., \$975.
 Herisson 50338, May, '16, Jas. Johnson, Bismarck, S. D., \$880.
 Zenobia 50428, Jas. Johnson, \$700.
 Aldine 53040, Wm. Jameson, Great Falls, Mont., \$590.
 Gladiator 61092, H. H. Mallay, Delmont, S. D., \$1,050.
 Lawton 59943, J. W. Patterson, Worthington, Minn., \$985.
 Manatobi 46839, Henry Kohl, Vandalla, Mo., \$625.
 Belmont 63581, H. A. Williams, Otis, Colo., \$665.

Roxmore 63585, Wm. Jameson, \$590.
 Marcus 63587, Wm. Jameson, \$675.
 Gigola 52708, Jas. Johnson, \$440.
 John C. 52386, Jas. E. Reed, Townner, N. D., \$510.
 Launcelott 57709, C. R. Steele, Ireton, Ia., \$1,000.
 Malaga 56818, Henry Kohl, \$800.
 Ivanhoe 61089, F. M. Ring, Phillip, S. D., \$660.
 Prince 49375, C. R. Steele, \$890.
 Romeo 52544, Jas. Johnson, \$500.
 Marshal 51796, Jas. Johnson, \$400.
 Edward 54882, Wm. Jameson, \$490.
 Norwood 63983, Jas. Walker, Dunbar, Neb., \$495.
 Rebo 51797, Jas. E. Reed, \$520.
 Bolivet 51790, Wm. Jameson, \$490.
 Hamlet 51531, P. W. Moir, Orange City, Ia., \$410.
 Allison 61095, L. E. Ausman, West-sington Springs, S. D., \$500.

Mares.

Cora 41727, Robt. Oakes, Kansas City, Mo., \$535.
 Fay 61086, A. H. White, \$600.
 Marjorie M. 46122, Geo. Homrighouse, Hornick, Ia., \$635.
 Mynette 68141, H. S. Buck, Rhodes, Ia., \$550.
 Alberta 45553, Geo. Homrighouse, \$615.

Fastrada 53018, A. H. White, \$730.
 Flirt 54157, Bogg & Hanson, Hubbard, Neb., \$800.

Isabella 46301, A. H. White, \$600.

Janice 64016, Jno. McNeil, \$500.

Frankie 64015, Robt. Oakes, \$380.

Myrtha 52297, L. E. Ausman, \$500.

Lola 56857, C. D. Cutter, Coyne, Ia., \$550.

Mose B. 53154, L. E. Ausman, \$710.

Favorite VIII 48640, Frank Nordstrum, Galva, Ia., \$410.

Favorite IX 48642, Frank Nordstrum, \$410.

Rita 63986, Jno. McNeil, \$400.

Lenora 56856, Max Wolf, Albion, Neb., \$510.

Favonia 59695, Jno. McNeil, \$485.

Lady Woodlawn 111 53037, Capt. Jones, Sioux Falls, S. D., \$490.

Corinne 63994, Jno. McNeil, \$400.

Josephine 54875, Jno. McNeil, \$410.

Burnetta 63995, Jno. McNeil, \$420.

Susie P. 43110, Jno. McNeil, \$400.

Orphie 63987, Jno. McNeil, \$430.

Madge 64010, H. M. Coverdale, \$460.

Elizabeth 63996, W. L. Joy, Woonsocket, S. D., \$405.

Arlette 57918, W. L. Joy, \$405.

Ella 64011, Jno. McNeil, \$450.

Erdine 64012, Jno. McNeil, \$425.

Dodo 63998, Jno. McNeil, \$460.

Laurinette 64001, H. R. Harker, Ute, Ia., \$400.

Cella 64000, C. D. Cutter, \$495.

Nana 63984, P. W. Moir, \$405.

Charlette 64002, L. E. Ausman, \$425.

Winnie 64215, C. H. White, Vall, Ia., \$600.

Sylvette 64231, C. H. White, \$650.

Malzelle 64234, Ellen overdale, Madison, S. D., \$425.

Summary: 48 stallions brought \$24,030, average, \$500.63; 74 mares brought \$30,030, average, \$405.81; 122 head brought \$54,060, average, \$443.11.

A. M. Jordan's Sale Not Good.

A. M. Jordan's sale of Shorthorns and Poland Chinas at his farm Nov. 19 was not good. Owing to poor train service and bad roads the attendance was small and the offering, especially on the cattle, lacked fitting. However, all of the stock was disposed of at prices that would make money. The registered cows averaged around \$50, and the hogs sold at prices ranging from \$15 to \$40.

BERKSHIRES

BRABURN BERKSHIRES
 Pigs, high-class in quality and breeding.
 H. B. Cowles, Topeka, Kan.

RIDGEVIEW BERKSHIRES.
 2 herd boars for sale. 1 two-year-old by Forest King, other males of different ages. Sows and gilts open.

MANWARING BROS., Kansas.

BERKSHIRE BOARS AND GILTS.

for sale. Long bodied, smooth spring pigs. The best breeding and excellent individuals. No culls shipped. Visitors welcome.

J. M. NELSON, Kansas.

Marysville, Kansas.

SAVE YOUR HOGS

By using the Ridgway Treatment against Cholera. Guaranteed to make your hogs cholera proof for life. Write today for circulars.

ROBERT RIDGWAY, Amboy, Ind.

BERKSHIRES—OVER 250 HEAD.

To select from. Choice boars and females of various ages. Baron Duke 7500 and Masterpiece 77000. Spring pigs for sale. We guarantee satisfaction.

Write LEON A. WAITE, Winfield, Kan.

MR. FARMER

You need a Berkshire boar—buy a good one; it pays.

We are offering 50 big boned, growthy fellows ready for business, weighing 125 to 250.

Every one a good one. No culls.

Order today and get first choice at special prices \$20, \$25 and \$30. Satisfaction guaranteed.

SUTTON FARM, Kansas.

Lawrence, Kansas.

NEW YORK VALLEY HERDS BERKSHIRES AND SHORTHORNS.

25 years' experience with these breeds.

Sows bred to and sired by Field Marshal 103300 and Lee's Masterpiece 97715. Young stock for sale. 50 spring and summer boars and gilts at \$25 each; two extra fancy and herd leaders at \$50 each. Bred sows and gilts from \$35 to \$100 each. Write your wants. Visitors always welcome.

J. T. BAYER & SONS, Kansas.

Yates Center, Kansas.

POLAND CHINAS

GRAND PERFECTION NO. 77899.

Spring pigs by this bear and out of richly bred dams for sale, either sex, at \$15 each to move them quick. Write at once.

JEWELL BROS., Humboldt, Kan.

STRYKER BROS. HERD POLAND CHINAS

The greatest show and breeding herd in the West. Write your wants and they will please you. Hogs any age at reasonable prices. Buy the best and make the most. They breed the kind that win the kind you want. Address STRYKER BROS., Fredonia, Kan.

BIG TYPE POLAND CHINAS.

For quick sale few Aug. and Sept. boars, out of grandson of Expansion and Victor X L. winner at World's Fair, 3 of the boars out of Lady Youtell 4th, the dam of Prince Youtell. Cheap if sold soon.

J. H. HARTER, Westmoreland, Kan.

BOLLIN'S POLAND CHINAS.

We have for sale some very good spring boars. Write and get our prices on an extra high bred gilt or bred sow. These are representatives of the very best blood strains of the Poland China breed. We give customers satisfaction. Write today for particulars.

John Bollin, Leavenworth, Kan., R. D. 3.

BOARS

15 big, growthy, Poland China boars ready for service. The kind that make good.

CHAS. O. PARSONS, Kansas.

Clearwater, Kansas.

GOOD POLAND CHINA BOARS.

fine lot of young Poland China boars that were sired by the great Lalis Perfection and out of my choicest sows, for sale. All of March farrow and will be sold cheap if taken at once. Must close out as I need the room.

S. W. TILLEY, Kansas.

Irving, Kansas.

Barred Rocks.

With this issue Paul Oliver is starting an ad in Kansas Farmer offering some choice Barred cockerels for sale. These birds are extra good and priced reasonable. Look it up and write for prices and kindly mention Kansas Farmer.

SOUTH MOUND STOCK FARM

LARGE TYPE POLAND CHINAS

Herd headed by Orphan Chief (50986), John Ling (49897), and Logan Ex. (51718) and contains 30 great strictly large type sows the equal to which is hard to find in one herd; the produce of which I will guarantee to be much larger and with as much quality as any medium type herd. Choice spring pigs and they are very choice, weighing as high as 271 pounds. 90 head of summer and fall pigs ready to ship. Let me know your wants and mention Kansas Farmer.

ROY JOHNSTON, South Mound, Kan.

POLAND CHINAS

Gilts for sale of May farrow sired by Cowels' Tecumseh. Bred sows and gilts for sale later.

F. S. COWELS, Kansas.

R. F. D. 2, Lawrence, Kan.

DINGMANS BIG POLAND CHINAS

A few big smooth boars, the tops of 40 head sired by the 317 pound Voter and out of such sows as the 735 pound sow, Miss G., and the 550 pound Holly. Write and mention this paper.

C. W. Dingman, Kansas.

CLAY CENTER, Kansas.

POLAND CHINAS

SHOW PIGS FOR SALE—5 June pigs, sired by Mischief Maker, dam by On and On 2nd; three boars and two gilts. They are extra good show material. Priced right. O. J. MITCHELL, Centerville, Kan.

SNYDER BROS. HIGH CLASS POLAND CHINAS.

Either sex, bred sows and bred gilts, priced right for quick sale. Write your wants.

SNYDER BROS., Kansas.

Winfield, Kansas.

SPANGLER'S BIG POLANDS.

For sale now: 25 big smooth spring boars and 25 gilts, mostly by Spangler's Hadley. Some top stuff among these, but all priced to sell.

J. D. SPANGLER, Sharon, Kan.

POLAND CHINAS.

20 early spring Poland China gilts, tracing to the large type Expansion—will sell them bred or open, a few choice spring boars; prices reasonable; satisfaction guaranteed.

OLIVER & SONS, Danville, an.

BRED SOWS AND GILTS FOR SALE.

A few choice sows and gilts for sale bred for fall litters. Write me your wants. I can please you.

A. W. SHRIVER, Kansas.

Cleveland, Kansas.

SPRING BOARS AT BARGAIN PRICES.

Out of sows by S. P.'s Perfection, Chief Perf. 2nd, Spellbinder and others. These young boars are fine individuals and by Sportsman and Corroctor and out of a Meddler dam. Write me your wants.

JOHN B. FREESE, Bayneville, Kan.

BIG POLAND CHINAS.

Headed by my big smooth boar Prince 45889. Our sows are strictly on the big order. 75 big strong early pigs ready to ship. Both sexes. Description guaranteed.

J. E. BOWSER, Kansas.

Abilene, Kansas.

CEDAR LAWN FARM.

Polands and Shorthorns for immediate sale: 15 choice spring boars sired by Orphan Chief 50908, Priceless King and a good son of Pan Famo. Dams carry the blood of Bell Metal, Logan B., Big Hutch, etc. Also a few good gilts. No culls shipped.

S. B. AMCOATS, Clay Center, Kansas.

MELBOURNE HERD POLAND CHINAS.

I have a few choice spring boars and gilts sired by Gold Metal, Hadley Boy and Klever Boy for sale at moderate prices. Let me know your wants.

JOHN C. HALDERMAN, Neb.

Burchard, Neb.

BARGAINS.

Ten choice big type boars for sale, sired by Price Hadley and Captain Hutch.

W. C. SINGER, Hiawatha, Kansas.

RICHLY BRED POLAND CHINAS.

Spring boars and gilts sired by Jewel Perfection 2nd, grandson of Chief Perfection 2nd. Sows equally as well bred. Reasonable prices.

GEO. W. CROOKS, Kansas.

Clay Center, Kansas.

200 STRICTLY BIG TYPE POLANDS

March and April farrow. Bell Metal, What's Ex., Nebraska Jumbo and Colossus head our herd. Sows carry the blood of the biggest sires of the breed.

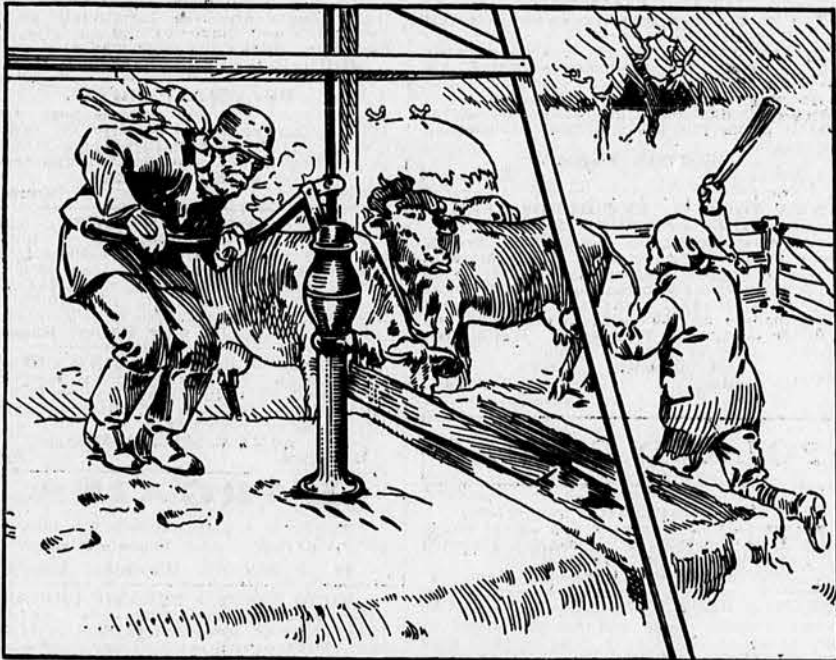
B. M. BELL, Kansas.

Beattie, Kansas.

HIGHVIEW BREEDING FARM</

Don't be an Engine —BUY One!

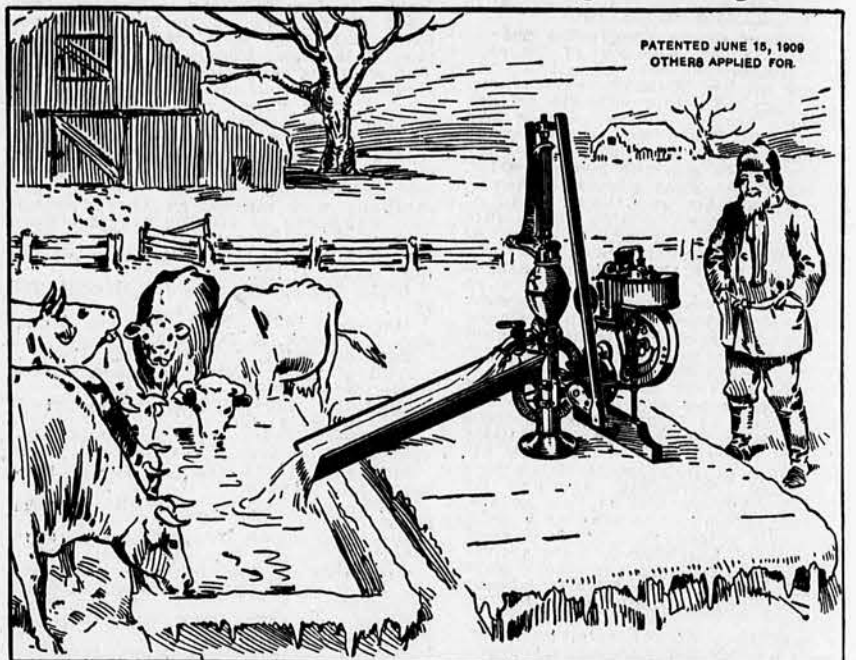
Thousands of thoughtless farmers are doing the work of **engines**. Pumping water for stock and running all sorts of machines by **muscle-power**. Burning up **human energy** instead of cheap **gasoline**. It's the most expensive mistake a man can make to become a mere **machine**. **Don't do it!** A small investment will now secure the famous **Farm Pump Engine**—the sensational little wonder that almost runs the farm! The most remarkable **pumper** that ever worked in a well! An engine that will be your "right hand man" for a **trifle a day!** One with power for every purpose—adaptable to scores of uses—complete in itself—easily moved from place to place and ready for instant action. The pictures printed below point a moral for every man who is wasting time and effort in **working like an engine**.



Pumping by MAN-POWER Is WORK!

"Being an engine" is no joke when it's cold as Greenland and the cattle are so thirsty they simply can't drink enough. The boy is "shooing" them away before they are satisfied. The man at the pump is "working like an engine" and every muscle says "Ouch!"

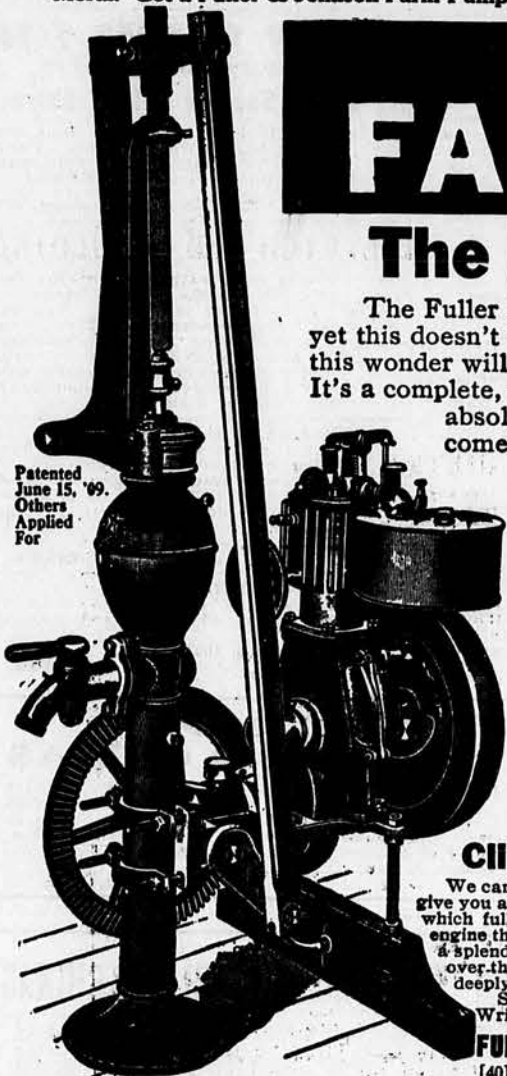
Moral: Get a Fuller & Johnson Farm Pump Engine.



Pumping by ENGINE-POWER Is PLAY!

The man is "taking it easy" while the Farm Pump Engine works. The busy little engine is on the job and the cattle drink all they want. While watching it work the farmer is thinking—"What a fool I was that I didn't get that dandy little engine long ago! It's the best 'hired man' on the place!"

Moral: Get a Fuller & Johnson Farm Pump Engine.



Patented
June 15, '09.
Others
Applied
For

THE FULLER & JOHNSON FARM PUMP ENGINE

The Engine That Almost Runs the Farm!

The Fuller & Johnson Farm Pump Engine is a Prodigy in Power. It's supreme as a pumping engine alone, yet this doesn't begin to tell the scope of its ready service. For no other engine, regardless of price, does all that this wonder will do. Note how it differs in looks from ordinary gasoline engines. This is the key to its greatness. It's a complete, portable little Power Plant. Needs no cement foundation! No arms! No belts! The engine is absolutely **complete in itself**, and ready for work **any time, anywhere!** Everything but the gasoline comes in the packing box in which it is shipped.

How it Works

The engine attaches to any standard force pump by means of four common nuts. It will start with **half a ton** lift on the sucker rod and run at the rate of 31 to 35 strokes a minute as long as the fuel holds out. The length of strokes can be regulated.

Works in any well that a windmill will pump. Easily detached and moved. Has a convenient 4-inch pulley for operating all kinds of hand-power machines—churn, cream separator, grindstone, feed cutter, fanning mill, washing machine, etc.

By attaching a piece of ordinary pipe for extra air chamber, it will throw water over any ordinary building. Splendid fire protection—worth everything in an emergency.

The Fuller & Johnson Farm Pump Engine is as high grade a machine in every respect as the best automobile engines. The perfectly **Air-Cooled Engine**—no fans or cooling attachments. Every engine built and **GUARANTEED** for Strength, Durability and Steady Running, by the Fuller & Johnson Co.

Clip the Coupon for FREE ENGINE BOOK!

We cannot do justice to the Farm Pump Engine in an advertisement. We can only give you an idea of its startling advantages. Let us send you the new engine book, in which full details are given. In fairness to yourself, get posted on this ever-ready engine that gives such cheap and dependable power. No engine has ever made such a splendid record for service. Farmers everywhere are talking about it. Dealers all over the country are scrambling for the agency. Every progressive farmer will be deeply interested in the description of the engine and what it will actually **DO!** Send the coupon or a postal card for it today. You will be abundantly repaid. Write for the name of the dealer in your locality who sells this wonderful engine.

FULLER & JOHNSON MFG. CO., NORTH AVE., MADISON, WIS.
Established 1840

Cannot Freeze or Overheat

It will run in the hottest weather or when the thermometer stands 30 degrees below zero. Self-oiling. All important working parts encased, yet easily accessible. The simplest, neatest, handiest, strongest and most adaptable little engine on the market. We couldn't make it better if we charged \$500 for it. Yet it costs even less than a windmill!

Dealers The territory is being assigned rapidly. The demand is simply tremendous. Write at once if you wish the agency for the engine that is revolutionizing the business.

FREE ENGINE BOOK

Fuller & Johnson Mfg. Co., North Ave., Madison, Wis.
Please send Catalog of Farm Pump Engine to address below:

Name _____
Town _____
R. F. D. _____ State _____
Dealer's Name _____

Sign and Send Today