

KANSAS FARMER

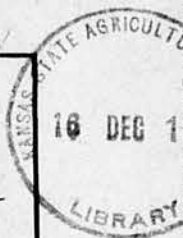
For the improvement



of the Farm and Home

CP 2

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Whether as milk—raw, malted, powdered, or condensed; whether as cream—plain, whipped or iced; whether as butter, alone or in combination with other oils; whether as cheese in its many brands and varieties; whether as buttermilk; as kumiss, or as confection, the call for dairy products is one of the most insistent, universal, and exacting of all the demands of trade. An infant necessity, a standard food, a common luxury, is the milk of the dairy cow.

—Eugene Davenport

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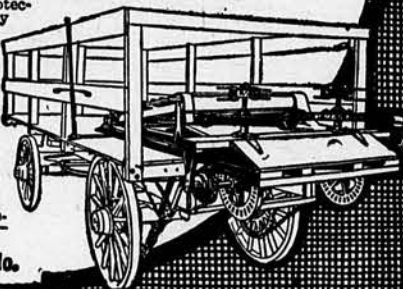
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FEEDING FALL PIGS

A KANSAS FARMER reader in Osage County has forty good, thrifty fall pigs now weighing 80 to 85 pounds apiece. No corn was grown on this farm this year. The silo was filled with corn but this contained little or no grain. There is also some alfalfa and clover hay and some kafir fodder from which the mature heads were removed. The kafir grain so harvested amounted to only seventy bushels. He asks if it would be possible to carry these pigs through on silage, clover hay, and what grain they might get from the kafir fodder by following the cattle, or if it would be better to sell them now. He can now obtain \$5 apiece for those pigs.

Pigs of this age cannot be profitably maintained on silage and alfalfa and clover hay. Mature hogs can eat enough of such rough feeds for bare maintenance but pigs of this size and age would be badly stunted unless fed some grain. The problem largely hinges on the relative price of hogs and feed during the next few months. Corn is now worth about \$1 a bushel, shorts \$1.80 to \$1.85 a hundred, and tankage about \$3.25 a hundred. The present market for hogs is high in spite of the fact that a larger number than usual have been sent to the central markets. Up to the middle of November the receipts of hogs at Chicago for 1916 exceeded the ten-year average by 39 per cent, and the price during the same period exceeded the ten-year average by 46 per cent. Light, unfinished hogs are being marketed in large numbers. This would indicate the probability of a shortage during the next few months. The prospect for high prices to continue for several months, at least, is bright. It would seem that when the present flood of light hogs is out of the way, the market is bound to be stronger than it is at present.

If our reader should decide to fatten these hogs now, all the grain feed would have to be purchased. There could be no hope of profit from feeding corn alone. The most efficient ration that could be fed is a mixture of corn, shorts, and tankage or meat meal, in about the following proportions: Sixty parts corn, 32 parts shorts, and 8 parts tankage. Such mixture will cost at the prices quoted at the present time, \$1.90 a hundred. The most efficient way to feed this ration is to have the corn ground and mixed with the shorts and tankage in the proportions suggested, wetting it at time of feeding. Plenty of trough room should be supplied. During cold weather it would be eaten with greater relish and give better results if wet with hot water.

A large number of experimental tests have been made at the Kansas Experiment Station, so we are not in the dark as to what can be expected from feeding such ration. In Bulletin 192, eighteen different trials, involving 207 hogs, are reported, in which corn, shorts and tankage were fed in about the proportions suggested above. The average daily gain made for all these trials was 1.53 pounds per hog, and the average feed required for each hundred pounds of gain was 475 pounds. The hogs fed in these trials were nearly all spring shoats weighing 140 to 160 pounds when the feeding trials began. Hogs of this size require more feed for each pound of gain than do younger and smaller pigs. An 80-

pound pig fed this ration should make a pound of gain for each four pounds of feed. Assuming that it would require 475 pounds of feed to put 100 pounds of gain on the 80-pound pig, the cost at \$1.90 a hundred for feed would amount to about \$9. This added to \$5, the present value of the pig, gives \$14. If the market at the end of ninety days—which would be about the time required to add 100 pounds to the pigs—should be as high as at the present time, they would sell in Kansas City for about \$18 apiece. Of course, this calculation does not take into consideration the labor in feeding and caring for these pigs. This would not be a large item, however, as the pigs would all be fed in one yard, and quite often on the farm during the winter season labor is not given a very high value. If there is no further increase in feed prices during the next three months, it would seem there is a fair chance to make a profit in finishing these pigs for market as soon as possible.

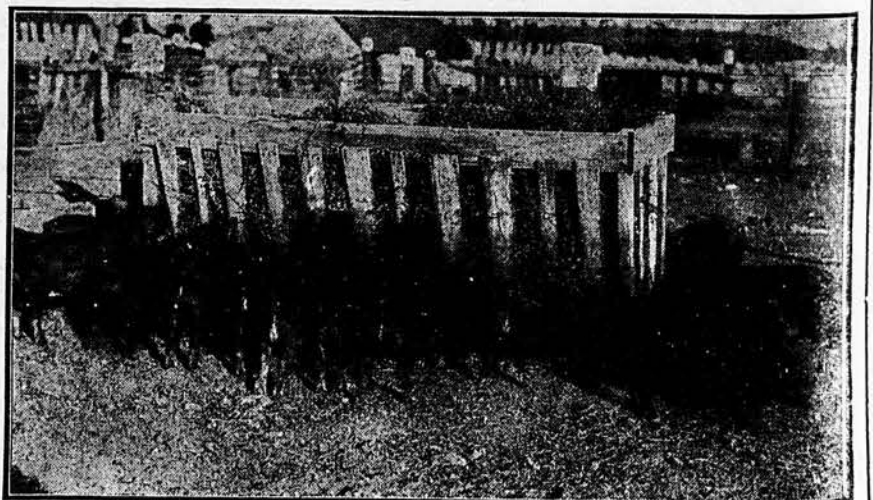
Silage and clover hay will supply variety in the ration and will help a little in reducing the amount of grain required. Therefore it would be advisable, even though they are to be pushed for market, to feed them all the hay and silage they will eat. Another source of feed value is the waste kafir from the fodder that will probably be fed to the cattle. While the mature kafir heads were harvested, there is probably some grain left on this fodder in the immature heads. When fed to cattle as fodder, very little of the grain of kafir is digested, and the hogs that follow after them will save the waste.

Another method of handling these hogs might be suggested, and that is to carry them through at the least cost possible and depend on grain grown next year to finish them for market. Even this will require the feeding of some grain, and it should be a ration containing plenty of growing material. The clover and alfalfa hay contains growing material and the pigs should be given a chance to eat all they will of this hay. Silage is a very bulky feed for hogs and they cannot digest enough of it to do them much good.

Rye has been planted on this farm for pasture, and there is also wheat. In carrying pigs through with a limited amount of grain they should be allowed to run on this pasture as much as possible, and of course they should have the run of the cattle yards so as to save any waste grain. In addition they should be given enough of the corn, shorts, and tankage mixture to keep them gaining at the rate of about one-half pound daily apiece. The amount required should not average more than two pounds a day for the winter.

The quickest way to get some early grain and stop the feeding of high-priced purchased feeds, is to plant a patch of the earliest variety of corn that can be secured, or some feterita. There are varieties of corn that will mature grain by July 1, and the hogs can be turned in and made to gather it themselves. Feterita will mature grain in even less time and can be "hogged down."

There is more risk from disease involved in carrying pigs through a long period, but we believe either of the alternatives suggested is better than to sell the pigs for \$5 apiece.



FEEDING ALFALFA HAY HELPS TO LESSEN THE AMOUNT OF GRAIN NECESSARY TO KEEP PIGS GROWING.—SUITABLE RACK SHOULD BE PROVIDED



KANSAS FARMER

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STARTING WITH PURE-BREDS

It should be the ideal of every farmer to own and use pure-bred stock in so far as possible in his farm work. For many years these pure-bred animals have been carefully bred for specific purposes and the qualities they possess give them far greater value than the inferior or "scrub" animal. It is a mistaken idea, however, to expect the pure-bred animals will consume less feed or withstand more hard treatment and exposure than will scrub animals. The scrub in his fight for existence has been compelled to take on characters that have no utility value to man. In fact many of these characters actually lessen in a marked degree the usefulness of the animal for man's purposes. The pure-bred is an animal developed as a result of being surrounded with artificial conditions and it is because of this fact that it has become more valuable for man's purposes.

The grade animal is one possessing a considerable percentage of pure blood and the more pure blood it contains the more useful it becomes if given a proper chance. There is no conflict between the grade and the pure-bred. The pure-bred animal is responsible for practically all the really valuable qualities the grade possesses. Some farmers have developed herds and flocks that are not registered but still possess the characteristics that make them as valuable from the strictly utility standpoint, as registered animals. This has been possible because only the very best pure-bred sires have been used year after year in developing these herds.

The question of how to start in realizing the ideal of keeping nothing but pure-bred animals, often comes up. A reader of KANSAS FARMER who wishes to start in Holstein cattle by purchasing three or four heifer calves, asks whether it would be better to buy a less number and get registered animals. He can buy high grade heifer calves from two to five weeks old for from \$20 to \$25 apiece. He also asks about buying a bull to go with these heifer calves. From the fact that this man is considering the buying of calves, it is evident he does not have much money to put into pure-bred stock and wishes to get started as cheaply as possible. Unless he is already milking a few cows and has skim milk to feed, it would not be advisable to buy such young calves at all. No matter how good they might be now, they could not be properly developed so as to become useful cows without feeding them considerable skim milk.

High grade heifer calves of a dairy breed, if they come from the use of the right kind of sires, are likely to develop into high producing cows, but their offspring will always be grades. A pure-bred herd cannot be started without the purchasing of at least one pure-bred female. Perhaps all the money this man can spare would not buy a pure-bred heifer or cow. If properly handled, however, there is no farm animal that will more quickly pay for itself than will a good dairy cow. The man who is willing to stay by the dairy business, giving it intelligent attention, will find that it will pull him out of debt and start him on the road to making a comfortable income. To such we would say, try and get at least one pure-bred cow or heifer as the foundation animal of the pure-bred herd. We were recently visiting one of the best pure-bred herds in Southern Kansas and had our attention directed to the fact that most of the cows in the herd were descended from two old cows that were still producing. One of them was eighteen years old at the time and was expected to drop another calf in the near future.

If the capital is very limited it may be necessary to start by buying young calves, but it should be remembered that the heifer old enough to begin producing milk soon will be bringing in an income while the calf will have to be fed for two years at least. It will be all expense and no income until it is old enough to produce. Buying calves is a good way to start without spending

much money as the initial investment, but it takes time and time may represent more money than it would have taken to get a producing heifer in the start.

The bull should be a pure-bred with a good record behind him, even if the cows of the herd are all grades.

FARM QUESTIONS WELCOMED

The editors of KANSAS FARMER wish to be of the greatest service possible to our readers. Apparently some of our readers do not fully understand the kind of service they should expect from a farm paper. In a letter just received, the writer says: "I read your editorial in which you invited your readers to send in questions about feeds and feeding. I herewith enclose some of my problems along this line. I have been wanting to do this for a long time but did not like to bother you."

We are glad we gave this invitation, for this letter suggests that there are readers of farm papers who fail to appreciate the fact that the editors of such papers as KANSAS FARMER have knowledge and experience that can be used to good advantage in their farming business. We do not claim to be walking encyclopedias of agricultural information. No one has a corner on all the agricultural knowledge that is now available. We have observed that quite often the farmer who seems to be most successful and has the most experience, is the one who is most constantly on the lookout for new ideas that will be helpful to him in his own work. In order to make progress—to learn new and better ways of doing things—it is necessary to have an open mind and be ready to receive valuable ideas, whatever may be their source. The important thing is to be sure that the information is based on facts and that the proper interpretation is given to the relation of these facts to the questions involved. In answering such questions as come to us constantly, we use the knowledge gained from our own practical experience and in addition draw on many other sources of reliable agricultural information. The ability to gather from all sources this knowledge, and to be thoroughly familiar with the conditions under which our readers are working so as to be able to pass it on in such way as to fit their needs is the test of the value of the farm paper and its editors.

Do not refrain from asking questions for fear you will bother us. You are not getting full value for your money if you feel that you cannot ask that the editors of your farm papers help you in securing the information needed to work out your various farm problems. If your farm paper editor does not like to be bothered with furnishing such help, the sooner you find it out the better. KANSAS FARMER welcomes honest inquiries for information such as were included in the letter referred to above, and assures our readers that their questions will be given the most careful attention.

COLLEGE WINS AT CHICAGO

After making a record-breaking run to Chicago, the Kansas Agricultural College steers made some sensational winnings at the International Live Stock Exposition just held.

Agricultural colleges and experiment stations have been charged with buying their choice show steers wherever they could be obtained. The Kansas college has for several years been adhering to the policy of showing steers of its own breeding only. A group of three Shorthorn steers bred and developed by the college, won first place at the International last week, on get of sire, competing against all breeds, over fifteen entries being in the ring. These steers were sired by Matchless Dale, son of Avondale, that has headed the college Shorthorn herd for a number of years. Nearly all the competition in this class was furnished by breeders of registered cattle, very few college groups being

shown. The winning of this prize means more in adding to the prestige of the college work in breeding and feeding beef cattle, than would have the winning of the grand championship of the show on a purchased steer.

Another showing that demonstrates the results of good breeding work, was the group of five steers which won first place in this class. The five steers shown by the Kansas college were all sired by Matchless Dale, and the Kansas College bred the dams of four of the steers as well. There were nine groups in this class, the prize being a special offered by Clay, Robinson & Company, to be competed for by agricultural colleges only. As soon as the entries were all in the ring, the South American judge who passed on the class gave the Kansas steers the blue ribbon and asked that they be taken away while he selected the remaining places.

In the showing of individual Shorthorn steers, Prof. W. A. Cochel, head of the animal husbandry department of the college, had the honor of winning first and second on two-year-olds, first on senior yearling, first on junior yearling, and champion. He also won first on Shorthorn herd, and reserve champion two-year-old, all breeds competing.

The Kansas college winnings in Galloway steers were first on two-year-old, first on yearling, first on calf, first on herd, and champion. Hereford and Angus steers were also shown, but they did not rank as high as the Shorthorn and Galloway entries.

The Kansas college also breeds and feeds hogs. A carload of hogs bred at the Hays Experiment Station and fed at Manhattan in an experiment that closed a few weeks before the date of the International, won third in the carlot class. First place was won on pen of three Duroc Jersey barrows under 250 pounds weight.

The quarantine against Kansas which had been declared as a result of the foot and mouth disease scare, made it impossible to ship the show stock out of the state at the time it ordinarily would have been shipped to the International. Professor Cochel and his assistants had been eagerly looking forward to the show and they passed some anxious hours before word finally came that the quarantine had been lifted. By lively work a special train was loaded out at nine o'clock Friday night. The Union Pacific and Burlington railroads took this train of thirteen cars, which included exhibits from several Kansas breeders in addition to the college stock, in twenty-seven hours—just half the time usually taken by stock freights in making this trip. Only one stop was made between Kansas City and Chicago and that was to change engines. This splendid co-operation on the part of the railroads in getting the Kansas exhibits to Chicago in time to be shown, is worthy of special mention.

ERADICATION OF TUBERCULOSIS

The spread of tuberculosis among cattle is a serious menace to our dairy industry. It is necessary that the whole country unite in the efforts being made to stamp out this insidious disease. State and local communities have been much handicapped in trying to handle the disease through lack of co-operation. A campaign of national scope is necessary.

A resolution asking for national aid was passed by the National Dairy Union at its recent annual meeting. The National Grange likewise passed a resolution asking for federal aid in controlling this most serious disease.

Bulletin No. 192 of the Kansas Experiment Station contains a very large amount of information that is of the greatest value to those having hogs to feed under present conditions. If you do not have a copy of it we would suggest that you write the station for it.

CHRISTMAS SUGGESTIONS

Conveniences which will lighten the work of the housewife should not be purposely withheld until Christmas, but nothing will be more acceptable than they at this time.

A timely question for the head of the house to ask himself is, "How many conveniences have I supplied to make as easy as possible the daily routine of duties which falls to the lot of my faithful helpmeet, and how many can I add to these at this time?"

There is a long list of things that might be given, but this is unnecessary, for every husband knows or can easily find out the things which his wife would like to have to help her save time and energy in doing her housework.

A good rule to follow in this matter is to give to the point of "feeling." If it is a power washer you are thinking about and the cost surprises you because you have not thought of it before, consider it in the same light as you would the necessity for a farm wagon when you have a good-sized hand cart in which you yourself could pull quite good loads of feed, etc., from place to place on the farm—or anywhere else, for that matter. The things which make the outside farm work go quicker and easier have too long been considered necessities, while the conveniences for the house have been thought of as luxuries. These latter will pay as well on the investment as will anything bought for the place, and they should be considered as seriously and as often.

Make this a Christmas which will be remembered long by the women folks, by giving them useful presents of the kind that will conserve their time, energy and health, by reason of lightening the burden of housework.

FIRE DANGER IN DRY WEEDS

The state fire marshal is calling attention to the danger at this time of the year from patches of uncut weeds and grass. These patches may look harmless, but whole towns and much valuable property have been burned as a result of carelessness in disposing of these sources of danger. On the farms, haystacks, barns, sheds, and even houses have been burned because a spark from the chimney or a stray lighted match has started a fire in dry vegetation.

Wherever there is any dead grass or weeds that might by any chance endanger property, this hazard should be removed. It is not necessary to burn or destroy large amounts of vegetation that should be turned back to the soil, but fire guards should by all means be provided where necessary.

The demand for men trained in creamery work has been greater than the supply during the past year, and this demand is growing. The ten weeks' creamery short course given at the Kansas Agricultural College is designed to meet the needs of young men who want to prepare themselves for creamery work. For about seventy-five dollars a young man can take this course, which includes instruction in creamery butter-making, creamery management, dairy farming, dairy bacteriology, refrigeration, ice cream making, cheese making, and handling market milk. The Dairy Department at Manhattan will supply full information to those wishing to take this course.

Noted speakers with messages of real significance and helpfulness will appear on the program of the State Board of Agriculture, which meets in Topeka, January 10-12, 1917. Secretary J. C. Mohler announces the following: President A. Ross Hill of Missouri University; T. A. Borman of KANSAS FARMER; Charles Dillon of the Capper farm papers; Mrs. Cora Wellhouse Bullard of Tonganoxie. Announcement of other speakers will be made later as the program is arranged.

PLAN FOR GARDEN NOW

Cut Down Cost of Living by Growing Plenty of Vegetables for Family Use

By Geo. O. Greene, Extension Division, K. S. A. C.

IF THE vegetable is to play the part it should in helping to tide the farmer and his family over adverse conditions that are almost sure to exist at the close of the great European war, we should get into the habit of yearly planning for and providing a garden adequate for the family needs. Plans for next year's garden should be made now while there is more time for this than when the busy spring opens.

The first requisite in garden planning is to fall or winter plow the ground as deeply as possible. This will destroy many insects that, if unmolested, will in turn destroy many of the young plants as they appear after spring planting. Fall plowing breaks up the waterproofed earthen cells of such insects as cutworms, white grubs, wire worms, and many others that will be awaiting the first appearance of the young vegetable seedlings. Fall plowing also turns up the earth and if left rough the freezing and thawing during the winter will put the ground in fine condition for spring work. The earth will warm up earlier and will drain sooner for early planting. Deep plowing also insures a large reservoir for winter moisture.

After the garden has been fall or winter plowed it should have a heavy top dressing of barnyard manure which should not be trashy. Too much dry litter will, in rotting, absorb so much moisture from the soil as to "burn the crop." If the soil is already rich and condition only is desired this top dressing should be disked and well worked into the soil just before a more shallow plowing in the spring. Where the rainfall is light, spring disking only is good practice. This top dressing will then act as a mulch and help to conserve moisture instead of acting as an insulating area which may under such conditions absorb too much moisture in rotting to be good for the vegetable crop.

The patch of ground selected for the garden should be measured and marked off in plats to receive a certain number of rows each, of vegetables to be grown. This work of marking off can be done on paper and the amount of each sort of seed to be planted may be determined by the likes and demands of the family as well as a consideration of the ability of some member of the family to can and preserve for later use. If this ability is not well developed it should, by all means, be acquired.

The table on this page is a record from the Kansas experiment station and under average conditions, may be safely followed. It will materially aid in determining the amounts required by the family for immediate use and for canning.

Where conditions are less favorable than the average, more space should be allowed. The main things to be observed are, to be sure and have enough—and a little over—and to have a succession of plantings. Successive plantings will insure a longer season for each vegetable.

The plan should call for some late vegetable to follow the earlier sorts, as,



DISPLAY MADE AT LEAVENWORTH COUNTY FALL FESTIVAL.—IN THIS COUNTY, AS RESULT OF CANNING CLUB ACTIVITIES, THOUSANDS OF CANS OF VEGETABLES ARE PUT UP FOR WINTER USE

tomatoes or late beans to follow early lettuce, radishes or peas. The ordinary, late summer weed patch seen in farm gardens where these earlier crops were grown may be avoided by having later crops to follow.

Now is a good time to secure seed catalogues, the sorts needed checked over and ordered by the first of the year, sufficient in quantity to plant all that will be required and to guard against possible loss of any one planting.

The plans should also call for 18" and 20" rows instead of the ordinary 30" rows found in farm gardens. The garden is much more easily and more surely cultivated with a wheel hoe than when the cultivation is left to the farm team.

A good wheel hoe may be secured for \$5.00 and may be ordered from any seed house along with the seed order, or may be had from almost any hardware dealer. Farm gardens are usually too large and when, because of harvest or hay-field demands, we fail to cultivate the ground the area is too large to weed with an ordinary hand hoe and a weed patch is the result.

Now is a good time to haul straw for mulching the potatoes and late season vegetables where mulching is practiced. In the wheat belt where the garden suffers for want of cultivation during harvest, a mulch if applied just before that time will do all cultivation can do—conserve moisture and keep down the weeds. This is more surely applied if it is piled alongside the garden. It is better yet if it has first been scratched over by the chickens. This will remove all wheat and weed seeds.

A little planning now will aid greatly in forcing the farm through the farm garden to contribute as much as possible toward the living of the family instead of drawing on the cash crop for all the groceries required by the family.

Maintaining Soil Fertility

The methods of farming generally practiced during the past fifty years in Kansas have not maintained the fertility of the soil. If we compare the yield of the common farm crops during the past twenty-five years with the yield of the first twenty-five years of this fifty-year period, it will be found that the yield of wheat has declined over 17 per cent, corn over 40 per cent, and oats 33 per cent. If anyone should doubt that the productive capacity of old cultivated fields is less than that of virgin soils, it is only necessary to plow up an old uncultivated fence row and compare the productiveness of this soil with that of the field itself to demonstrate the fact to the satisfaction of the most skeptical.

Better methods of farming must be followed in the future if the fertility of the soil is to be maintained. In order to work out practical cropping systems and methods of using barnyard manure, green manure and commercial fertilizers, an area consisting of 140 one-tenth acre plots is devoted to this work on the Kansas agricultural college farm. In this work corn and other crops have been grown continuously and in rotation. While the work has extended over a period of but six years, the effect of con-

tinuous cropping to corn in reducing the yield has been marked.

The yield last season—1915—on upland soil where corn had been cropped continuously for six years, was 53.7 bushels per acre. In a simple rotation of two crops of corn and one of wheat, the yield of corn was 63.9 bushels. In the same rotation, where cowpeas were sown after harvesting the wheat and plowed under in the fall before frost, the yield was increased to 70.2 bushels per acre. When barnyard manure was applied in this rotation at the rate of five tons to the acre on the second corn crop, the yield was 71.9 bushels. In a rotation consisting of corn, cowpeas, and wheat when the cowpeas were cut for hay, the yield of corn was 66.2 bushels. On a field that grew alfalfa four years and corn the next two seasons, the yield of corn was 70.3 bushels per acre. The results secured from rotating crops have thus been striking.

In other tests barnyard manure applied at the rate of two and one-half tons to the acre annually has been worth \$2.71 a ton and has increased the yield of alfalfa 85 per cent; applied at the rate of five tons annually, it has increased the yield 129 per cent and has been worth \$2.00 a ton. Barnyard manure applied on wheat as a top dressing in the winter has increased the yield of wheat 37 per cent and has been worth \$1.42 a ton.—L. E. CALL, Kansas Experiment Station.

Among the good Farm and Home meetings held in the state this fall, Nortonville is worthy of special mention. At no time during the two days' meetings did the attendance fall below one hundred. There were five out-of-town speakers present as well as considerable local talent. The most notable feature of the occasion was the co-operation between the merchants and the farmers, which culminated in a big free dinner on the second day, November 21, given by the Nortonville Commercial Club to the farmers in attendance at the institute. The young ladies of the community acted as waitresses.

Farm bureau work in Kansas counties is bringing about close co-operation between the farmers in many communities. I. N. Chapman, county agent in Leavenworth County, reports that in Reno Township a farm bureau community club has been formed at Six Corners by the members of the farm bureau of Reno Township. At a recent meeting of this club, eighty were present. The greatest problems in this particular district are how to drain the land subject to overflow and how to improve the soil. Definite steps are being taken to overcome the obstacles.

Kansas elected 151 women for county offices in the recent state election—58 county superintendents of instruction, 46 registers of deeds, 25 clerks of district courts, 15 county treasurers, five county clerks, and two probate judges.

VEGETABLE	Variety in order of production	Date of setting or planting	Amount of seed	Average price of seed	Depth of planting	Distance between rows	Distance apart in row	First picking	Last picking	Yield to 100 feet
Beans	Stringless Green Pod	May 10	1 pt. to 50 feet	1 qt., 30c.	2 to 3 inches	3 feet	6 inches	June 27	July 18	48 qts.
	Bush Lima	May 10	1 pt. to 50 feet	1 qt., 25c.	2 to 3 inches	3 feet	6 inches	June 27	July 18	46 qts.
Beets	Crosby's Egyptian	April 6	1 oz. to 50 feet	1 oz., 20c.	1/2 inch	12 to 18 in.	2 to 4 inches	June 11	Sept. 11	450 lbs.
Cabbage	Premium Flat Dutch	April 24	1 oz. to 1,500 plants	1 oz., 20c.	1/2 inch	3 feet	2 feet	June 27	July 21	41 heads, 54 lbs.
	Early Jersey Wakefield	April 24	1 oz. to 1,500 plants	1 oz., 30c.	1/2 inch	3 feet	2 feet	June 27	July 21	45 heads, 52 lbs.
Carrots	Early Chantenay	April 1	1 oz. to 100 feet	1 oz., 25c.	1/2 inch	14 to 18 in.	2 to 4 inches	July 20	Nov. 1	240 lbs.
	Half Long Danvers	April 1	1 oz. to 100 feet	1 oz., 25c.	1/2 inch	14 to 18 in.	3 to 5 inches	Aug. 10	Nov. 4	120 lbs.
Celery	Giant White Pascal	July 13	1 oz. to 3,000 plants	1 oz., 20c.	1/2 inch	3 to 4 feet	6 inches	Sept. 28		180 heads
	White Plume	July 13	1 oz. to 3,000 plants	1 oz., 20c.	1/2 inch	3 to 4 feet	5 inches	Sept. 15		220 heads
Cucumbers	Arlington White Spine	May 8	1 oz. to 50 hills	1 oz., 20c.	1/2 inch	4 to 6 feet	4 to 6 feet	July 25	Sept. 20	1799, 150 lbs.
Lettuce	Black Seeded Simpson	April 12	1 oz. to 150 feet	1 oz., 15c.	1/2 inch	14 inches	3 to 4 inches	May 28		264 lbs.
	Improved Hanson	April 12	1 oz. to 1,000 plants	1 oz., 15c.	1/2 inch	14 inches	3 to 4 inches	June 1		244 lbs.
Onions	Giant Gibraltar	April 12	1 oz. to 100 feet	1 oz., 15c.	1/2 inch	12 inches	3 to 4 inches	Aug. 22		28 lbs.
	Prizetaker	April 12	1 oz. to 100 feet	1 oz., 15c.	1/2 inch	12 inches	3 to 4 inches	Aug. 22		21 lbs.
Parsnips	Hollow Crown	April 12	1 oz. to 200 feet	1 oz., 15c.	1/2 to 1 inch	18 inches	2 to 4 inches		Oct. 9	56 lbs.
Peas	Nott's Excelsior	April 12	1 qt. to 100 feet	1 qt., 40c.	3 inches	3 to 3 1/2 feet	1 to 2 inches	June 8	July 19	21 lbs.
	Gradus	April 12	1 qt. to 100 feet	1 qt., 60c.	3 to 4 inches	3 1/2 feet	1 to 2 inches	June 8	July 19	20 lbs.
Radishes	Early Scarlet Turnip	March 22	1 oz. to 100 feet	1 oz., 10c.	1/2 to 1 inch	14 inches	1 to 2 inches	May 1	May 20	3077 roots
	White Strassburg	April 10	1 oz. to 100 feet	1 oz., 10c.	1/2 to 1 inch	14 inches	1 to 2 inches	May 20	June 1	2607 roots
Salsify	M. Sandwich Island	April 25	1 oz. to 70 feet	1 oz., 10c.	1/2 to 1 inch	18 inches	2 to 4 inches		Sept. 4	50 lbs.
Spinach	Victoria	March 25	1 oz. to 100 feet	1 oz., 10c.	1 to 2 inches	12 to 18 in.	2 inches	May 11	June 17	75 lbs.
Squash	Summer Crookneck	May 16	1 oz. to 20 hills, or 8 to 12 seeds per hill	1 oz., 15c.	1 to 2 inches	7 to 8 feet	7 to 8 feet	Aug. 7		13 squash, 39 lbs.
	Hubbard	June 20	12 seeds per hill	1 oz., 15c.	1 to 2 inches	10 to 12 feet	10 to 12 feet	Sept. 9		9 squash, 35 lbs.
Sweet Corn	Mammoth White Cory	April 20	1 qt. to 200 hills, or 1 qt. to 100 feet	1 qt., 25c.	2 inches	3 feet	2 1/2 to 3 feet	June 23	July 16	91 lbs.
	Stowell's Evergreen	April 20	1 qt. to 200 hills, or 1 qt. to 100 feet	1 qt., 30c.	2 inches	3 feet	2 1/2 to 3 feet	June 23	July 16	87 lbs.
Tomatoes	Earlana	May 12	1 oz. to 1,500 plants	1 oz., 30c.	1/2 to 1 inch	4 feet	4 feet	July 12	Sept. 18	420 lbs.
	Stone	May 12	1 oz. to 1,500 plants	1 oz., 25c.	1/2 to 1 inch	4 feet	4 feet	July 12	Sept. 18	405 lbs.
	Dwarf Champion	May 12	1 oz. to 1,500 plants	1 oz., 25c.	1/2 to 1 inch	4 feet	4 feet	July 12	Sept. 18	217 lbs.
	Trucker's Favorite	May 12	1 oz. to 1,500 plants	1 oz., 25c.	1/2 to 1 inch	4 feet	4 feet	July 12	Sept. 18	230 lbs.
Turnips	Early White Milan	July 3	1/2 oz. to 100 feet	1 oz., 10c.	1/2 to 1 inch	18 inches	6 inches	Aug. 15	Oct. 1	150 lbs.

GENERAL FARM INQUIRIES

Something For Every Farm—Overflow Items From Other Departments

A READER asks how to color white-wash red, green, or blue, and whether these colors will last.

The dry colors sold by dealers in paint can be used in coloring whitewash. There are quite a number of the standard shades of red, green, and blue, and we would suggest that our correspondent pick out the colors he wishes and use them as he would in coloring paint.

The lasting qualities of paint colors are so variable that we would not venture an opinion as to the permanence of these colors.

We would be glad to hear from any of our readers who have had experience in coloring whitewash.

Digging Cave

R. D. F., a Missouri reader of KANSAS FARMER, is planning to dig a cave and asks for suggestions. He wishes particularly to know how deep the dirt should be piled on top and how to keep it from slipping or washing down until he can get grass started to hold it in place.

We would suggest that the cave be dug deep enough so it will not have to rise very far above the level of the ground. Such cave will be cooler in summer and warmer in winter and thus serve its purpose better than one built largely above the ground. The best way to make a cave is to use concrete for the side walls, floor, and steps, and also arch over the top with concrete. If the cave is to be very large, it is a good plan to use some reinforcing in the arch. If enough dirt is taken out the slope of the part above ground can be made gradual enough to lessen the tendency to wash. It is always advisable to have the concrete entirely covered with soil. Dirt can be hauled from some other part of the farm for the purpose of lengthening the slope. A steep slope always causes trouble and it is harder to get grass started on it than on a gradual slope.

Treatment for Lumpy Jaw

G. F. K., of Saline County, writes that he bought a carload of young thrifty cows, September 10, and turned them into a forty-acre stubble field where they run until the frost killed the crab grass and other vegetation. He then began feeding alfalfa straw, alfalfa hay, and wheat straw. A few weeks ago some of them began to develop lumps on their cheeks. One heifer has quite a large lump just under her ear and several others smaller. In all, nine are affected. The lumps are loose in the hide and when opened a heavy thick pus is discharged. He has been treating them with a proprietary lumpy jaw remedy. Some of his neighbors say it is caused by feeding alfalfa straw and that the lumps will disappear if opened so the pus can get out. These young cows are eating well and seem to be thrifty. Two have dropped calves and all will calve soon. Our correspondent asks for advice and information on how to get rid of these lumps.

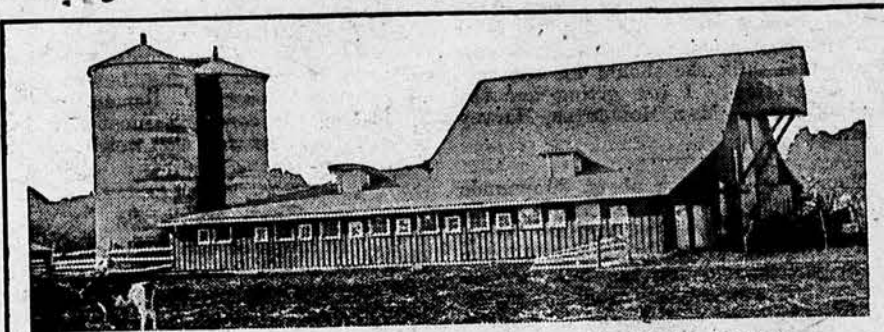
We submitted this question to Dr. R. R. Dykstra, of the agricultural college, and he states that he is satisfied the cattle are affected with lumpy jaw. The lumps are caused by a mould or fungus which is more common in certain fields than in others. The fields in which these heifers have been pastured are apparently badly infected with this fungus. It is a serious condition and should not be neglected.

The following from a circular by Doctor Dykstra suggests the treatment to be followed:

"The best line of treatment is to cut the growth out completely. This is easily accomplished when it is not firmly adherent to surrounding parts, or where it has not infiltrated neighboring structures. The wound thus produced should afterwards be washed out daily with a 2 per cent watery solution of carbolic acid.

"When the growth cannot be totally removed, it may be cut open, the pus washed out with a 2 per cent solution of carbolic acid and water, and the wound packed with a piece of cheese-cloth that has been saturated with tincture of iodine. The gauze may be left in position for twenty-four or forty-eight hours.

"In those cases where the growth can-



DAIRY BARN AND SILOS ON FARM OF W. B. STUBBS, SUMNER COUNTY.—CENTRAL PART USED FOR HAY STORAGE.—COW STALLS ON SIDES AND ACROSS ONE END.—FULLY EQUIPPED WITH FEED AND MANURE CARRIERS

not be cut out, or if it does not contain pus, but is hard, a large cattle trocar and canula may be passed into the most prominent part of the enlargement until the center is reached. The trocar is then withdrawn, a piece of trioxide of arsenic the size of a bean is forced into the canula and the latter withdrawn, leaving the arsenic in the tumor. In the course of from four to eight weeks the entire tumor drops out.

"When the tongue is affected, and in the early stages, several superficial incisions may be made in the surface, and afterwards painted with tincture of iodine.

"Finally, when the preceding forms of treatment cannot be carried out, the iodide of potash treatment may be adopted. It is as follows: Young animals should receive from one-half to one draw of iodide of potash in the drinking water daily. Adult animals should receive from two to three drams daily. This treatment should be continued from four to six weeks, or until the growth has disappeared. If, during this treatment, the eyes commence to water, with an excessive nasal discharge, skin eruptions, loss of hair, and emaciation, then the dose must be decreased or discontinued for a week. This treatment is successful in about 75 per cent of all cases treated. The milk should not be used during this treatment, nor when the udder is the seat of the trouble."

Cowpeas Before Alfalfa

N. G., Allen County, plans to seed some alfalfa next August and asks if he can plant cowpeas in the spring and get them off in time to seed the alfalfa.

We would not advise doing this. Cowpeas cannot be planted early in the spring for the reason that the soil must be thoroughly warm before they will germinate and grow. For this reason the cowpeas would be fully occupying the ground when the preparation work for the alfalfa seed bed should be going on. Even if the peas should be sufficiently mature to be harvested at the time the alfalfa should be seeded, the soil would be low in moisture and the alfalfa would not be likely to make a good start.

Oats might be seeded in the spring on ground that is to be seeded to alfalfa in August. Oats are ordinarily ready to be harvested by the first of July. If the land is plowed this fall, the disk could be used in preparing the stubble

for the alfalfa. The preparation should begin, however, as soon as the oats are harvested. If the weeds and grass are allowed to take the ground they will soon exhaust its moisture.

If it is unusually difficult to get a stand of alfalfa it would perhaps be a safer plan to spend the whole season getting the seed bed ready. Many farmers in Eastern Kansas who practice late summer or fall seeding of alfalfa, consider the securing of a good stand of too great importance to risk trying to grow any other crop preceding the sowing of alfalfa. They carefully cultivate the land during the summer as often as necessary to keep down weeds and when the time comes to sow, the seed bed is well stored with moisture and available plant food and is in a fine, mellow condition on top.

Wood Blocks for Stable Floor

C. J. R., Pottawatomie County, writes that he was much interested in a recent article in KANSAS FARMER telling how to lay cow stable floors of creosoted wood blocks. He asks for further information on the cost of such a floor, the size and thickness of the blocks used, and any other points that will enable him to figure on the advisability of using this type of floor.

The blocks commonly used for barn floors are two and one-half inches thick. They will cost in the neighborhood of \$1.60 to \$1.70 per square yard, depending on the distance from Kansas City. Where the concrete is already laid, the cost of a wood block floor will include the cost of the blocks, the work of laying them, and the filler, the work and filler amounting to about fifteen or twenty cents per square yard. A farmer can lay these blocks himself, as there is nothing difficult about this operation. It will thus cost approximately \$2 per square yard over and above the cost of an ordinary cement floor. There is about one and one-half square yards to each cow stall, so the cost per stall would not be high.

Feeding Stock Cows

M. S. M., Rice County, writes that he has a bunch of good grade Shorthorn cows that will drop calves about the first of January. He expects to let the calves run with the cows and wants them to have as good a chance as possible. For feed he has corn silage that does not contain much grain, an abundance of

wheat straw, and considerable first cutting alfalfa hay. He has a good shed. He asks whether or not he should feed some concentrates to these cows.

Ordinarily stock cows can be wintered in fine condition on alfalfa hay and silage without any concentrates. The fact that these cows are to drop their calves in the middle of the winter instead of in the spring, makes it necessary to feed them a little better during the winter than if they were not to calve until April or May. They should not be permitted to run down in flesh or they cannot produce vigorous calves and nourish them with a good flow of milk. A daily feed per cow of 25 or 30 pounds of silage, with all the alfalfa hay they will eat and free access to straw, should keep them in good condition up to calving time unless the alfalfa is poor in quality. If the cows are rather thin in flesh at the present time we believe it will pay to feed them a pound of cottonseed meal or cake daily per head. If there is not enough alfalfa so they can be fed all they will eat, it is more important that they have a concentrate rich in protein. It takes protein to properly develop the calf and to make milk. It would not be good policy to pinch the calves in the start. During the first few months of their lives they must depend almost entirely upon milk, and the only way to insure a good milk flow is to feed the cows a ration containing plenty of protein.

Rye for Silage

A. E., a California reader of KANSAS FARMER, asks if the silo is practical where corn cannot be grown, and whether or not rye will make good silage. If so, at what stage it should be cut for silage, and whether a ton of rye silage is equal in feeding value to a ton of corn silage.

Corn is generally considered the ideal silage crop, but there are a number of other crops that can be used. Rye for silage should be cut when the kernels are just past the milk stage. On account of its hollow stems it is important that unusual care be taken to tramp it thoroughly so as to expel all the air possible.

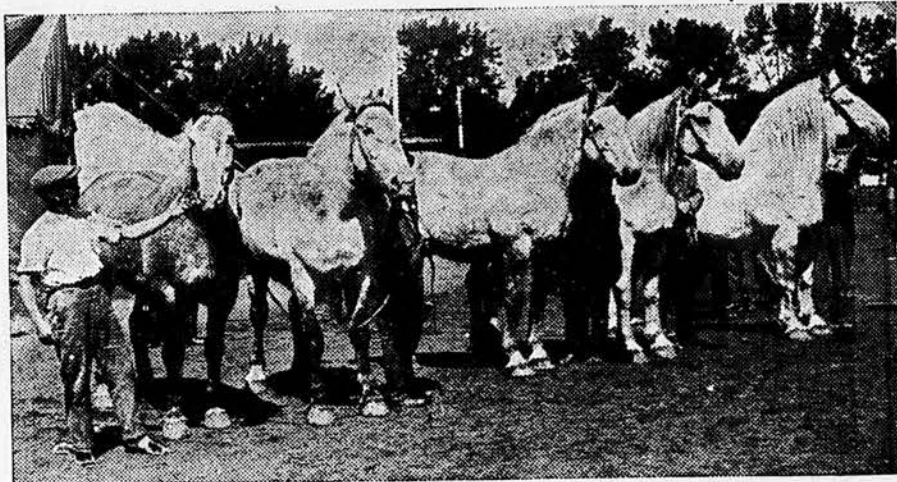
The Vermont Experiment Station has made tests of rye silage as compared with corn silage, and reports that it was less readily eaten by cows and produced 10 per cent less milk and butter. When cows were changed from corn to rye silage they shrank 20 per cent in milk. When changed from rye silage back to corn silage, they gained 2 per cent in milk production.

Water for Hogs.

Hogs, in common with all animals, require plenty of good, pure water to do their best. In winter there is always danger that the hogs will not get water enough, even on farms where water is abundant. Water, which is so necessary to the proper development of the hog, is about the cheapest thing that can be provided. In summer it is a much simpler matter to keep hogs supplied with water than it is in winter. In winter water freezes up in the troughs and the automatic watering devices freeze so they will not work. It requires considerable ingenuity to devise a scheme for keeping fresh, pure water before hogs in the winter, but it can be done. Automatic watering devices for winter use must have the float and valve placed in a tank or barrel that can be covered with manure or straw so that it cannot freeze and prevent the float working. The pipe leading to the fountain or vessel where the hog drinks must also be protected from freezing.

Water is so important to the animal body that a hog may be fed the best kind of a balanced ration and still make poor gains from lack of water. Water is one of the necessities that has not advanced in price, so this cannot be given as an excuse for neglecting to make proper provision for supplying it in abundance.

Farmers who use pure-bred sires receive about \$30 more for every \$100 worth of feed consumed by live stock than do those using grade sires, according to figures compiled by the farm management extension service of the University of Nebraska.



FIRST PRIZE GROUP, STALLION AND FOUR MARES—SHOWN AT TOPEKA FAIR BY J. R. ALBERT, MITCHELL COUNTY, KANSAS

Kansas Farmer Dairy Club

Asks Feeding Advice

I AM sending my cow's milk and feed record, hoping it will reach the KANSAS FARMER office by December 10. Do you think my cow is giving the amount of milk she should for the feed she is getting? I am giving her the best of care.—MAX HOLLISTER, Harvey County.

Your cow is giving about 30 pounds of milk daily. She is making a profit over the cost of the feed you are giving her. You are probably feeding all the grain you should for the milk she is giving. Of course your roughage ration of 10 pounds of alfalfa and 40 pounds of silage daily, is ideal for a roughage ration, but she would not keep up her milk flow unless you fed the grain in addition. The daily grain ration of 4 pounds chops, 4 pounds oats, and 1 pound of oil meal is a good, well balanced feed for milk production. In figuring how much grain to feed, dairymen ordinarily allow a pound of grain for each three or four pounds of milk the cow is giving daily, or a pound of grain daily for each pound of butter fat produced weekly. Since your cow is a grade Holstein she is probably using the grain you are giving her for milk instead of fat. The chief difference between cows bred for beef production and those bred for milk, is that the beef cow uses the surplus feed for laying on body weight, while the milk cow keeps lean even though getting a heavy grain ration. You are feeding your cow very close to the limit for grain, and should watch closely to see that she is not increasing in weight, which would indicate she had reached her capacity for milk production and is storing fat on her body.

Milk-Making Feed Necessary

My cow was to freshen October 15, but the owner made a mistake in the date for it was November 7. But she freshened November 8, which was the day after election, so I named the calf Woodrow Wilson.

I had quite a bit of trouble at first, as she had a caked udder. The veterinarian said this was because she was not milked before fresh. But she is all right now and is giving between 40 and 50 pounds of milk a day.

I sent a sample of milk to Manhattan before the fifteenth of November, but haven't received the test yet.

I am only feeding my cow roughage—alfalfa, corn and kafir fodder and straw.—HELEN BUCHENAN, Dickinson County.

You cannot expect to keep your cow up to 40 or 50 pounds of milk a day on roughage alone. Grain is very high in price, but you are also getting a good price for butter fat and cannot afford to let your cow fall off in milk production for lack of feed. It is all right to give her all the alfalfa hay, fodder and straw she will eat, but she has enough capacity for giving milk to make it pay to feed her some grain in addition. At present prices there is probably no better ration than corn, bran, oil meal or cottonseed meal, fed in the proportion of four parts corn, two parts bran, and

one part cottonseed meal, by weight. If the corn is ground you can mix these feeds together in a box. If you have to feed the corn without grinding you cannot mix it before feeding, but can feed it in this proportion. Remember that in feeding ear corn you must add one-fourth to allow for the weight of the cob.

Club Records

We are proud of our dairy club members this month for their promptness in sending in their records. Half of the records have reached this office before the tenth of the month and we know this number will be increased before the day is past, for there are several whose records are always on time who have not yet been heard from. But we need not worry about these for we know they will be here on time or else we will have letters telling why they are late.

If your November records are in, we want to thank you for your promptness in sending them. If you have not yet sent them, won't you please figure your butter fat right away and mail them to us today?

Remember, one of the biggest things in business is punctuality. And everyone can be punctual for it is entirely a matter of habit. It is as easy to form the habit of starting to school in time to reach there before the bell rings, as it is to wait until time for the bell to ring before starting from home. In fact it is easier by far, for the whole day's work is done more easily by reason of the good start. When you get into business for yourself—and all our dairy club members are now in business—it is easier, more pleasant and more profitable to do things at the time they should be done, than to put them off. If you do not have regular times for milking and feeding your cow, you will be the loser, for you will soon find that your cow will not be regular in the amount of milk she gives you. If you do not make your monthly payment on your cow promptly on the day the banker is expecting you to make it, and do not give him some good reason for not being able to make it, you will be the loser, for your banker will soon lose his confidence in you and your word will not mean anything to him. If for any reason you cannot make a payment, call on the banker in person, call him by phone, or write to him a day or two before payment is due, so that he may know at the time he is expecting it, why it is not in his hands. Keeping promises is one of the most important things in business. In fact, promises of any kind should be kept unless there is a good reason for not doing so. Then the explanation should be promptly made.

The Farm Boy Cavalier story referred to on this page, was left out, but you will find it in the Home Department in this issue.

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Cash Paid for Hides and Furs.

Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.

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Write today for a pair of Mated Everbearing Strawberry plants, one large packet each of the new Ceresal Fertilizer, Sudan Grass and Silk Leaf Fertilizer seed, all Free for Testing. Send 10 cents for mailing expense, or not, as you please. We offer genuine Progressive Everbearing plants at 50c per dozen; 90c for 50; \$1.75 for 100; \$5.00 for 225, all postpaid. CATALOGUE FREE.

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INVENT SOMETHING. It May Bring Wealth. Our Free Book tells What to Invent and How to Obtain a Patent through Our Credit System. **WATERS & CO.**, Succeeded by **WALBERT & PARKER**, 4517 Warder Building, Washington, D. C.



Roughing Cattle Through the Winter

VERY few cattle are being full fed this season. Those having cattle are interested in wintering them on rough feeds in the best manner possible.

"Roughing cattle" may mean either one of two methods of handling them. It may mean carrying cattle through the winter without shelter and allowing them to gain their livelihood from straw stacks and whatever they can pick up about the farm, or it may mean caring for them in a practical, economical and profitable manner without the use of grain. Where cattle are roughed through the winter by the first method there will usually be some losses and the stock will come out in the spring weighing less than they did in the fall. It will take them half the summer to get in a good, healthy, thrifty condition again. This method of roughing cattle through the winter never has proved profitable and never will. The second method implies the use of cheap shelter, which may be either a straw shed or a board shed open on one end, also the use of suitable rough feeds, such as corn or kafir fodder, silage, cane hay, prairie hay, clover or alfalfa hay, and oat or wheat straw. In most localities this winter there is an abundance of rough feed of one or more of the above varieties.

For roughing cattle through the winter the best possible combination of feeds is silage and alfalfa hay. Many have not as yet accepted this fact. There are too few farms where silage and alfalfa hay both are to be found in sufficient quantity to winter any large number of cattle. A fairly roomy shed that is kept well bedded with straw, a suitable water supply, and an abundance of alfalfa hay and silage, make ideal conditions for wintering a bunch of yearling or two-year-old steers or heifers or a bunch of breeding beef cows. On farms where the silo has not yet been built and the alfalfa field has not been started, the fodder and other rough feeds can be used, but along with these feeds a pound a day of cottonseed cake or oil meal should be fed to give the best results.

In order that a beef herd may prove profitable it is necessary that all the young cattle shall gain a little in winter and come out in the spring in a good thrifty condition so that they will begin to gain at once when put on pasture. To accomplish this and get the desired result the young cattle especially must have suitable shelter, though it need not be expensive, and they must be regularly and carefully watered and regularly fed an abundance of feed even though the feed is not of the best quality.

Pork from High Priced Feeds

When grain is very high in price we generally try to use it as economically as possible. This does not necessarily mean to feed scant rations. It is never profitable to feed corn alone to hogs, but at present prices for corn it is especially important that it be balanced with some feed rich in protein.

L. A. Weaver, of the Missouri Experiment Station, has the following to say of tankage, one of the most important protein supplements fed to hogs:

"Tankage has perhaps received more attention by experiment stations and by practical feeders during the last few years than any other protein supplement. Its composition makes it almost an ideal supplement to corn for hog feeding. The high protein content, derived from an animal source, along with a high mineral or ash content makes it particularly valuable when fed with corn, which is noticeably lacking in these nutrients. It would be impossible to discuss here in detail the enormous amount of experimental data upon this subject since most of the state experiment stations, including the Missouri station, have published the results of trials made with tankage. The data reported, however, shows that tankage is in every way one of the best supplements to corn for hog feeding.

"Experimental work shows that better results are obtained with the breeding herd when some tankage or meat meal is added to a corn ration. Not only are more pigs farrowed per litter, but those farrowed are stronger. It has been found for example that gilts fed corn alone

farrowed an average of 7.6 pigs per litter as compared with an average of 8.5 farrowed by the gilts fed a ration of corn 10 parts, tankage or meat meal 1 part. Sixty-eight per cent of the former were strong as compared with 98 per cent of the latter.

"Not only does the addition of some feed like tankage increase the efficiency of the breeding herd, but it also materially decreases the time required to get the pig to a marketable weight. This is shown in a list at the Missouri Agricultural Experiment Station where one lot of hogs for 120 days on a ration of corn 10 parts, tankage 1 part, gained on the average 1.15 pounds per head per day, while a similar lot fed on corn alone gained only 1.11 pounds. This would indicate that it would require about a month longer to make a 100-pound shoat weigh 250 pounds, if corn alone was used as the ration than when a ration of corn and tankage was used. In the trial mentioned above it required 436.4 pounds of corn plus 43.6 pounds of tankage to produce 100 pounds gain on the one hand as compared with 580 pounds of corn where corn alone was used. These results are reported in Missouri Bulletin 136, which may be obtained by writing to the director of the Missouri Agricultural Experiment Station at Columbia, Mo."

Trend of Beef Cattle Values

The records show that public sales of beef cattle in the fall usually result in somewhat lower prices than in the spring and late winter season. Yet it would appear from the public sales held so far this season that Shorthorn values will hold to a higher level than during the spring sale season. The fact that the present season is an exception so far as the breed is concerned, indicates an increasing demand.

The sale of imported Shorthorns, held at Chicago November 1 by Carpenter & Ross of Ohio, resulted in an average of \$911 on 72 head, all of the calves with two exceptions being sold separate from their dams. Had they been sold together, as is the prevailing custom, the average would have been considerably higher. The cattle were widely distributed, going into eleven central states.

It was in the Anoka Farms sale in Wisconsin that the most positive evidence of demand for Shorthorn seed stock was manifested. The year's calf crop, 40 odd head in number, sold for an average of \$1,016. At the opening of the sale, ten of the most desirable were displayed in the ring, and when sold the average on these ten stood at \$1,900 per head. The Anoka Farms' exhibit in the get-of-sire class in the leading shows was included in this sale and the quartet sold for an average of approximately \$2,400 each.

At the joint McDermott, Weaver & Garden sale at Chicago an average of \$677 was made.

It is a significant fact that in these sales no efforts were made to create unusual enthusiasm. The bidding represented the sober judgment of the farmers and breeders, and the settlements were practically all made in cash. The purchases were made for foundation breeding material and the discrimination in these selections clearly indicates the broad purpose of breeders in all sections to improve the standards of their herds in keeping with the general tendency toward higher achievement in American live stock husbandry. — FRANK D. TOMSON.



To condition and fatten

old thin horses and cattle we recommend feeding a small amount of our Blue Bag Brand Medicated Salt. It improves appetite and digestion quickly. See page 1539 in big General Catalog.

Sears, Roebuck and Co., Chicago.

Oil Tests

Their Relation to Correct Lubrication

Several years ago a prominent engineer invented a machine to determine the comparative efficiency of lubricating oils. But one day it was found that crude kerosene oil, by this machine's test, was the best lubricant.



That, of course, was ridiculous on the face of it.

This will indicate the difficulties which science has always met in trying to judge on oil's efficiency by anything but the practical tests of use.

Nevertheless, during manufacture, certain scientific tests are essential.

Gargoyle lubricants, whether intended for steam engine use, gas engine use, or use on other friction surfaces, are all put through many such scientific tests.

For example: Each batch of Gargoyle Mobiloils which goes on the market, is put through at least 35 separate and distinct tests.

These tests are not aimed to get at the efficiency of the oil. The oil's efficiency had to be arrived at by long experiment in practical use.

The scientific laboratory tests simply make

sure that the oil is running uniform—that every lot manufactured is up to the proven standard.

A great difference in efficiency may exist between oils which look alike and test alike. To cope with this puzzling condition, the Vacuum Oil Company has for years maintained thoroughly equipped laboratories and engineering departments in many parts of the world.

In recommending a Gargoyle lubricant for a given purpose, we first analyze the operating conditions, to be met, then specify the lubricant which is known, from practical experience, to meet the conditions most efficiently.

With Gargoyle Mobiloils this situation is met by a lubrication Chart which is shown in part on this page. The oils specified for the various cars in this Chart are determined annually by a careful engineering analysis of each model and make of car.

The recommendations are based on 50 years of practical experience in lubrication. The formulae and methods used in manufacturing these oils are based on almost numberless practical tests. You may safely feel that the oil specified for your car in this Chart will ensure

Greater Power; Less Friction; Less Carbon; Lower Consumption of Lubricating Oil; Lower Consumption of Gasoline; Minimum Repairs; Longer Life of Your Car.

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container. For information, kindly address any inquiry to our nearest office.



CORRECT AUTOMOBILE LUBRICATION

Explanation: The four grades of Gargoyle Mobiloils, for gasoline motor lubrication, purified to remove free carbon, are:

Gargoyle Mobiloil "A"
Gargoyle Mobiloil "B"

Gargoyle Mobiloil "E"
Gargoyle Mobiloil "Arctic"

In the Chart below, the letter opposite the car indicates the grade of Gargoyle Mobiloil that should be used. For example, "A" means Gargoyle Mobiloil "A," "Arc" means Gargoyle Mobiloil "Arctic," etc. The recommendations cover all models of both pleasure and commercial vehicles unless otherwise noted.

MODEL OF CAR	1916	1915	1914	1913	1912
Abbott Detroit (8 cyl.)	A	A	A	A	A
Apperson (8 cyl.)	A	A	A	A	A
Auburn (8 cyl.)	A	A	A	A	A
Albion (8 cyl.)	A	A	A	A	A
Avery (Mod. 5 & 6 Cyl.)	A	A	A	A	A
Briscoe (8 cyl.)	A	A	A	A	A
Buick (8 cyl.)	A	A	A	A	A
Cadillac (8 cyl.)	A	A	A	A	A
Chevrolet (Mod. 6-40)	A	A	A	A	A
Chrysler (Mod. 6-30)	A	A	A	A	A
Clairemont (8 cyl.)	A	A	A	A	A
Columbia (8 cyl.)	A	A	A	A	A
Cord (8 cyl.)	A	A	A	A	A
Crossley (8 cyl.)	A	A	A	A	A
Dodge (8 cyl.)	A	A	A	A	A
Empire (8 cyl.)	A	A	A	A	A
Federal (8 cyl.)	A	A	A	A	A
Ford (8 cyl.)	A	A	A	A	A
Franklin (8 cyl.)	A	A	A	A	A
Grant (8 cyl.)	A	A	A	A	A
Haynes (12 cyl.)	A	A	A	A	A
Hudson (Super Six)	A	A	A	A	A
Hupmobile (8 cyl.)	A	A	A	A	A
International (8 cyl.)	A	A	A	A	A
Jackson (8 cyl.)	A	A	A	A	A
Jeffery (8 cyl.)	A	A	A	A	A
Kearney (8 cyl.)	A	A	A	A	A
Knickerbocker (8 cyl.)	A	A	A	A	A
Laurel (8 cyl.)	A	A	A	A	A
Lincoln (8 cyl.)	A	A	A	A	A
Marquette (8 cyl.)	A	A	A	A	A
Maxwell (8 cyl.)	A	A	A	A	A
Mercer (8 cyl.)	A	A	A	A	A
Mitchell (8 cyl.)	A	A	A	A	A
Moline (8 cyl.)	A	A	A	A	A
National (12 cyl.)	A	A	A	A	A
Oakland (8 cyl.)	A	A	A	A	A
Oldsmobile (8 cyl.)	A	A	A	A	A
Overland (8 cyl.)	A	A	A	A	A
Packard (12 cyl.)	A	A	A	A	A
Pontiac (8 cyl.)	A	A	A	A	A
Reo (8 cyl.)	A	A	A	A	A
Regal (8 cyl.)	A	A	A	A	A
Reo (8 cyl.)	A	A	A	A	A
Stearns (8 cyl.)	A	A	A	A	A
Stearns Knight (8 cyl.)	A	A	A	A	A
Studebaker (8 cyl.)	A	A	A	A	A
Stutz (8 cyl.)	A	A	A	A	A
Valley (8 cyl.)	A	A	A	A	A
White (8 cyl.)	A	A	A	A	A
Willys Knight (8 cyl.)	A	A	A	A	A
Winton (8 cyl.)	A	A	A	A	A

YOUR TRACTOR

also may be lubricated efficiently with Gargoyle Mobiloils. On request we will mail you a separate Chart specifying the correct grade for each make and model of tractor.

VACUUM OIL COMPANY, Rochester, N. Y., U.S.A.

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

Domestic Branches:

Detroit
Chicago
New York

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Philadelphia
Pittsburgh

Minneapolis
Boston
Kansas City, Kan.

FERTILE KANSAS LAND CHEAP

Those who located in Central Kansas 20 years ago are the big farmers today. Their land has made them independent.

Your chance now is in the five Southwestern Kansas counties adjacent to the Santa Fe's new line, where good land is still cheap.

With railroad facilities this country is developing fast. Farmers are making good profits on small investments. It is the place today for the man of moderate means.

Wheat, oats, barley, speltz, kaffir and broom corn, milo and feterita grow abundantly in the Southwest counties referred to. Chickens, hogs, dairy cows and beef cattle increase your profits.

You can get 160 acres for \$200 to \$300 down, and no further payment on principal for two years, then balance one-eighth of purchase price annually, interest only 6 per cent—price \$10 to \$15 an acre.

Write for our book of letters from farmers who are making good there now, also illustrated folder with particulars of our easy-purchase contract. Address

E. T. Cartledge,

Santa Fe Land Improvement Co.,
1892 Santa Fe Bldg., Topeka, Kansas.

HOTEL KUPPER

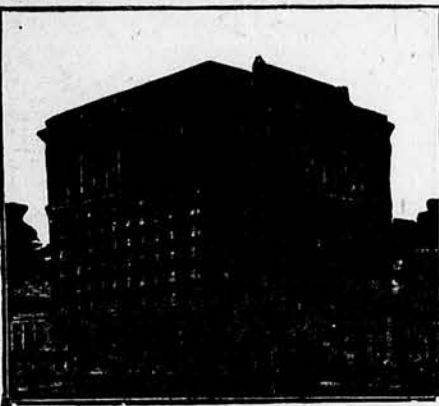
KANSAS CITY, U. S. A.



Located in the center of the shopping district, convenient to car lines, stores, and all points of interest.

The hotel of quality, comfort and refinement. European Plan, \$1.00 to \$2.50 per Day.

Cafe in Connection.
ROBINSON-MARS HOTEL CO., PROPS.
Eleventh and McGee Streets



Meet Me at the TULLER For Value, Service, Home Comforts

HOTEL TULLER

DETROIT, MICHIGAN
Center of business on Grand Circus Park.
Take Woodward car, get off at Adams Avenue.

ABSOLUTELY FIREPROOF
200 Rooms, Private Bath, \$1.50 Single, \$2.50 Up Double.
200 Rooms, Private Bath, \$2.00 Single, \$3.00 Up Double.
100 Rooms, Private Bath, \$2.50 Single, \$4.00 Up Double.
100 Rooms, Private Bath, \$3.00 to \$5.00 Single, \$4.50 Up Double.

TOTAL, 600 OUTSIDE ROOMS
All Absolutely Quiet
Two Floors—Agents' New Unique Cafes and Sample Rooms Cabaret Excellence

Please Mention Kansas Farmer When Writing to Advertisers.

MONEY IN TURKEYS

JUST before Thanksgiving Mrs. C. H. Wickham, of Harper County, sold 87 turkeys to the Harper Produce Company. Her check for the sale, says the Anthony Bulletin, was \$226.07, the biggest check ever given by this firm for turkeys, and the biggest ever given in the county. The amount received by Mrs. Wickham represents a profit, and she has twenty turkeys still unsold. There was practically no expense in raising and caring for the flock. Not only so, but for her it was a pleasant pastime. She thoroughly enjoyed seeing them grow, seeing them about the farm, seeing them walking with stately dignity in field and feed lot. She made pets of them and so brought them to perfection as people do who love the work.

Mrs. Wickham understands raising turkeys and her loss from disease is small. She has made a study of the diseases of these birds and because of this knowledge can give the proper treatment if any of the diseases appear. This year her loss of the flock was only from coyotes and she found a way to keep these animals from slaughtering her brood. To the necks of her turkeys she attached little bells and the tinkling of these bells scared the coyotes so that they tucked their tails and went away to deplore the fact of the discovering of the new life-saving device.

Of course Mr. Wickham insists that he had a hand in the matter. He claims that Mrs. Wickham had all the pleasure and gets all the profit while he did whatever hard work there was in feeding and watching them and getting them ready for market and taking them to market. But he makes this claim with somewhat of a twinkle in his eyes and in a manner which indicates his pride in the success of his wife in this matter of raising and selling turkeys.

We are sure there are other women who may profit by this bit of business done by Mrs. Wickham and who can, if they will, find profit in raising turkeys as she has done.

Better Care for Farm Flock

Few farms are properly equipped for raising and handling poultry and yet the women and girls on these farms market many dozens of eggs and raise and sell much poultry. If the farm hens could be provided with good scratching sheds and warm houses they would lay much better in the winter. On many farms the hens stand around in the snow and mud and shiver when they should be

scratching and singing in a dry, warm shed. Often this cannot be entirely prevented, but the farm hens could be made to fare better with a very little effort in providing better conditions.

On most farms the chickens are raised in small boxes and from these boxes they go to the trees to roost. When fall comes they must be taught to go to the hen houses, otherwise they will stay in the trees and freeze when the cold weather comes. Perhaps the house may be old and poor, but it can be patched so the cold and snow will not blow through. A poultry netting door should be placed in the south side so the hens can be shut in each evening. It does not require much work to keep the house clean, and it will pay.

Hens do not freeze their combs as often while on the roost at night as they do in the morning after they leave the house. If the house is so planned that they have fresh air, light and sun, they do not need to be let out so early in the morning.

The things suggested do not call for much work, but the hens will pay well for these little helps.—LYDIA SMYER, Cherokee County.

White Langshan Question

A 16-year-old boy who lives in Clark County, writes to ask why White Langshans are not exhibited more at the fall fairs and poultry shows, and why there are not more breeders of this variety.

Perhaps some of our breeders of White Langshans can supply some information on this subject.

Our correspondent also asks if it would pay him to take a course in poultry work. The Kansas Agricultural College has a strong poultry department and gives very valuable instruction in the growing and handling of poultry. The poultry farm at the agricultural college occupies eight acres and is fully equipped with different types of incubators, brooders, houses and runs, and with flocks of the leading varieties of poultry. A summer course in farm poultry production is given as well as the regular courses through the college year. A card addressed to the Kansas Agricultural College, Manhattan, will bring full information about the work given.

Scaly legs is a troublesome and loathsome disease and is contagious. A mixture of kerosene oil, lard, and carbolic acid rubbed on the legs will soon cure this trouble.

Rainfall Over Kansas, for November

Reports Furnished by S. D. Flora, Observer, U. S. Weather Bureau.

0.34	0.33	0.11	0.10	0.05	0.04	0.04	0.62	0.43	1.00	2.98	2.78	3.11
0.11	0.33	0.17	0.10	0.05	0.04	0.04	0.62	0.43	1.00	2.98	2.78	3.11
0.10	0.21	No	No	0.40	0.10	0.19	0.77	0.43	1.00	2.98	2.78	3.11
0.05	0.07	0.07	0.02	0.04	0.04	0.09	0.25	0.40	1.00	2.98	2.78	3.11
0.10	0.20	0.29	0.04	0.06	0.02	0.09	0.25	0.40	1.00	2.98	2.78	3.11
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.29	0.06	0.10	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
No	No	No	No	No	No	No	No	No	No	No	No	No
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05

THERE was an abundance of moisture in the eastern half of Kansas this month, but severe dry weather was general in the western counties, where it was the fourth driest November on record and, together with September and October preceding, makes the fall of 1910 one of the driest ever experienced in that part of the state.

It was a fine month for outdoor work of all kinds and wheat grew well in the eastern counties, but in the western half of the state it was greatly retarded by the dry weather and frozen to the ground by the cold wave of the fourteenth so that it was short and of little value for pasture when the month closed. Reports generally indicated, however, that it was in healthy condition and needed only a good rain or heavy snow to start it growing again.

Did You Have Good Luck

With Your Chicks?

"Luck" with chicks starts with the incubator. If it is properly heated, properly regulated, and properly ventilated, your chicks will start off with vitality. They won't come out of the shell half dead. So many people trust their eggs to a cheap machine, forgetting that it is not only how many you hatch that counts, but how many live and grow.

Start Your Chicks With a Queen Constitution

The Queen has a reputation for hatching strong, healthy chicks. It is built of genuine Redwood—very scarce in these days of cheap substitutes. Redwood does not absorb odors from the hatching eggs. Cheaper woods, and pasteboard lining in iron and tin machines, retain the odors to weaken and kill the hatching chicks.

Queen incubators are not cheap, but they are built to hatch big hatches of chicks that live. Book sent free. Queen Incubator Co., 1101 N. 14th St., Lincoln, Nebr.

SELF-OILING WINDMILL

WITH INCLOSED MOTOR

Keeping OUT DUST and RAIN—Keeping IN OIL

SPLASH OILING SYSTEM

Constantly Flooding Every Bearing With Oil

DOUBLE BEARS—Each Carrying Half the Load

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Route From House to Barn

WE ARE beginning to learn the value of permanent walks on the farm, starting at the front gate and extending to and beyond the farmhouse, to orchard, truck garden, barn and outlying buildings, to which trips afoot are necessarily frequent.

The concrete walk is the modern substitute for the old plank walk, or cinder path which first extended from the front gate to the front porch and after sneaking around the side of the house vanished into a single strip of board laid on the ground or a series of stepping-stones over which you managed to pick your way in wet weather and stumble over in dry weather. The old walk scarcely ever went as far as the barn and if it did it stopped at the barn lot gate. As a conveyor of mud and barnyard filth to the back door of the house and inside of it, the old walk was an unqualified success.

Concrete for walks where the work is one-course construction, should be a 1:2:3 mixture, although if care is used to select well graded sand and pebbles, a 1:2:4 mixture will accomplish the purpose. Sand should range from fine to 1/4-inch with the coarser particles predominating, while pebbles should range from 1/2 to 1 or 1 1/2 inches. Both sand and pebbles should be clean and free from clay or other foreign matter. A 1:2:3 mixture means 1 sack of Portland cement to 2 cubic feet of sand and 3 cubic feet of pebbles or broken stone.

Many persons have the impression that when definite proportions of sand and pebbles are specified, the same results can be secured by substituting for them an equal bulk of bank-run material; that is, sand and pebbles as found combined in the ordinary gravel pit. This is incorrect, since the volume of air spaces (voids) in a bank-run material requires more cement for filling than would be used with a properly proportioned mixture of cement, sand and pebbles. Bank-run gravel should never be used for concrete work until screened, so that the fine and coarse particles can be correctly re-proportioned.

Consideration must be given to the character of the soil upon which the walk is to be laid and sometimes a sub-base or special foundation is necessary. So far as possible, a concrete walk should be built where drainage will be good, but if this cannot be done, a sub-base must be built by compacting clean gravel or cinders, then side drains should be laid to lead water away from this sub-base.

Where there is not much heaving of soil because of the fact that it is loose and well drained, slabs for farm walks need not be thicker than 4 inches, but 5 inches is better. In no case should individual slabs exceed 5 feet in any one dimension. Forms in which to place the concrete should be provided, the course of the walk first being marked with strings stretched from stakes. Then the sod is removed, loose soil dug out and the foundation compacted. Usually 2 x 4's well staked in position will serve as forms. One-inch lumber is sometimes used, but unless well staked, the placing of concrete will often make such light forms bulge out of line, thus affecting the appearance of the finished walk. If the walk is to be 5 inches thick, then 2 x 5's should be used for forms so that the concrete will be placed to the required thickness.

For most if not all farm walks, one-course construction will be found best. This can be floated readily with a wood hand float to the desired surface finish, if pebbles no larger than 1/2 to 1 inch are used when proportioning the concrete mixture.

Use of Windmills

Windmills have long been used as a means of furnishing the power for pumping water. There is plenty of this kind of power in Kansas and the windmill is a means of harnessing it so it can be utilized for such work as pumping water for live stock, irrigating the garden, or perhaps keeping a storage tank in the house filled.

The question is frequently raised as to which of the many windmills on the

market will give the best results for the amount of the investment. This question is as impossible to answer as to state which is the best breed of cattle or horses. The type of windmill to select is largely a matter of the requirements in each particular case.

On some farms it is necessary to use an engine-driven pump, as wind power would prove insufficient to supply the amount of water needed. Some mills give good results in shallow wells, while others will work favorably in deep wells where the water must be raised to a considerable height. Some require considerable care while others will run for years without adjustment; some cost high prices while others are reasonably inexpensive. All of these points should be taken into consideration and be carefully investigated by one who intends to install a new windmill. No single mill has all the good points in its favor.

Wheat, Farmer to Consumer

The increase in the value of wheat through the manufacturing process is shown in a bulletin recently published by the North Dakota Experiment Station. In summarizing the results of this bulletin it is shown that a carload of No. 1 Northern, for which the farmer received \$1,526.75 October 14, was worth \$1,607.34 in Minneapolis, and produced mill products worth \$2,034.88 wholesale, and \$2,558.47 retail. A carload of Feed D grade wheat which brought the farmer \$653.01 October 14, was worth \$992.06 in Minneapolis, and when milled the products were worth \$1,660.15 wholesale, and \$2,107.03 retail.

This bulletin shows that the per cent increase in value of the mill products over the cost of the wheat October 14, varied from 21.4 per cent on No. 1 Northern, to 111.9 per cent on the Feed D wheat.

This remarkable increase in the value of low grade wheat through the milling process would suggest that a much larger proportion of this wheat goes into first grade products than the milling interests are willing to admit.

Sudan grass has been investigated by J. E. Payne, agricultural agent for the Frisco Railroad. He finds that the good results from trials in 1914 and 1915 made it a temporary favorite. The season of 1916 has been hard on all feed crops in Southwest Oklahoma. Drouth and chinch bugs have damaged all feed crops badly and the Sudan grass has suffered with the rest. But some farmers have reported profits from Sudan grass in 1916. Although the yields are much lower than they were in 1915, when they are compared with the yields of other forage crops this year Sudan grass must still be counted as a candidate for a prominent place among our annual forage crops.

A good pedigree with a good individual is usually worth all it costs in the buying of breeding animals. This is the opinion of the greatest authorities on live stock breeding. The price paid is not for the individual only, but for thought, care and management. A single pedigree with some breeds of cattle, for instance, represents the combined results of care, selection and union of suitable types for many generations and shows the handiwork of several generations of men.



On page 1440

of our big new General Catalog is shown the best power feed grinder we have ever seen. Priced far below competition and guaranteed satisfactory in every particular.

Sears, Roebuck and Co., Chicago.

WHY PAY MORE?

FOR A SEPARATOR NO BETTER THAN THIS

SAVE HALF ON A HIGH CLASS SEPARATOR
Where other separators are good the New Galloway Sanitary is as good or better. Where the others are wrong the New Galloway Sanitary is right—absolutely right! You can get more separator for less money—more genuine, honest, high-grade material and workmanship built into this high quality, beautifully finished, 1917 designed separator than can be found anywhere! I say this advisedly and mean it.

THE GALLOWAY SANITARY

Must Sell Itself to You
I just want you to try it! If you like it, buy it! If you don't, send it back. We pay freight both ways. If the New Galloway Sanitary is as good as I say it is you can't afford to buy any other kind. If it is not as good as I say it is—I could not afford to make this 90-day trial offer—I couldn't afford to guarantee it for ten years—not to back it with a

\$25,000 LEGAL GUARANTY BANK BOND

You save money when you buy this 1917 model Galloway Sanitary Cream Separator. You make money when you use it. Some separators are sold for less money—but there is a reason.

4 New 1917 Selling Plans EITHER CASH OR TIME

Buy on a plan to suit your purse. 1—Cash with order. 2—Bank Deposit. Deposit the price with your own banker while you are trying the separator. 3—All note settlement—to accommodate our customers who are not ready to pay cash at the time they need the separator. 4—Pay in installments, which gives you a chance to pay for the separator with monthly cream checks and the extra profits that the separator will make you.

BUY DIRECT FROM MY FACTORY

Don't get fooled on separators only assembled by so-called manufacturers and priced at figures you positively know a satisfactory sanitary cream separator can not be built for. Stand the Galloway side by side with cheaper machines and you'll see the difference in material, workmanship, true down to date design and skimming qualities. Stand it beside the highest priced machine. Test them side by side for months. Higher priced machines will not run any easier nor skim any closer—can't be more perfectly sanitary nor better built!

TRY A GALLOWAY SANITARY FOR 90 DAYS

Remember we took four years to design and perfect this separator—to build into it every good cream separator feature and retain it in beautiful proportions. It has not been built down to a price, but built up to a high standard in our own factories right here in Waterloo, Iowa. We do not demand fabulous prices for Galloway separators bought on the installment plan. Before buying elsewhere on this plan, be sure to read, at least, that part of my book about separators.

ASK FOR THIS FREE BOOK

I WANT YOU TO HAVE THIS BOOK. It tells how we build Galloway Sanitary Separators from the ground up. How they are designed—the story of how we perfected this wonderful separator—and many other separator secrets and facts. Chock full of dairy wisdom—a meaty, exact, concise book about cream separators and how they are built. Why by selling direct I can make a machine as good or better than many high-priced separators sold through the three and four profit system. That's why I want you to get this book about separators. It tells the whole story—it tells the truth—it tells the facts—it will settle separator questions for you.

WM. GALLOWAY, Pres., WM. GALLOWAY CO., 213 Galloway St., WATERLOO, IOWA
Cream Separator Mfg. Specialists

New KEROSENE LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle, beats electric, gas, or kerosene. Lights and is put out like old oil lamp. Tests by U. S. Government and 34 leading Universities show that it

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common kerosene (coal oil), no odor, smoke or noise, simple, clean, won't explode. Three million people already enjoying this powerful, white, steady light, nearest to sunlight. Won Gold Medal at Panama Exposition. Greatest invention of the age. Guaranteed.

\$1000 Reward will be given to the person who shows us an oil lamp equal to the new Aladdin in every way (details of offer given in our circular). We want one user in each locality to whom we can refer customers. Yours. To that person we have a special introductory offer to make. FREE under which one lamp is given free. Write quick for our 10-Day FREE Absolutely Free Trial Proposition and learn how to get one free. FREE

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Largest Kerosene (Coal Oil) Mantle Lamp House in the World

Men With Rice Make \$100 to \$300 Per Mo.
Our trial delivery plan makes it easy. No previous experience necessary. Practically every day home and small town boys will buy after they see it. One farmer who had never sold anything in his life before writes: "I sold 61 of the first seven days." Christensen, Wis., says: "I have never seen an article that sells so easily." Worthing, Iowa, says: "99 per cent of homes visited bought." Phillips, Ohio, says: "Every customer becomes a friend and buyer." Kemerling, Minn., says: "No money talk necessary. Selling Aladdin is the only money-making business in the world." ROBERT H. KEMERLING. We furnish stock to reliable men to get started. Ask for our distributor's plan, and learn how to secure an appointment and make big money in unoccupied territory. (State occupation, age, whether you have rig or auto; whether can work spare time or steady; when can start; townships most convenient for you to work.)

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Illustrations of latest designs, new improvements, prices and save money. Write Today. 30 days' trial, 90 days' approval test. Cash or Credit. \$100.00 Guarantee. We pay freight and ship within 24 hours. Ask for Catalog No. 189.

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Stoves, Ranges, Gas Ranges, Furnaces,
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ADVERTISING PAGE FOR READY BARGAINS

Classified Advertising

HELP WANTED.

WANTED—LIVE AGENTS AT ONCE. Excellent terms. Falls City Nursery, Falls City, Nebraska.

BE A GOVERNMENT FARMER. GOOD pay; steady, interesting job. Write Central Institute, 44-F, St. Louis.

THOUSANDS U. S. GOVERNMENT JOBS now open to farmers, men and women. \$65 to \$150 monthly. Write immediately for list positions easily obtained. Franklin Institute, Dept. 8-82, Rochester, N. Y.

MAN OR WOMAN TO TRAVEL FOR old established firm. No canvassing; \$1,170 first year, payable weekly, pursuant to contract. Expenses advanced. G. G. Nichols, Philadelphia, Pa., Pepper Bldg.

WANTED—A FARMER WITH CAPITAL. Agricultural college graduate preferred, to purchase an interest in a large sanitary milk farm in the East. Farm now supports one hundred cows. Person would be expected to take entire charge of the farm. Address Box 558, Oswego, Kansas.

TO FORD OWNERS

STOP FOULING OF SPARK PLUGS AND pumping of oil by attaching a White's Oil Distributor to your Ford. Saves its cost in thirty days in oil alone. Price \$3 prepaid or sent collect on delivery if you write your name on a postal. Evapco Manufacturing Company, 416 Grand River Ave., Detroit, Mich.

CATTLE.

CAN SPARE SOME NICELY MARKED well bred springing two-year-old grade Holstein heifers; also a few fresh cows. Glenn C. Smith, Sedgwick, Kansas.

FOR SALE—AN EXCELLENT REGISTERED Shorthorn bull, of serviceable age. Red in color. C. W. Merriam, Columbian Building, Topeka, Kansas.

HIGHLY BREED HOLSTEIN CALVES, either sex, 15-16ths pure, crated and delivered to any station by express, charges all paid, for \$20 apiece. Frank M. Hawes, Whitewater, Wis.

FIVE HOLSTEIN HEIFER CALVES, 15-16ths pure-bred, well marked, at \$20 each. Two registered Holstein bulls, one six weeks old, at \$40; one five months old at \$55; crated for shipment anywhere. Write Minor R. Knilians, Whitewater, Wis.

REAL ESTATE.

TRADES EVERYWHERE—EXCHANGE book free. Bersie Agency, El Dorado, Kan.

640 ACRES, EASTERN KANSAS IMP., 300 acres in wheat, 100 in alfalfa. Price, \$75 per acre. Can take in 160. Write P. O. Box 125, St. Marys, Kansas.

FARMS WANTED.

FARMS WANTED—HAVE 7,000 BUYERS. Describe your unsold property. 514 Farmers Exchange, Denver, Colo.

SHEEP

100 NATIVE BRED EWES FOR SALE. B. E. Miller, Newton, Kansas.

THE STRAY LIST.

TAKEN UP, BY MARSHALL RIFE, Union Township, Rice County, Kansas, one red bull calf, about one year old, appraised value \$20. L. W. Pulliam, County Clerk, Rice County, Lyons, Kansas.

TAKEN UP, BY EARL SOUTHER, FOUR miles north and two miles east of Parsons, Neosho County, Kansas, one red milk cow, weight about 700 pounds. November, 1916. W. E. Craig, County Clerk, Erie, Kansas.

TAKEN UP, BY O. L. FREY, ABOUT eight miles northwest of Elmdale in Diamond Creek Township, Chase County, Kansas, one red yearling heifer; no marks or brands; valued at \$30. November, 1916. J. A. Mann, County Clerk, Chase County, Cottonwood Falls, Kansas.

HORSES AND MULES.

FOR SALE OR TRADE—ONE REGISTERED black jack with white points, 14½ hands high; extra quality and breeder, quick server, lots of colts to show; nine years old and guaranteed every way. Also one three-year-old. Would trade on car in good condition or other personal property. Harvey Beeler, St. Marys, Kansas.

HOGS.

100-POUND POLAND CHINA BOARS, \$15. Six weaned pigs, \$35. Four gilts (shoats), \$50. Quick. Frank Barrington, Sedan, Kan.

SHETLAND PONIES

SHETLAND PONIES FOR CHRISTMAS—Charles Clemmons, Coffeyville, Kansas.

SHETLAND PONIES—GET THE CHILDREN Christmas presents. C. H. Clark, LeCompton, Kansas.

WANTED—TO BUY.

WANTED, SEEDS—CLOVER, CANE, millet, kafir, milo, English blue grass, Sudan grass, pop corn. Send samples. Mitchell Seed Co., St. Joseph, Missouri.

SITUATION WANTED.

WANTED—WORK ON A FARM. WILL work for reasonable wages. J. C. Campbell, Albuquerque, New Mexico.

JOB WANTED—BY AN EXPERIENCED farmer as foreman or would work by month this winter. Good references from bank and other good firms. Jos. Wood, Burns, Kan.

HONEY.

ONE 60-POUND CAN CLOVER, \$6.25; case of two cans, \$12.00; two, \$11.75; five, \$11.50. Light amber, one 60-pound can, \$5.25; two, \$10.00; f. o. b. Center Junction, Iowa. Cash with order. Satisfaction guaranteed. W. S. Pangburn.

ALFALFA.

I CAN SHOW YOU RAW LANDS THAT I sold less than two years ago at \$85 per acre that are now renting by the year at fifteen dollars per acre. Why not get some of this wonderful alfalfa bottom land now? I have several choice pieces at \$100 on long time payments. Under best irrigation system in America. For names of farmers from your own state write here and printed matter, write H. H. Clark, 100 Main, Calipatria, Imperial Valley, California.

DOGS.

COLLIE PUPS—U. A. GORE, SEWARD, Kansas.

WOLF AND COON HOUNDS. RICE & Tindall, Garnett, Kansas.

FOR SALE—COON, SKUNK, OPOSSUM, wolf and fox dogs. Few rabbit dogs. Reasonable. Tindall & Rice, Garnett, Kansas.

AIRDALE—THE GREAT TWENTIETH century dog. Collies that are bred workers. We breed the best. Send for list. W. R. Watson, Box 128, Oakland, Iowa.

MISCELLANEOUS.

FERRETS FOR SALE—PRICE LIST free. Also ferret muzzles, 25c each. Bert Ewell, Wellington, Ohio.

MEN—100% PROFIT GUARANTEED selling spray pump and automobile washer. Write Rusler Company, Johnston, Ohio.

YOU CAN MAKE A GOOD LIVING in your back yard raising Belgian hares. Full particulars and price list of all breeds, 10c. W. G. Thorson, Aurora, Colo.

THREE DOLLARS BUYS DANDY PAIR Belgian hares, Angora rabbits, trio white rabbits, or pair guinea pigs full grown; best stock. Christmas presents. Page's Pet Place, Salina, Kansas.

NEW CROP TABLE RICE, PRODUCER to consumer, 100 pounds beautiful clean white whole-grain table rice in double sacks, freight prepaid to your station, \$5.85. We guarantee safe arrival of rice. Cabaniss, Rice Farmer, Box 103, Katy, Texas.

FOR SALE—16-HORSEPOWER GASOLINE engine on steel trucks; good as new. Double seated carriage, rubber tires, good as new, cost \$480, or will trade either of the above. Make me an offer. H. W. McAfee, Route 8, Topeka, Kansas.

FANCY SWEET CLOVER SEED, PURE white, hulled, re-cleaned. Price, ten dollars per bushel, f. o. b. Florence, Kansas. Fancy alfalfa seed, re-cleaned, for eight dollars and forty cents per bushel. Will ship by freight or express. Will not ship less than sixty pounds. Reference, Florence State Bank. J. F. Sellers, Florence, Kansas.

I HAVE NO RENT OR HIGH PRICED salesmen to pay, therefore I sell pianos and player pianos very low. I now have a fine \$650 player piano, standard make, for \$368; used only three months; also one slightly used piano for the low price of \$228; beautiful case and made by one of the largest factories. H. S. Dickey Piano House, Dickey Building, Newton, Kansas.

FARM AND HERD.

Kansas farmers and breeders recognize the value of consignment sales to the breeder who does not have an offering to justify an individual sale. This is evidenced by the good lot of stock consigned to the breeders' sale to be held at Wichita, Kansas, December 12, 13 and 14. The sale will open with the sale of eighteen Hampshire hogs, twenty big fat Polands, two big Spotted Poland boars, and a few Durocs. In the afternoon some seventy head of Scotch and Scotch-topped Shorthorn cattle will be sold. Homan & Son of Peabody have consigned none but pure Scotch and they will sell some bulls good enough to head a pure-bred herd. Graner Bros. of Lancaster are selling fifteen bulls and six females. They are well bred good individuals. Park E. Salter of Wichita also has a nice consignment of pure Scotch cattle. H. W. Sutton of Weir will sell six Aberdeen Angus bulls and three heifers, all of them nice growthy youngsters. J. C. Bergner & Sons, of Pratt, will sell six German Coach stallions. Ed Nickelson has consigned seven mares, Wolfe Bros., of Blue Mound, have a good consignment of mares and stallions. H. M. Cottier, of Mound City, Missouri, has consigned five good stallions and five mares, all of them in good thrifty condition. Mr. Cottier also consigns five registered jennets, and they are the Missouri type. D. H. Fawcett has consigned two good jacks and six jennets. All told there will be some forty head of Percherons and about twenty-five head of jacks and jennets. December 14 will be a sale of trotting bred horses, when a lot of the best race horses in Kansas will sell for the high dollar. The largest consigner is W. H. Liggett, of Herington. He is making a dispersal sale of all of his stallions, mares, colts and developed race horses, including Charlie A. C. 2:07½, William J. 2:13½, and a dozen or more of others. Doctor Branch, of Marion, is selling the good mare, Lucy Hurst, 2:13½, and a good stallion by Liberty Bird. F. S. Kirk is selling Cecil Kirk, 2:17½, and Kenneth Kirk, a green trotting stallion with a trial in a race of 2:17½.

W. W. Shott, of Lathrop, Missouri, is one of Missouri's successful breeders of high-class jacks, and Mr. Shott's Owl Hollow Stock Farm has one of Missouri's leading herds of jacks and jennets. A feature of his herd at this time is eleven head of mammoth jacks, the type that has made Missouri famous.

When Writing to Advertisers, Please Mention Kansas Farmer



We desire to make this department just as helpful as possible, and believing that an exchange of experiences will add to its value, we hereby extend an invitation to our readers to use it in passing on to others experiences or suggestions by which you have profited. Any questions submitted will receive our careful attention and if we are unable to make satisfactory answer, we will endeavor to direct inquirer to reliable source of help. Address Editor of Home Department, Kansas Farmer, Topeka, Kansas.

Mother's Christmas Gift.

It never comes to Christmas, but I think about the times we used to save our pennies and our nickels and our dimes; And we bunched them all together, even little baby brother Put in something for the present that we always gave to mother.

We began to talk about it very early in December. 'Twas a very serious matter to us children. I remember. And we used to whisper nightly our suggestions to each other. For by nothing cheap and tawdry could we show our love for mother.

Her's must be a gift of beauty, fit to symbolize her ways; It must represent the sweetness and the love that marked her days. It must be the best our money, all combined, had power to buy. And be something that she longed for; nothing else would satisfy.

Then it mattered not the token, once the purchase had been made. It was smuggled home and hidden and with other treasures laid. And we placed our present proudly in her lap on Christmas Day, And we smothered her with kisses and we laughed her tears away.

It never comes to Christmas but I think about the times we used to save our pennies and our nickels and our dimes; And the only folks I envy are the sisters and the brothers Who still have the precious privilege of buying for their mothers.

—The American Boy.

Try filling the centers of apples to be baked, with raisins. Good baked apples hardly need to be improved, but the raisins will add a delicious flavor.

It is economical to buy soap ahead of the time it is needed for use, and store in a dry place. This gives it a chance to dry out and harden and it will not waste away so fast in water. Often there is a saving in price on soap in quantities, and as it is something that

is needed every day, it is safe to lay in a supply when there is a bargain price.

The fruit cake will be improved if grape juice is poured into it after it is cool. Cherry juice is also good for this purpose. Turn the cake upside down and pour the fruit juice on a little at a time until the cake is quite moist. Then wrap the cake well in oiled paper, a cloth and outside paper wrapping, and keep in a cool place. This treatment will keep the cake moist and improve the flavor.

Successful Young Gardener

There was one garden in Wichita last summer which the extremely dry weather did not put out of business. This was not because it was located in a more favored spot than were the others, but because it was in charge of Lester McDaniel, the young "Garden King" of Southern Kansas. The name of this young man may not be very well known to the professional gardeners of the state, but it is perhaps a little too well known by some of the other club boys and girls, especially those in the garden clubs around Wichita, where he has captured practically all of the best garden club prizes for the last two years. Not only that, but a year ago he was the only member of the boys' and girls' clubs of Sedgwick County who received a state prize from the agricultural college at Manhattan.

In the contest just closed by the Wichita Y. M. C. A. in co-operation with the extension division of the agricultural college and the U. S. Department of Agriculture, this same Lester McDaniel almost "cleaned the platter." Aside from winning \$40 in cash prizes on the different varieties of vegetables from his garden, this young garden king won the

First Kansas Troop Farm Boy Cavaliers

SOME time ago I saw a paragraph in KANSAS FARMER about the Farm Boy Cavaliers. Since then I have organized a troop and Prof. D. D. Mayne informs me it is the first troop in Kansas. Ours is a yeomanry troop, which is the unmounted division of the Farm Boy Cavaliers.

I am enclosing a picture of our troop. There are six members, but one member was not present when this picture was taken.

I have four achievements under way and the others have one apiece. My achievements are rope work, entomology, pig raising, and farm accounts. I will be ready to be examined on rope work and pig raising about January 1, 1917. I started entomology and farm accounts July 1, 1916, so I will be finished with four achievements July 1, 1917.

Three members of the troop intend to take up pig raising and all of us have taken rope work.

Mr. Chapman, the county agricultural agent, is acting as examiner for us and we appreciate his help very much.

We organized in June, 1916. I would be glad to hear from other Farm Boy Cavaliers.—PAUL STUDDARD, Leader Farm Boy Cavaliers, Glen Valley Troop No. 1, Route 4, Box 27, Leavenworth, Kansas.



FARM BOY CAVALIERS, GLEN VALLEY TROOP NO. 1, LEAVENWORTH COUNTY, KANSAS. FROM LEFT TO RIGHT—HARRY BERG, GEORGE KLEY, WALTER BERG, PAUL STUDDARD, MINOR MEADERS. THE OTHER MEMBER, WHO IS ABSENT, IS JAMES FINNERAN

following premiums that were offered by the business men of Wichita: A pair of shoes, two dollars' worth of flour, a fish rod, a kodak, two sweaters, a porch swing, a loving cup, a Y. M. C. A. membership, and a bicycle valued at \$35. The total value of all these articles was placed at \$67.40, which amount, plus the cash prize of \$49 that he received, makes a total value of \$116.40 already won by this young gardener this year, and the state prizes for this club have not been awarded as yet.

Canned Rabbit

Recently one of our Missouri readers called at the KANSAS FARMER office and in the course of our talk gave a simple recipe for lessening the cost of living, at least in so far as meat is concerned. A "drive" will be made in this reader's orchard next week and the rabbits will be canned for future use. The following recipe will be used: Skin and quarter or cut into smaller pieces. Soak over night in weak salt water. Drain, roll in flour, salt and pepper to taste, fry quickly until brown but not cooked through. Pack in glass jars, adding the grease in which fried and enough boiling water to fill jars. If screw-top jars are used, place rubbers and screw top only slightly—about as tight as thumb and one finger will screw it. If clamp-top jars are used, place only top bail in position. If that is too tight, the lid

should be tied on with string so the steam will have a chance to escape. Place jars in water in covered kettle or boiler which has been provided with false bottom, and let cook four and one-half hours after the water begins to boil. At the end of this time screw tops on tight, remove from water and set away to cool in a place free from drafts.

The rabbit is thoroughly cooked in this way and when it is opened it is only necessary to heat thoroughly and make the gravy.

For those who like rabbit, this is a very easy way to effect a saving in meat cost. Rabbits seem to be generally plentiful this winter and the meat is unusually tender. Cooked as above, both flavor and palatability are greatly improved.

The little Christmas remembrance that is attractively wrapped carries much more cheer than does the carelessly-wrapped present. Is it not the thought of the giver that warms the heart of the one who receives the gift? Then let us think about the outside appearance of our gift also. A sheet of clean white tissue paper and a couple of bright Christmas seals will make the package look dainty and pretty. Red, white, or green baby ribbon is effective for tying packages, but it costs more than the seals. A card should be enclosed with the gift and this should bear a personal message from the giver.

FASHION DEPARTMENT — ALL PATTERNS TEN CENTS

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



No. 7985—Girls' Dress: Cut in sizes 6, 8 and 10 years. In the juvenile class of tasteful dresses this one belongs. The separate gulleps with front closing is finely tucked at center, showing an oval vest effect; edging daintily finishes the collar and cuffs. The overdress in one piece is effective with smocking as pictured. No. 7965—Ladies' Shirtdress: Cut in sizes 36 to 44 inches bust measure. For all practical needs, this is the style of blouse to choose. A tuck in each front turned toward the armhole gives a very pretty line; the collar is simple but one is impressed with its cut at front. The plain sleeve may be long or short, finished with a neat cuff. No. 7998—Child's Play Dress: Cut in sizes 2, 4 and 6 years. The pockets in this little dress supply the note of newness that give it attention value, but its cut and fit will also appeal to the mother of a small girl. Fastening is at back and either sleeve may be used. No. 8006—Ladies' Apron: Cut in one size. This serviceable garment is made attractive with a yoke facing. The front is slashed and finished for lacing, as the apron slips on over the head. An elastic at the waistline takes care of the fullness and evenly divides it in the skirt section. No. 7976—Ladies' Skirt: Cut in sizes 24 to 32 inches waist measure. A splendid model for practical or dressy wear, according to the material used in making. Cut in nine gores, so arranged as to give panel front, thus adding to its grace of line. The closing is at back, where five backward-turning plaits are made in each half. No. 7905—Ladies' Dress: Cut in sizes 36 to 44 inches bust measure. A design that will appeal to the style sense of fashion followers. A raised waistline is used for the three-gored skirt joined to a perfectly plain blouse under a belt of contrasting goods. Taffeta, fine serge, voile, gabardine or mohair can be used to make this dress.

SCHOOLS AND COLLEGES

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Learn all about this big school. Let me send you free our big new 1916 catalog and a copy of the "NEW ERA." Write for them now.

L. L. TUCKER, Pres., Kansas Wesleyan Business College
SALINA, KANSAS

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Gentlemen:—Please send me particulars concerning your "One Dollar" Installment Plan of paying for a business course. Also how to get a position.

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PROSPERITY is found in corn, wheat and clover land. Whole milk, 46c per pound for butter fat; corn, 90c per bushel; wheat, \$1.75. Locate on one of our farm bargains close to Ottawa, Kansas. Take advantage of creamery and market. Write for list of any size farm you want.
MANSFIELD LAND CO., Ottawa, Kansas.

DAIRY FARM
Forty Acres, one mile out; all alfalfa land, large buildings. A bargain if sold soon. Write for list of farms and ranches.
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We have many farms ready for immediate occupancy to be sold on terms, of which the following is a fair sample: 160 acres, fair improvements, in cultivation; fenced; good soil. Price \$30 per acre, half cash, balance long time, low interest. Good agricultural, grazing and fruit section. Mild climate, ample rainfall. Any sized farm from 40 acres up. Write for descriptive list.

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No. 31.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



No. 32.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



No. 33.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



No. 34.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



No. 35.—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?

OVERLAND RED

A Romance of The Moonstone Canon Trail

(Chapter XXV, "In the Shadow of the Hills")

Overland Red stood before him, silent, alert, anxious. "You, Chico?" he asked.

"Sure. Hello, Red."

"Anybody see you come across yesterday?"

"Not that I know of. I kept away from the town."

"Your hoss shod?"

"Yes. All around. Why?"

"Nothin'. I'm sufferin' glad to see you again. When we get on top of the hills, you can take the left trail and keep on down. You can't miss the canon. I'll leave you here. I got to stay here a spell to see that nothin' else comes up but the sun this mornin'."

"All right, Red. Your pardner down there?"

"Yep. Whistle when you get up to the meadow in the canon. Billy'll be lookin' for you."

"Any trouble lately?"

"Nope. But Billy's got a hunch, though. He says he feels it in the air."

At the crest Collier rode on down the winding trail, or rather way, for no regular trail existed. At the foot of the range he turned to the right and entered the narrow canon, following the stream until he came to the meadow, where he picketed the pony.

He continued on up the canon on foot. When he arrived at the camp, Overland was there waiting. Winthrop and he greeted Collier cordially. "Short cut," explained Overland, jerking his thumb over his shoulder.

"No hoss trail, though. Too steep."

Faint dawn lights were shifting along the canon walls as they had breakfast. As the morning sunlight spread to their camp Collier's natural curiosity in regard to Overland's pardner was satisfied. He saw a straight, slender figure, in flannel shirt and khaki. The gray eyes were peculiarly keen and humorous. Winthrop was not a little like his sister Anne in pose and coloring. The hands were nervously slender and aristocratic, albeit roughened and scarred by toil. There was a suggestion of dash and go about Winthrop that appealed to Collier. Even in repose the easterner seemed to be alert. Undoubtedly he would make a good companion in any circumstance.

"There's spare blankets in the tent. Roll in for a snooze, Collier. Billy and me'll pack your saddle and stuff up here later."

"I guess I will. You might sponge Yuma's back a little, Red. She's brought me close to two hundred miles in the last three days."

"Sure, Bo! I'll brush her teeth and manure her toe-nails if you say the word. I guess that hoss has kind of made a hit with you."

Collier yawned. "Mebby. But it isn't in it with the hit she'll make with you if you try to take up her feet. She's half-sister to a shot of dynamite. I'm only telling you so she won't kick your fool head off."

"You talk like most a full-size man," said Overland.

Down at the meadow, Overland looked at the colt and shook his head. "He is correct," he said succinctly. "That hoss don't welcome handlin' worth a bean."

Winthrop's silence rather stirred Overland's sensitive pride in his horsemanship. "Course I broke and rode hundreds like her, down in Mex. But then I was paid for doin' it. It was my business then. Now, minin' and educatin' Collier is my business, and a busted neck wouldn't help any."

Winthrop realized for the first time that Overland's supreme interest in life was Collier's welfare. Heretofore the paternal note had not been evident. Winthrop had imagined them chums, friends, tramps together. They were more than that. Overland considered Collier an adopted son.

The easterner glanced at Overland's broad shoulders stooped beneath the weight of the heavy stock saddle. Something in the man's humorous simplicity, his entire willingness to serve those whom he liked and his stiff indifference to all others, appealed to Winthrop. So this flotsam of the range, this erstwhile tramp, this paradox of coarseness and sentiment, had an object in life? A laudable object: that of serving with his sincerest effort the boy friend he had picked up on the desert, a castaway.

As they tolled up the stream toward the camp, Winthrop recalled their former chats by the night-fire. Now he began to see the drift of Overland's then frequent references to Collier. And there was a girl—mentioned by Overland almost reverently—the Rose Girl, Louise Lacharme, of whom Anne Marshall had written much in eulogy to him. And Winthrop himself?

His swift introspection left him aware that of them all he alone seemed to lack a definite aim. Making money—mining—was still to him a game, interesting and healthful, but play. To Overland it was life. Winthrop saw himself as he was. His improved health scoffed at the idea of becoming sentimental about it. He laughed, and Overland, turning, regarded him with bushy, interrogative brows.

"Nothing," said Winthrop.

"Ain't you feelin' good lately, Billy?"

"I'm all right."

"Glad of that. It's good to forget you got such a thing as health if you like to keep it. If you get to lookin' for it, like as not you'll find it's gone."

"I'm looking for something entirely different. Something you have—something that I never possessed."

"I don't know anything I got that you haven't 'less it's that new Stetson I got in Los. You can have her, Billy, and welcome. Your lid is gettin' on the bum."

"Not that," laughed Winthrop. "Something you keep under it."

"Tain't me hair. I'm plumb sure of that."

"No."

"Mebby you're jealous of some of me high-brow ideas?"

"Add an 'I' and you have it."

"I-d-e-a-l-s. Oh, ideals, eh? Never owned none except that little electric do-

diddle-um of the Guzzuh what makes the spark to keep the machinery goin'. That's called the 'Ideal'."

At the camp he prepared to make his trip to the Moonstone Ranch. He read his sister's letter over and over again. Finally he sauntered up the canon to where Overland was at work. "I'll lend a hand," he said in answer to Overland's questioning face. "I don't believe I'll go before tomorrow night. It is hardly right to leave the minute my new pardner arrives. I want to talk with him."

Overland nodded. "Guess you're right. It won't hurt to keep in the shadow of the hills for a day or two. Can't tell who might 'a' spotted Collier ridin' out this way."

That afternoon, toward evening, Collier arose, refreshed, and eager to inspect the claim. He could hear the faint click of pick and shovel up the canon. He stretched himself, drank from the stream, and sauntered toward the meadow. He would see to his pony first.

He found the horse had been picketed afresh by Overland when he had come for the saddle. He was returning toward camp when he heard a slight noise behind him—the noise a man's boot makes stepping on a pebble that turns beneath his weight.

Collier wheeled quickly, saw nothing unusual, and turned again toward the camp. Then he hesitated. He would look down the canon. He realized that he was unarmed. Then he grew ashamed of his hesitancy. He picked his way down the stream. A buzzard circled far above the cliffs. The air hummed with invisible bees in the rank wild clover. He peered past the next bend. A short distance below stood a riderless horse. The bridle was trailing. For an instant Collier did not realize the significance of the animal waiting patiently for its rider. Then, like the flash of a speeding film, he saw it all—his pony's tracks up the canon—the rider who had undoubtedly seen him crossing to the water-hole, and who had waited until daylight to follow the tracks; who had dismounted, and was probably in ambush watching him. He summoned all his reserve courage. Turning away, he remarked, distinctly, naturally, casually, "Thought I heard something. Must have been the water."

He walked slowly back to the notch in the canon walls. Stepping through it, he continued on up the stream. A few paces beyond the notch, and a face appeared in the cleft rock, watching him. The watcher seemed in doubt. Collier's action had been natural enough. Had he seen the horse? The hidden face grew crafty. The eyes grew cold. The watcher tapped the side of the cliff with his revolver butt. The noise was slight, but in that place of sensitive echoes, loud enough to be heard a long way up the canon. Then it was that Collier made a courageous but terrible mistake. He heard the sound, and seemed to realize that it was made intentionally—to attract his attention. Yet he was not sure. He kept on, ignoring the sound. Had he not suspected some one was in the canon, to have glanced back would have been the most natural thing in the world. The watcher realized this. He knew that the other had heard him—suspected his presence, and was making a daring bluff.

"Got to stop that," muttered the watcher, and he raised his hand.

The imprisoned report rolled and re-echoed like mountain thunder. Collier threw up his arms and lurched forward.

Below in the canon clattered the hoofs of the speeding horse. The rider, still holding his six-gun, muzzle up, glanced back. "I didn't care partic'lar about gettin' him, but gettin' the kid hits the red-head between the eyes. I guess I'm about even now."

And Silent Saunders holstered his gun, swung out of the canon, and spurred down the mountain, not toward the desert town, but toward Gophertown, some thirty miles to the north. He had found the claim. The desert town folk he had used to good advantage. They had paid his expenses while he trailed Overland and Collier. They had even guaranteed him protection from the law—such as it was on the Mojave. He had every reason to be grateful to them, but he was just a step or two above them in criminal artistry. He had been a "killer." Like the lone wolf that calls the pack to the hunt, he turned instinctively to Gophertown, a settleme t in the hills not unknown to a few of the authorities, but unmolested by them. The atmosphere of Gophertown was not conducive to long life.

CHAPTER XXVI

SPECIAL

Overland, leaning on his shovel, drew his sleeve across his forehead. "Reckon I'll go down and wake Collier. He'll sleep his head off and feel worse 'n thunder."

"I'll go," said Winthrop, throwing aside a pan of dirt with a fine disregard of its eventual value. "I want some tobacco, anyway."

"Fetch a couple of sticks of dynamite along, Billy. I'll put in one more shot for tonight."

A distant, reverberating report caused the



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Overland Red.—Copyright, Houghton Mifflin Company.

two men to jerk into attitudes of tense surprise.

"What the hell!" exclaimed Overland, running toward the tent. "That wasn't the kid, Colie's only packin' a automatic, and here it is."

He stopped in the tent-door, grabbed up the gun and belt, and ran down the canon, Winthrop following breathlessly. Near the notch he paused, motioning Winthrop to one side. "Mebby it was to draw us on. You keep there, Billy. I'll poke ahead."

But Overland did not go far. He almost stumbled over the prone figure of Colie. With a cry he tore his handkerchief from his throat and plugged the wound. "Clean through," he said, getting to his feet. "Get the whisky."

"Shan't I help you carry him?" queried Winthrop.

Overland shook his head. "Get the whisky and get a fire goin'." "I'll bring him."

"Will he live?" asked Winthrop, hesitating.

"I reckon not, Billy. He was plugged from behind—close—and clean through. Here's the slug."

Then Overland picked up the limp form. So this was the end of all his planning and his toll? He cursed himself for having urged Colie to come to the desert. He strode carefully, bent with the weight of that shattered body. He felt that he had lost more than the visible Colie; that he had lost the inspiration, the ideal, the grip on hope that had held him toward the goal of good endeavor. His old-time recklessness swept down upon him like the tides, submerging his better self. Yet he steadily held to one idea. He would do all that he could to save Colie's life. Failing in that, there would be a red reckoning. After that he would not care what came.

Already he had planned to send Winthrop, in his big car, for a doctor. The car was at the desert town, where a liveryman accepted a royal toll in advance to care for it.

At the tent Overland laid Colie on the blankets, bathed and bandaged the wound, and watched his low pulse quicken to the stimulant that he gave him in small doses. "It's the shock as much as the wound," said Overland. "He got it close, and from behind—from behind do you hear?"

Winthrop, startled by the other's intensity, stammered: "What shall I do? What shall I do?"

Overland bit his nails and scowled. "You will ride to town. Colie's horse is here. Take the Guzzuh and burn the road for Los and get a doctor. Not a pill doctor, but a knife man. Bring the car clean back here to the range. To hell with the chances."

Winthrop slipped into his coat and filled a canteen.

"If that horse throws me—" he began.

"You got to ride. You got to, understand? I darsent leave him."

Down in the meadow Overland saddled the pony Yuma. He mounted and she had her "spell" of bucking. "Now, take her and ride," said Overland. "After you hit the level, let her out and hang on. If anyone tries to stick you up this time—why, jest nacherally plug 'em. Sabe?"

Winthrop nodded.

Two hours later a wild-eyed, sweating pony tore through the desert town at a run. Her rider slid to the ground as the liveryman grabbed the pony's bridle.

"Take care—of her," gasped Winthrop. "I want—the machine."

"Anybody hurt?"

"Yes. Who did that?"

Winthrop stood with mouth open and eyes staring. The tires of the big machine were flat.

"I dunno. I watched her every day. I sleep here nights. Last Sunday I was over to Daggett."

"And left no one in charge?"

"The boy was here."

"Well—the job is done. Take care of the horse. I'll be back in a minute."

At the station Winthrop wired for a special car and engine. He gave his check for the amount necessary and went back to the stable. He was working at the damaged tires when the agent appeared. "Special's at the Junction now. Be here in five minutes."

Winthrop climbed to the engine-cab. "I'll give you ten dollars for every minute you cut from the regular passenger schedule," he said.

The engineer nodded. "Get back on the push and hang on," was his brief acknowledgment.

It was dark when the surgeon, drying his hands, came from the canon stream to the tent. "That's about all I can do now," he said, slipping into his coat.

Overland, who was sitting on a box beside the tent, stood up and stretched himself. "Is he goin' to make it?" he asked.

"I can't say. He is young, in good condition, and strong. If you will get me some blankets, I'll turn in. Call me in about two hours."

CHAPTER XXVII
THE RIDERS

Several days passed before the surgeon would express a definite opinion.

Colie lay, hollow-cheeked and ghastly, in the dim interior of the tent. His eyes were wide and fixed. Overland came in. Colie recognized him and tried to smile. Overland backed out of the tent and strode away growling. The tears were running down his unshaven cheeks. He did not return until later in the day. Then he asked the surgeon that oft-repeated question.

"I don't see how he can recover," said the surgeon quietly. "Of course there's a slim chance. Don't build on it, though."

"If there's a chance, I reckon he will freeze to it," said Overland. "From what he was ramblin' about when he was off his head, I reckon he's got somethin' more to live for than just himself."

"Has he any relatives?" queried the surgeon.

"Nope. Except me. But he was expectin' to have, I guess. And I tell you what, Doc, she's worth gettin' shot up for."

"Too bad! Too bad," muttered the surgeon.

"What's too bad, eh?"

The other shook his head. "If there is anyone that he would care to see, or that would care to see him, you had better write at once."

Overland was stunned. The doctor's word had been given at last, and it was not a word of hope.

Overland Red bowed to the doctor's opinion, but his heart was unconquerable. He

wrote a long letter to his old-time friend, Brand Williams, of the Moonstone Ranch. The letter was curiously worded. It did not mention Louise Lacharme, nor Mrs. Stone, nor the rancher. It was, in the main, about Mexico and the "old days"; no hint of Colie's accident was in the page until the very end. The letter concluded with "But you needn't think you owe me anything for that. I was glad to put him to the hush because we was pals them days. Colie was shot by Saunders. The doctor says he will die most likely. He was shot in the back. It would go bad with Saunders if the Moonstone boys ever heard of this."

The letter dispatched by Winthrop, Overland Red took courage. He felt that he himself was holding Colie's life from slipping. His huge optimism would not admit that his friend could die.

He was leaning back against a rock near the notch and gazing at the slanting moonlight that spread across the somber canon walls. A week had gone since he mailed his letter to Brand Williams, of the Moonstone, and Colie was still alive. Overland shifted his position, standing beside him the Winchester that had lain across his knees, and pulling his sombrero over his eyes. The notch made an excellent background for an object over the sights of a rifle, even at night, so long as the moon shone. Gopher-town riders would never venture that far up the canon with horses. They would tether their ponies at the entrance and come afoot and under cover. Still, they would have to pass the notch in any event.

Thus it was that when, some few minutes later, Overland heard the faint jingle of rein-chains, he grinned. It was celestial music to him.

The sound came again, nearer the notch, and clearer. He remained motionless gazing at the shadowy opening.

Slowly a shaft of moonlight drew down toward the notch, silencing its ragged edges. Lower the light slid until it revealed the opening and in it the figure of a horseman. In the white light Overland could see the quirt dangling from the other's wrist. The horseman's wide belt glittered.

"Brand!" called Overland Red softly. The opposite wall took up the name hesitatingly and tossed it back.

"Brand!" whispered the echoes that drifted to the darkened corners of the cliff and were lost in voiceless murmurings. "Brand your own stock," came the answer, low and distinct.

Overland laughed. It was their old-time pun upon the foreman's name. He got to his feet and approached. "It does me good," he said, extending his hand.

"How is Colie?" asked Williams, dismounting.

Overland heaved a great sigh. "He's floatin' somewhere between here and the far shore. Mebby he's tryin' to pull through. The doc says the kid don't seem to care whether he does or not. Did—the little Rose Girl—tell you anything to—say to him?"

"When I was leavin' she come out to the gate," said Williams. "She didn't say much. She only hands me this, and kind of whispered, 'Give him this. He will understand.'"

And Williams drew a small gray gauntlet from his shirt. Overland took the glove and tucked it in his pocket.

"Anything doing?" asked Williams.

"Nope. They're overdue to jump us if shootin' Colie was any sign."

"Like old times," said Williams.

"Like old times," echoed Overland. "No trouble findin' your way across?"

"Easy. Followed them automobile tracks clear to the range. We fed up at the town. The boys gets kind of restless—"

"Boys? Ain't you alone?"

"Hell, no!" replied Williams disgustedly.

"I wish I was! I got four pigeon-toed, bow-legged, bat-eared Moonstoners down in that meadow, just itchin' mad to cut loose. And they ain't sayin' a word, which is suspicious. Worryin' across the old dry spot the last three days has kind of het 'em up. And then hearin' about Colie . . ."

"How'd you come to have so much company?" queried Overland.

"I was plumb fool enough to read that letter of yours to 'em. They all like Colie first-rate. Better than I calculated on. The boss talked turkey to 'em, but he had to let 'em come. He did everything he could to hold 'em, knowin' what was in the wind."

"And they quit?"

"Quit? Every red-eyed bat of 'em. Bud and Pars and Billy and Miguel. Told the boss they quit, because me bein' foreman they would do as I says, but if they quit I wasn't their foreman any longer, and they would 'do as they dum please. They had the nerve to tell me that I could come along if I was wishful."

"Kind of bad for Stone, eh?"

"The Price boys are holdin' down the ranch. You see, Jack, it hit us kind of hard, Colie ridin' away one mornin', and next thing your letter that he was down and pretty nigh out. The boys didn't just like that."

Overland nodded. "Well, Brand, I guess I'll step down and look 'em over."

Only one thing, Jack. I feel kind of responsible for them boys, even if I ain't their foreman just now. Don't you go to spellin' to 'em and get 'em thinkin' foolish. They're about ready to shoot up a town, if necessary."

"Been hittin' the booze any?"

"Some. But not bad."

"All right. I don't want to say only 'How!' and thank 'em for Colie. If I say more than three words after that, you can have my hat."

"It don't take three words, sometimes," said Williams, somewhat ambiguously.

Ringed around their little fire in the meadow sat or lay the Moonstone riders. While crossing the desert Williams had sketched a few of the red episodes in Overland's early career. These pleased the riders mightily. They were anxious to meet Red Jack Summers. When Williams did introduce him, they were rather silent, asking after Colie in monosyllables. They seemed strangely reticent.

Both Williams and Overland felt an inexplicable tenseness in the situation.

Miguel, the young Mexican vaquero, broke silence. "How long you call it to this Gophertown place, I think?"

(To Be Continued.)

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LEGHORNS.

FOR SALE—300 SINGLE COMB WHITE Leghorn cockerels, \$1 each. East Oklahoma Hospital for the insane, Vinita, Okla.

UTILITY SINGLE COMB WHITE LEGHORN cockerels, Young's strain, \$2.00 each. Mrs. C. W. Churchill, Route 1, Leslie, Mo.

FINE SINGLE COMB WHITE LEGHORN cockerels. Smith strain. \$1.50 each. P. J. Wirtz, Ellinwood, Kansas.

SINGLE COMB WHITE LEGHORN COCKERELS, \$1. Young hens, \$9 per dozen. Good stock. Chas. McFadden, Morland, Kansas.

FOR SALE—TOM BARRON COCKERELS and two dozen pullets, \$1 each. Two yearling cocks out of imported birds, \$3 each. J. L. Stratton, Ottawa, Kansas.

LANGSHANS.

BIG BLACK LANGSHANS. FANCY AND utility cockerels and pullets. Guaranteed. H. Osterfoss, Hedrick, Iowa.

BLACK LANGSHAN COCKERELS FROM blue ribbon and sweepstakes winners. Mrs. D. A. Swank, Blue Mound, Kansas.

RHODE ISLAND REDS.

ROSE COMB RED COCKERELS, \$1 each. J. W. Warner, La Crosse, Kansas.

ROSE COMB REDS EXCLUSIVELY. Cockerels for sale. Bean strain. M. L. Puckett, Puxico, Mo.

S. C. RED COCKERELS, BIG, DEEP red, exceptionally good birds. Price, \$2.50. Creighton Harper, Oak Leaf Poultry Farm, Roca, Neb.

SINGLE COMB REDS—FINE BREEDING cockerels at reasonable prices. This is the last chance this season. Order early and you will not be disappointed. Fine colored, large size birds, guaranteed to please. Write for prices. H. H. McLellan, Kearney, Neb.

DUCKS

BROWN INDIAN RUNNER DUCKS BY hundred or small lots, \$1.00, \$1.50 each. Mrs. E. C. Wagner, Holton, Kansas.

IMPERIAL PEKIN DUCKS, STANDARD weight, large Toulouse geese. Prices reasonable. Mrs. F. Bender, Hampton, Iowa.

TURKEYS.

BOURBON RED TURKEYS, HENS AND toms for sale. W. H. Oliver, Reger, Mo.

BOURBON RED TURKEYS, LARGE with splendid color and markings. Mrs. Elmer Nicholson, Route 6, Wellington, Kan.

EXTRA GOOD BOURBON RED TURKEY toms, prices reasonable for immediate sale. Julia Haynes, McDonald, Kansas.

OAK HILL FARM—PURE-BRED M. B. turkeys from high scoring stock. Pure-bred Duroc pigs. Lawson, Missouri, Route 3.

MAMMOTH BRONZE TURKEYS, "GOLD-bank" strain. Beautifully bronzed, pure white edging, big boned, splendid birds, \$6 to \$10. Mrs. Iver Christenson, Jamestown, Kansas.

SEVENTY-FIVE PURE BOURBON RED turkeys, toms, \$4, weight 12 to 15 pounds; hens, \$3, weight 8 to 10 pounds. Tails red and white. Prices not good after December 25. For particulars send stamp. E. V. Eller, Dunlap, Kansas.

DUCKS AND GEESE.

GEESE, EMBDEN, TOULOUSE, CHINA; turkeys, ducks. All leading breeds of poultry. Emma Ahlstedt, Roxbury, Kan.

SIXTY VARIETIES PRIZE WINNING geese, ducks, turkeys, chickens, peafowls, guineas, stock, eggs. Cheap. Write wants. F. J. Damann, Farmington, Minn.

ROUEN DUCKS, FINELY MARKED; Wild Mallards, good, and tame; White Guineas, White Wyandottes, French Houdans from scored stock. Guarantee safe arrival. Robert Fulliton, Austin, Neb.

SEVERAL BREEDS.

COCKERELS FOR SALE—W. ROCKS, S. C. Buff Leghorns, R. C. R. I. Reds, Black Langshans; also Imperial Pekin drakes. Reasonable if taken before January 1, 1917. Mrs. A. Bollinger, Lewis, Kansas.

PLYMOUTH ROCKS.

BARRED ROCK COCKERELS, \$1.50, \$2.00, \$2.50. Mrs. E. C. Wagner, Holton, Kansas.

BARRED ROCK COCKERELS, PRICED reasonably. Chas. Kolterman, Route 5, Onaga, Kansas.

WHITE ROCKS, SIZE AND QUALITY, priced reasonable. Write G. M. Kretz, Clinton, Kansas.

BIG BONED BARRED ROCK COCKERELS, fancy breeding, \$2 each. Bred to lay strain. C. D. Swaim, Geuda Springs, Kan.

BARRED—FIRST PEN ST. LOUIS SHOW. First cockerel and cock, State Fair exhibition; breeding males. J. K. Thompson, 205 The Drive, Topeka.

BARRED ROCK COCKERELS FROM well bred stock. No better for the money. \$2 to \$5. Satisfaction or money back. R. D. Ames, Walton, Kansas.

BARRED PLYMOUTH ROCK COCKERELS, Bradley strain. Parks 200-egg strain. \$3 to \$5 each. Eggs in season. Gem Poultry Farm, Haven, Kansas.

WHITE PLYMOUTH ROCKS, EXTRA large pure white hens, cockerels and pullets for sale. Write. Originator of Ivory strain. Chas. C. Fair, Sharon, Kan.

WHITE ROCK COCKERELS, SIZE, quality and color. Fawn and White Runner ducks, all prize winners. Mrs. Ben Miller, Newton, Kansas.

BARRED PLYMOUTH ROCK COCKERELS—Grand breeding birds, large and well marked. Dams have trap nest record 225 eggs in year. \$3 each, two \$5.50, four \$10. Ike Hudnall, Milan, Mo.

ORPINGTONS.

FINE BUFF ORPINGTON COCKERELS, \$2 each. Mary E. Price, Route 7, Manhattan, Kansas.

FINE LUFF ORPINGTON COCKERELS and cock birds, \$1 to \$5 each. Myrtle Howard, Byron, Okla.

RHODE ISLAND WHITES.

FOR SALE—FINE LARGE ROSE COMB Rhode Island White cockerels, \$3 each. Mrs. J. E. Swenson, Clay Center, Kansas.

BRAHMAS.

FELTON'S MAMMOTH LIGHT BRAHMA cocks, cockerels and pullets for sale. Mrs. Mark Johnson, Bronson, Kansas.

MAMMOTH LIGHT BRAHMA COCKERELS, exhibition and choice breeders. Cheap. No culls. Always winners at Kansas and Missouri State Shows when exhibited. Mrs. Oscar Felton, Blue Mound, Kansas.

WYANDOTTES.

CHOICE WHITE WYANDOTTE COCKERELS, \$1.25 and up. Mrs. Will Beightel, Holton, Kansas.

EXTRA CHOICE ROSE COMB SILVER Wyandotte cockerels, \$2 each, six for \$10. Mrs. Phillip Schuppert, Arrington, Kansas.

WHITE WYANDOTTE COCKERELS, also eggs for hatching; \$1.50 and up. Satisfaction guaranteed. N. F. Whiting, Pella, Iowa.

FOR SALE—BUFF WYANDOTTE COCKERELS, price \$1, and also White Pekin ducks and drakes, price \$1. Address Gus Sauer, Belvue, Kansas.

COLUMBIAN WYANDOTTES—WINNERS at Kansas State Fair, Hutchinson. Choice cockerels. Stock for sale. Eggs in season. Fancy pigeons. John J. Pauls, Hillsboro, Kansas.

According to preliminary reports, the Holstein cow Novelty McKinley Hengerveld 183-356 has broken the record for fat production in the senior three-year class of the division covering tests begun not less than 240 days from freshening, by producing in seven consecutive days 423.1 pounds milk containing 16.937 pounds fat. She freshened at the age of 3 years, 10 months, 7 days, and began her test 246 days from freshening. Her prior record, begun six days from freshening, is 475.9 pounds milk containing 19.478 pounds fat. Her sire is Pietertje Hengerveld Sir Korndyke 60966; her dam is Novelty Jolie McKinley 145622. In the senior three-year class of the eight months division she displaces Lindale Bonnie Pauline 177521, whose record, begun 264 days from freshening, is 432.1 pounds milk containing 18.108 pounds fat.

RIFLES GIVEN AWAY

Kansas Farmer is going to give away hundreds of the celebrated Hamilton 22-Caliber Rifles to wide-awake, hustling boys.



This rifle has automatic ejector, solid breech-block, tip-up round barrel, accurately tapered and rifled, fitted with knife front and adjustable rear sight, blued steel butt plate, stained walnut stock and forehand plate, shoots 22 short or long rim fire cartridges.

Any boy can earn one of these rifles in one afternoon without costing him one penny.

You have been wanting a good rifle. Why not get one free? For full information write

KANSAS FARMER RIFLE CLUB
Topeka, Kansas

B. M. LYNE'S ANNUAL SALE

Shorthorn Cattle and Poland China Hogs

At Baer Barn, Abilene, Kansas

Thursday, December 28

19 - Head of Choice Scotch-Topped Shorthorns - 19

Ten bulls ranging in age from 10 to 20 months, sired by Red Laddie 353594 by Captain Archer. Seven cows bred to Violet Search 508055 by Old Searchlight. Cows all showing heavily in calf. Two heifers, first and second prize winners, Miltonvale Stock Show, 1916. They are daughters of Red Laddie and will be sold open. One yearling bull in this sale that measured perfect in stock judging at Miltonvale, 1916.

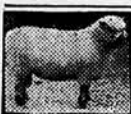
15 - Poland China Bred Gilts - 15

This offering, mostly fall gilts, all Nebraska bred, big-boned and high-class, all sired by Victor Pride 73878 and all bred to Kansas Wonder by Big Bob Wonder, will farrow in March and April. Send for catalog.

B. M. LYNE, Oak Hill, Kansas

Auctioneers—Cols. Lafe Burger, J. S. McCulloch, J. G. Engle, E. L. Hoffman

SHEEP.



SHROPSHIRE RAMS.
Chandler's aged ram won first prize and championship at Iowa State Fair, 1916. Weight and wool always win. One hundred yearling rams and ewes for sale. C. W. Chandler, Kellerton, Iowa

RAMBOUILLET SHEEP

A lifetime experience proves the Rambouillet is easily the best sheep for Kansas conditions. We offer choice individuals, either sex, with good bone, size, form and fleeced. E. D. KING, Burlington, Kansas.

RED POLLED CATTLE.



RED POLLED CATTLE

FOR SALE—Twelve cows and heifers.
I. W. POULTON, Medora, Kan.

Red Polled Cattle

A few 1916 bull calves for sale. Also a few cows and heifers.
AULD BROS., FRANKFORT, KANSAS

RED POLLED BULLS

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

RED POLLED BULL FOR SALE.

March calf, weight 700 pounds, out of a richly-bred 1,400-pound cow. Price, \$75.00.
MILTON PENNOCK, DELPHOS, KANSAS

CHESTER WHITE HOGS



CHESTER WHITE HOGS
For Sale—Spring boars and gilts from state fair winners.
COLEMAN & CRUM, Danville, Kansas

CEDARDALE CHESTER WHITES
Extra good April boars, sired by Wonder Chief and W. P. Sweepstakes. Also herd boar, W. P. Sweepstakes, sired by Wildwood Prince, senior champion and grand champion Iowa, 1914. Cholera immune. Priced to sell.
J. S. KENNEDY, Blockton, Iowa.

HAMPSHIRE HOGS

GEO. W. ELA'S HALCYON HERD
Registered, immuned Hampshire boars for sale. Valley Falls, Kansas.

ATTEBERRY'S HAMPSHIRE HOGS

Bred sows, \$25 to \$30 each. July gilts and boars, \$10 each for 30 days. Choice individuals. ATTEBERRY & SONS, Lancaster, Mo.

FARM AND HERD.

We have just received Volume 25 of the American Aberdeen-Angus Herd Book. This volume contains entries from 196501 to 208-500 inclusive. In addition to the entries this volume contains a lot of information that will interest Angus breeders and others who contemplate starting a herd of pure-bred beef cattle.

The Hereford Breeders' Association sale held at Council Grove, Kansas, November 20, was well attended by Hereford breeders. One hundred head sold for an average of \$240 per head. One yearling heifer consigned by Clyde Miller of Belvue, Kansas, sold for \$550. A banquet was held after the sale.

FARM AND HERD NEWS NOTES

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

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CLAIM SALE DATES.

Percheron Horses.
Feb. 9, 1917—Breeders' Combination Sale, Manhattan, Kan.

Jacks and Jennets.
Feb. 22, 1917—W. H. Roller & Son, Circleville, Kan., and Bruce Saunders, Holton, Kan. Sale at Holton.

Jersey Cattle.
March 8—F. J. Scherman, Topeka, Kansas.

Holsteins.
Feb. 6—H. C. Glissman, Omaha, Neb.

Shorthorn Cattle.
Dec. 28—B. M. Lyne, Oak Hill, Kan. Sale held at Abilene.
March 30, 1917—Combination Sale, South Omaha, Neb. H. C. McKelvie, Lincoln, Neb., Manager.
April 4-5, 1917—Central Shorthorn Association at Stock Yards Pavilion, Kansas City, Mo.

Hereford Cattle.
March 6—Moses Bros. & Clayton, Great Bend, Kansas. Combination sale.

Polled Durhams.
March 29, 1917—Combination sale, South Omaha, Neb. H. C. McKelvie, Lincoln, Neb., Manager.

Poland Chinas.
Feb. 1—P. M. Anderson, Lathrop, Mo.
Feb. 20—Fred B. Caldwell, Howard, Kan.
Feb. 22—A. J. Erhart & Son, Ness City, Kan. Sale at Hutchinson, Kan.
Feb. 28—F. Olivier & Sons, Danville, Kan.
Feb. 28—Clarence Dean, Weston, Mo. Sale at Dearborn, Mo.

Durocs.
Feb. 10—W. W. Jones, Clay Center, Kan.

O. I. C. Hogs.
March 8—F. J. Scherman, Topeka, Kansas.

Jacks and Jennets.
March 1—H. T. Hineman & Sons, Dighton, Kansas.

Holsteins.

Registered Horses.
Jan. 30-31, Feb. 1-2, 1917—Breeders' sale, Bloomington, Ill. C. W. Hurt, Manager, Arrowsmith, Ill.

Durocs.
March 15—W. T. McBride, Parker, Kan.

We have just received Volume 89 of the American Shorthorn Herd Book. This volume contains 30,000 pedigrees, of which 11,000 are for bulls numbered from 437,001 to 448,000, and 19,000 for cows numbered from 217,001 to 236,000.

H. C. Glissman, of Omaha, Neb., claims February 6 as the date of his next sale of Holstein cattle. On that date Mr. Glissman will sell eighty-five head of registered Holsteins that will represent the best in breeding and production.

R. M. Anderson, of Beloit, Kansas, is one of the successful breeders of pure-bred Shorthorn cattle in this state. His herd at this time is made up of Double Marys (pure

HORSES AND MULES.



Percherons and Belgians

SIXTY-FOUR HEAD REGISTERED STALLIONS AND MARES.
THIRTY STALLIONS AND THIRTY-FOUR MARES AND COLTS.

To close up a partnership, the thirty-four mares and colts must be sold by March 1, 1917. I mean business. Come and see me.

J. M. NOLAN,

Paola, Kansas

FOR SALE THREE STANDARD-BRED COLTS: One brown filley 4 years old, 16 hands high, weighs 1,200 pounds, sire Pactolus Ellwood 50246 by Pactolus 2:09, No. 9102; has been tracked a little and shows lots of speed. One black stud, 3 years old, stands 15.3, weighs 1,135 pounds, broken single and double, has been tracked some with success; is a full brother to the above filley. One black filley, name Luta Miller, 3 years old, broken to drive and quite clever, same sire and dam is Estan Selotta by Black-leer No. 46643 by Symboler 2:09 No. 19869. Six head of Hereford males, 2 years old; 60 head of well-bred stock cows, 3 to 4 years old; 15 Poll Angus; 45 head Shorthorn grades bred to the Hereford males; six head of high-grade Holstein helpers, two milking, two springing, bred to my Holstein male; one Holstein male, 2 years old next April, weight 1,200 pounds; four head of registered female Jerseys. O. L. THISLER, CHAPMAN, KAN.

PIONEER STUD FARM

Established 1870

FIFTY REGISTERED STALLIONS AND MARES

JUST ARRIVED—A new shipment of stallions and mares. If you are in the market for a good Percheron stallion or mare, now is the time. We can show you more bone, size, action and conformation than you will find elsewhere. Write or come today.

C. W. LAMER & SON

SALINA, KANSAS

Home-Bred Draft Stallions, your choice \$500 with the exception of two. Also mares for sale. A. Latimer Wilson, Creston, Iowa.



REGISTERED PERCHERONS, 39 heavy 3 and 4 yr. stallions, 68 rugged 2 yr. olds, 41 yearlings. Can spare 25 reg. mares, 24 reg. Belgian stallions. Sires and dams from France and Belgium.

FRED CHANDLER, R. 7, Chariton, Iowa Above Kansas City.

PERCHERONS FOR SALE

Five head pure-bred Percherons—Two mares, one 2-year-old stallion, two last spring colts. All good ones. Low price to the man that takes all.

J. W. BARNHART, BUTLER, MISSOURI



JACKS AND JENNETS

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

PHIL WALKER, Moline, Elk County, Kansas

SIX BREEDS DRAFT STALLIONS

Pedigree and guarantee with each, \$450 and up. Time given.

R. I. LITTLE, Good Block, Des Moines, Ia.

Barn Full of Percheron Stallions and Mares. Twenty-five mature and aged jacks. Priced to sell. AL. E. SMITH, Lawrence, Kansas.

AUCTIONEERS.

Live Stock and Farm Auctioneer

Write or wire for date. I can please you. LAFE BURGER, WELLINGTON, KANSAS

FRANK J. ZAUN Live Stock Auctioneer. Write or wire for date. Independence, Missouri

JOHN D. SNYDER Experienced Auctioneer, wants your sale. Write or wire. Hutchinson, Kansas.



P. M. GROSS

MACON, MISSOURI

LIVE STOCK AUCTIONEER

Pure Bred Sales a Specialty

"Twelve Years on the Block"

Sales Made Anywhere

Bates), Rose of Sharons and other noted families. A feature of the herd at this time is the fine lot of young stock, including outstanding young bulls.

The forty-second annual meeting of the Ayrshire Breeders' Association will be held in New York, January 11, 1917, at the Hotel McAlpin, Broadway at Thirty-fourth Street, at 1 o'clock p. m., to hear reports of president, secretary and treasurer, and to elect officers for the year ensuing.

Wonderful Egg Producer.
Any poultry raiser can easily double his profits by doubling the egg production of his hens. A scientific tonic has been discovered that revitalizes the flock and makes hens work all the time. The tonic is called "More Eggs." Give your hens a few cents' worth of "More Eggs" and you will be amazed and delighted with results. A dollar's worth of "More Eggs" will double this year's production of eggs, so if you wish to try this great profit-maker, write E. J. Reefer, poultry expert, 4248 Reefer Bldg., Kansas City, Mo., who will send you a season's supply of "More Eggs" Tonic for \$1.00 (prepaid). So confident is Mr. Reefer of the results that a million-dollar bank guarantee if you are not absolutely satisfied your dollar will be returned on request and the "More Eggs" cost you nothing. Send a dollar today or ask Mr. Reefer for his free poultry book, that tells the experience of a man who has made a fortune out of poultry. (Advertisement.)

We have received Volume 34 of the Holstein-Friesian Herd Book. This volume comprises entries from May 1, 1915, to January 15, 1916, instead of those for the entire fiscal year as formerly, the business having so increased as to make the issuing of one volume a year impracticable. The total number of entries in the volume is 45,538, of which 16,659 are bulls and 28,879 cows. The value of the book is greatly augmented

HORSES AND MULES.

SHORTHORN CATTLE.

Shorthorn Bulls

For Sale, Ten Shorthorns

Eight months to two years old. Reds and roans. Large rugged fellows from heavy milking families of Shorthorn cows. Will offer these bulls at farmer prices. Come and see them. They are priced to sell.

H. W. Estes, Sitka, Kan.

Barber Shorthorns

Villager Junior and Curley Dals Head Herd.

For Sale—Twenty coming yearling bulls, 20 yearling bulls, 40 cows and heifers, Scotch and Scotch topped. We have what you want. Come and see our cattle. Three hundred head in herd.

F. C. Barber & Sons

SKIDMORE - - - - - MISSOURI

Willow Lane Shorthorns

For Sale—Herd bull, Lavender Cumberland 384976. Color red, weighs over a ton, outstanding individual, fit to head the best herds. Also three yearling bulls; three two-year-old heifers in calf; one three-year-old cow in calf; one three-year-old cow with heifer calf at side.

MARK W. EDDY, FONTANELLE, IOWA

PEARL SHORTHORN HERD

Pearl, Dickinson County, Kans.

For Sale—Twenty bulls, 8 to 10 months old, red, white and roan. Can ship over Rock Island, Union Pacific, Missouri Pacific or Santa Fe. Come and see my herd.

C. W. TAYLOR - - - - - ABILENE, KANSAS

OUR HERD BULL

Abbotsford Lad 2d 395841, pure Scotch, deep red and a good breeder, three years old, priced to sell quick. We are keeping every heifer calf sired by him, also some young bulls six to ten months.

CHESTER A. CHAPMAN, Ellsworth, Kan.

CEDAR HEIGHTS SHORTHORNS

For Sale—Ten herd bulls from seven to eighteen months old. Scotch and Scotch-topped. Priced reasonable. Come and see my herd. HARRY T. FORBES, Bell Phone 59-N-1, Route 8, Topeka, Kansas.

Sycamore Springs Shorthorns

Master of Dale by the great Avondale heads herd. A few young Scotch bulls and bred heifers for sale.

H. M. HILL - - - - - LAFONTAINE, KANSAS

RIVERSIDE SHORTHORNS

Headed by Prince Valentine 4th 342179. Families represented, Orange Blossoms, Butterflies, Queen of Beauty and Violets.

H. H. HOLMES, Route 1, Great Bend, Kan.

PURE-BRED DAIRY SHORTHORNS

Double Marys (Pure Bates), Rose of Sharon and Craggs. Offer 3-year-old herd bull A snap. R. M. ANDERSON, BELOIT, KAN.

LOWEMONT SHORTHORNS.

Brawth Heir 351808 heads herd. Inspection invited. E. E. Heacock & Son, Hartford, Kan.

by its index, which contains an alphabetical list of all bulls recorded in it and a similar one of the cows; also a list of all persons whose names appear in the volume as either breeder or owner of an animal, together with the post office address of each and the numbers of the animals in the record of which his name appears. This volume does not contain the report of the annual meeting of the association, as the entries closed some months before that meeting took place. The usual reports will be published in Volume 35, which is now in preparation.

POLAND CHINAS



Faulkner's Famous Spotted Polands

We are not the originator, but the preserver of the old original big-boned Spotted Polands. The oldest and largest herd on earth. Every hog recorded in the recognized records. Bred sow sale February 14, 1917. Breeding stock for sale at all times.

H. L. Faulkner, Box K., Jamesport, Mo.

DEAN'S MASTODON POLANDS

Boars sired by Big Bone Model by Long Big Bone, champion Iowa State Fair; Smooth Black Bone by Smooth Big Bone, also champion Iowa State Fair, and Dean's Tim by Big Tim, a 1,120-pound boar. Dams of offering all by noted big-type sires. All immune. Bred sow sale February 28 at Dearborn, Mo. Write for catalog.

CLARENCE DEAN

WESTON, MISSOURI

Poland China Boars and Glts

Twenty-five early spring boars and twenty-five glts. Sired by 1 Am King of Wonder and Watt's King.

WM. WATT & SON - GREEN CITY, MO.

GREENWOOD FARM POLANDS

Bred glts for sale. The very best of big-type breeding, sired by my 900-pound boar. Price, \$30 each. Send check with order. Satisfaction guaranteed.

M. F. RICKERT - SEWARD, KANSAS

IOWA KING BRED SOW SALE FEB. 1

Will Sell 40 Head of Tops. Am offering now some choice herd boar prospects, June and July pigs. All immune. Send for catalog of sow sale and price on boars.

P. M. ANDERSON, LATHROP, MISSOURI

PIONEER HERD POLAND CHINAS

Twenty-five choice spring boars sired by the half ton A. Wonderful King, the first prize aged boar at Topeka fair and first and grand champion at Kansas State Fair at Hutchinson, 1916. Write for prices.

F. OLIVIER & SONS, DANVILLE, KANSAS

Lone Cedar Poland China Herd

Good spring boars by Meyer's Orange and out of mature sows, at farmer's prices for thirty days; also fall and spring glts, bred or open. Weanling pigs cheap. All immune.

A. A. MEYER - McLOUTH, KANSAS

Becker's Poland Chinas

For Sale—A few fall yearlings and spring boars, ready for service. Also fall pigs at \$10 per head. Leading strain.

J. H. BECKER - Newton, Kansas

Old Original Spotted Polands—Choice fall pigs, pairs or trios, no kin. Shipped in light crates. Carl F. Smith, Cleburne, Kansas.

HEREFORD CATTLE.

POLAND CHINAS.

OLD ORIGINAL SPOTTED POLANDS

150 choice spring pigs left, sired by seven of the very best boars of the East and West. Priced right. Write your wants to the

CEDAR ROW STOCK FARM

A. S. ALEXANDER, Prop., Burlington, Kansas

DEMING RANCH POLANDS

Twenty strictly high class boars, bred the same as our grand champion sow and other prize winners. They are herd headers. Also glts and bred sows and 150 fall pigs. All immune.

THE DEMING RANCH

H. O. Shelden, Herdsman, Oswego, Kansas

ARKELL'S POLANDS

Big high quality March and April boars, sired by Chief Big Bone, Longfellow Again and the champion Big Timm. These boars are out of big high quality sows and are fine prospects.

JAMES ARKELL, JUNCTION CITY, KAN.

EUREKA POLANDS AND DUROCS

April boars, fancy individuals. Priced for quick sale. Sires, Lafollette's Last, Bader's Golden Model 2d, McWonder and Big Ex Wonder.

W. H. SALES - SIMPSON, KANSAS

LANGFORD'S SPOTTED POLANDS

Boars—Serviceable age, guaranteed to please. Breeding stock, both sexes.

T. T. LANGFORD & SONS, Jamesport, Mo.

SPOTTED POLAND CHINAS

Spring boars, one extra good yearling boar by Faulkner's Spotted Chief and one of my herd boars, Spotted Duke, an 800-pound hog. Summer pigs, either sex.

R. G. SARTAIN, ROUTE 6, FAYETTE, MO.

OHIO IMPROVED CHESTERS

O. I. C. Serviceable Boars—Yearlings sows and glts bred for March farrow. Summer and fall pigs. G. P. Andrews, Dansville, Mich.

HEREFORD CATTLE.

STAR BREEDING FARM---HEREFORD PLACE

FOR SALE--100 BULLS

50 EARLY BULL CALVES
30 COMING 2-YEAR-OLDS
20 COMING 3-YEAR-OLDS

Herd headers and range bulls. Ten yearling heifers, twenty heifer calves and a carload of good cows. The very best breeding represented. Come and see me.

SAMUEL DRYBREAD, ELK CITY, KANSAS

HEREFORD CATTLE

35 BULLS, 10 MONTHS TO 2 YEARS OLD.
20 COWS AND HEIFERS.

Best breeding families. Bred to an Imported Bridgish bull. Come and see me. Sale barns right in town.

T. I. WOODDALL, HOWARD, KANSAS

WALNUT BREEDING FARM

Hereford Cattle, Shropshire and Cotswold Sheep, Berkshire Hogs. Thirty-five grandsons and granddaughters of Beau Brummel 10th for sale. Some extra herd headers at reasonable prices, breeding considered. Come and see my herd. Satisfaction guaranteed.

LEON A. WAITE, WINFIELD, KANSAS

Herefords and Percherons

Two choice Hereford bulls, 2 and 3 years old, well marked, both will make ton bulls. The 3-year-old weighs 1,950. Also some choice yearling Percheron stud colts.

M. E. GIDEON - EMMETT, KANSAS

HEREFORD CATTLE

150 Head in Herd. A few cows and heifers for sale. Also a lot of farm and range bulls. Priced reasonable.

B. M. BROWN, FALL RIVER, KANSAS

JERSEY CATTLE.

LINSKOTT JERSEYS

Kansas First Register of Merit, Estab. 1878. If interested in getting the best blood of the Jersey breed, write me for descriptive list. Most attractive pedigree.

R. J. LINSKOTT - HOLTON, KANSAS

SEVENTY HEAD REGISTERED JERSEYS

FORTY COWS AND THIRTY HEIFERS FOR SALE.

Nothing over five years old. Richly bred Fox Signal and Fern Lad families. All bred to choice registered herd bull. Must reduce herd.

N. L. DUCHESNE - GREAT BEND, KANSAS

REDHURST JERSEYS

Grandsons of Golden Jolly and Noble of Oaklands for sale. Also a few fancy cows and heifers of same breeding. Write.

REDMAN & SON - TIPTON, MISSOURI

120 Jersey Cows and Heifers

Pure-bred and high grade. Forty bred yearlings, superior individuals, all from profitable dams, now for sale.

J. W. BERRY & SON, Jewell City, Kansas

DORNWOOD FARM JERSEYS

Fine young bulls from Register of Merit and imported cows; descendants of Pontaine's Eminent, Pegasus 80th of Hood Farm, and Golden Fern's Lad.

DORNWOOD FARM, Route 1, Topeka, Kan.

Registered Jersey Bulls, butter-bred, from high producing cows. Photo furnished. Maxwell's Jersey Dairy, Route 2, Topeka, Kan.

HOLSTEIN CATTLE.

Clyde Girod, At the Farm.

F. W. Robison, Cashier Towanda State Bank

HOLSTEIN FRIESIAN FARM, Towanda, Kansas

Pure-Bred Holsteins, all ages, strong in the blood of the leading sires of today, headed by Oak De Kol Bessie Ormsby 156789. Special offering of choice young pure-bred bulls, ready for service, from tested dams. Let us furnish you a bull and improve your herd. TWENTY-FIVE pure-bred females, young useful Holsteins with A. R. O. records from 12 to 26 pounds butter in seven days.

BEFORE YOU BUY, TALK WITH US

We have an especially large, choice selection of extra high grade young cows and heifers due to freshen this fall and early winter, all in calf to pure-bred bulls. These females are large, deep bodied, heavy producers, with large udders, all well marked individuals and the right dairy type. Our offerings are at prices that challenge comparison for Holsteins of their breeding and quality. High grade heifer calves, \$25. Send draft for number wanted. Let us know what you want in Holsteins, and we will be pleased to send you descriptions and prices. Keep us in mind before purchasing. Wire, write or phone us.

GIROD & ROBISON -:- TOWANDA, KANSAS

BRAEBURN HOLSTEINS

John Walker DeKol, 14 months, \$150. His sire had a world record dam and sire's dam; has 30-pound sisters; has a junior-two daughter with 342-14.05 in missummer.

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

REGIER'S HOLSTEINS

Holstein-Friesian A. R. O. bulls ready for service. World's record blood flows in their veins.

G. REGIER & SONS, WHITEWATER, KAN.

GALLOWAY CATTLE.

GALLOWAY BULLS

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

E. E. FRIZELL, Frizell, Pawnee Co., Kansas

DUROC JERSEYS.

Maplewood Durocs

We have a fine lot of pure-bred Duroc boars ready for service, and some choice spring glts open, ready for December breeding. Price on boars, \$25; glts, \$30. Send us your order.

Mott & Seaborn, Herington, Kansas

A HERD BOAR

We offer the splendid herd boar, Gold Medal 176231, also spring boars by him and the great boar, Country Gentleman 132541. All double immune. Prices reasonable.

W. R. HUSTON - AMERICUS, KANSAS

TWENTY FIVE SPRING BOARS

Sired by Crimmon Wonder Again Jr., first prize boar at Topeka Fair, 1916, and G. M.'s Crimmon Wonder. Big rugged fellows ready for service. Immunized and priced to sell.

G. M. SHEPHERD - LYONS, KANSAS

GUARANTEED DUROC BRED GLTS

Immune Duroc glts with size, bone and stretch. Guaranteed in farrow. Shipped to you before you pay.

F. C. CROCKER, BOX K, FILLEY, NEB.

DUROC JERSEY BOARS

For Sale—Fifteen spring boars, two fall yearlings, sired by Wonder of Kansas. All are large and smooth. Priced right and satisfaction guaranteed. Write your wants.

K. HAGUE - NEWTON, KANSAS

DUROC JERSEY HOGS

Ten choice spring boars, real herd headers, the tops from forty head. Thirty-five spring glts. Priced to sell.

W. A. WOOD & SON, ELMDALE, KANSAS

MISCELLANEOUS.

LOOK HERE!

\$15,000 Worth of Property. Twenty-five head of stock horses and mules; 11 head of mammoth jacks; also some extra good jennets; good new 7-room house, acre of ground with good stock barn in Lathrop, Mo. Also one Percheron stallion, weight 2,000. Will sell this stuff cheap for cash or trade it for a good stock farm of 200 acres, within 100 miles of Kansas City.

W. W. SHOTT

Owl Hollow Stock Farm, Lathrop, Missouri

Breeder's Directory

ANGUS CATTLE.
Geo. A. Deitrich, Carbondale, Kan.
D. J. White, Clements, Kan.
SHORTHORNS.
C. H. White, Burlington, Kan.
RED POLLED CATTLE.
Mahlon Groenmiller, Pomona, Kansas.
HOLSTEINS.
C. E. Bean, Garnett, Kansas.
DORSET-HORN SHEEP.
H. C. LaTourette, Route 2, Oberlin, Kan.
JERSEY CATTLE.
J. B. Porter & Son, Mayetta, Kan.

BROWN SWISS CATTLE.

"BRYN-COED"

Ten choice young bulls by well selected sires and highly-bred heavy-producing dams. Prices reasonable.

PHIL H. JONES - NASHOTAH, WIS.

HOLSTEIN CATTLE.

IN MISSOURI

Price Segs Walker Pietertje 123955 heads herd. Dam 30.13 lbs. butter in 7 days, milk testing 5.07 per cent. A. R. O. of dam, granddam and ten nearest dams of sire, 29.75 lbs. Six of these are 30-lb. cows. His five nearest dams all test over 4 per cent. Bulls 2 to 8 months old, \$150 to \$350. Always have cows and bred heifers for sale. Everything registered Holsteins. Tuberculin tested.

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

Bonnie Brae Holsteins

A fine bunch of high grade two-year-old heifers coming fresh. Also a few young cows and one well-bred registered bull old enough for light service.

IRA ROMIG, Station B, TOPEKA, KANSAS

23-HOLSTEIN-FRIESIAN BULLS-23

Best of sires. A. R. C. dams, fourteen over 20 pounds. Seven of the others from heifers with records of 14.89 to 19.2 pounds. The kind you want. We have only two cows in the herd with mature records less than 20 pounds.

Breeders for Thirty Years.

McKAY BROS., Waterloo, Iowa

REGISTERED HOLSTEINS

We want to cut down our herd. Will sell ten or twelve choice cows, most of them young, also a few heifers.

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

CHOICE HOLSTEIN BULLS

Registered bull calves out of A. R. O. cows. Also a few heifers. Best breeding. Choice individuals. Price reasonable.

BEN SCHNEIDER, NORTONVILLE, KAN.

HOLSTEIN COWS

Holstein cows, springers or bred heifers. Very large; good markings, out of best milking strains, bred to pure-bred bulls of the very best blood. Special prices on carload lots.

J. C. ROBISON, TOWANDA, KANSAS

I should like to sell about ten head of my cows and heifers, as I have too many to take care of. I will try to make their prices agree with their ability to make good milk cows with an addition for the quality of the offspring.

Geo. C. Tredick, Route 2, Kingman, Kansas

HOLSTEIN CALVES

Fine bull calf four weeks old, well marked, from 25-pound sire, \$15. Also heifers from \$25 up.

Wichita Holstein Herd, R. 4, Wichita, Kan.

CORYDALE FARM HERD

Offers for sale four bull calves two to four months, sired by Jewel Paul Butter Boy 94245. These calves are all nicely marked and from good milkers.

L. F. CORY & SON, BELLEVILLE, KAN.

Butter Bred Holsteins

Buy your next bull calf from a herd that won the butter test over all breeds.

J. P. MAST - SORANTON, KANSAS

The Cedar Lane Holstein Herd

We are now offering some exceptionally good bulls of serviceable ages at very attractive prices. These calves are sired by our 29.4-pound grandson of Pontiac Korndyke.

T. M. EWING, INDEPENDENCE, KANSAS

HOLSTEIN CALVES

Registered and high grade Holsteins. High grade heifer calves two to four weeks old, \$20, delivered. We can supply you with anything in Holsteins.

CLOVER VALLEY HOLSTEIN FARM

Whitewater - Wisconsin

GOLDEN BELT HOLSTEIN HERD

Herd headed by Sir Korndyke Bess Hello No. 165946, the long distance sire. His dam, grand dam and dam's two sisters average better than 1,200 pounds butter in one year. Young bulls of serviceable age for sale.

W. E. BENTLEY, MANHATTAN, KANSAS

HOLSTEIN CALVES—Ten heifers and two bulls, 15-16ths pure, beautifully marked, 5 weeks old, from heavy milkers, \$20 each, slated for shipment anywhere. Write EDGEWOOD FARM, Whitewater, Wis.

AYRSHIRE CATTLE.

AYRSHIRE BULLS

Age two weeks to two years, priced to move quickly at \$40 to \$80. Worth double. Bred for high production. All pure-bred and sure to get high producing heifers. Herd of nearly a hundred, established in 1906, located at Linwood, Kansas, near Kansas City. Tuberculin tested yearly, never found a reactor. Milk test over 4 per cent.

Dr. F. S. SCHOENLEBER, Manhattan, Kan.

Raising Wheat and Mortgages

By HARRY BURMAN

I don't remember now who started it. Either my grandfather or his brother got 160 acres of land out in Southwestern Kansas from a railroad for a mere song. I don't believe you could have raised an umbrella on that place during the first ten years it was in the family's possession. With coaxing and sticking on the job all the time, a little wheat and corn would occasionally decorate the ground, but crops were certainly modest for many, many years.

Well, the place eventually came into my hands by right of kinship and by that time it was almost half as good sometimes as a regular farm in some other parts of the state. I was a poor as "Job's turkey." The wife and myself scraped out a hand-to-mouth living but it was enough to make a fellow despair and almost give up hope.

Things were at a crisis. The previous year I mortgaged the farm for money to take on a herd of two-year-old cattle. All kinds of things happened to that bunch of cattle. I wasn't equipped to take care of stock in the winter anyhow. I was in a deeper hole after my experiment.

The mortgage was one of those short-time, high-interest affairs. I saw my farm and everything slipping away from me. I couldn't borrow a red cent anywhere now.

It was rumored around that Zack Gordon, who lived next to me, had a big wheat increase the season before. Zack was not very neighborly with any of us and we didn't know very much of what was going on at the Gordon farm. One of Zack Gordon's hands told me that Zack had increased his wheat yield between four and five bushels per acre with some sort of machine that he used in spreading straw over the land. I couldn't find out much more and didn't try. If I had to wait for him to tell me how he increased his yield of crops, I would never know.

Things began to go from bad to worse. I couldn't sleep nights thinking of the impending disaster that stared me in the face. I had a vision of my wife and three kids being piled into a wagon with our household articles and rushed off the place. I could see that mortgage hanging over my head, ready to fall and crush all my hopes and ambitions. The days went on, weeks turned into months and I was just about ready for the madhouse. I passed Zack Gordon's place one day and saw Zack at work repainting his barn. The house was all finished and it looked fine. I also noticed that Zack had a silo in process of building and as far as I could see from the road, the place was about the best looking of any in the county.

I decided that something must be done and perhaps if I had a talk with Zack, I might get a few ideas that would help me out. So I resolved to let my pride fly to the four winds. I went up the lane to the Gordon place and when Zack saw me coming he laid down his paint brush and walked toward me. I was the first to speak and now as I remember the meeting, I confess my voice was none too strong. I was a little nervous, for it was years since I had spoken a word to the fellow.

"Hello Zack!" said I, "I see you are busy painting up things."

"Yes," answered Zack, "had a little time to spare and thought I had better fix up things while I had the chance and a few gallons of paint I got at a bargain price." Zack took me around and showed me where he was putting up the silo and back of the barn I saw some kind of an outfit fastened on the back of his hayrack. I asked Zack what the thing was. He said it was a straw spreader.

"A straw spreader! What's the idea?" I inquired. I had seen a manure spreader and had borrowed one a time or two, but this straw spreader was a new one on me. Unlike most farmers, I did not take a farm paper and had

seldom read one. I used to think the fellows that print farm papers were a lot of students who knew little, if anything about practical farming.

"Sure, that's a straw spreader," continued Zack, "and it means a lot to me for it increased my last yield of wheat almost five bushels to the acre. My land is like yours. It dries up and blows away every now and then. It needs fertilizer and moisture, too: Straw is really worth \$3.00 a ton and is going to be worth a lot more. Straw is full of potash and other fertilizing properties."

"Is that so?" was my only comment, but he had set me to thinking.

In a few days I was over to Zack Gordon's place to watch the thing work. He hitched up and spread a big stack of straw in one afternoon. He spread it on land that was already seeded to wheat. I had always burned my straw because I figured it was the easiest way to get rid of it. I walked over the ground where Zack had spread his straw and found that it was even and uniform and averaged about the right thickness. It was certainly a fine job of spreading. It was a "Perfection" spreader.

I went home thinking that the test would be a month later when the winds got up as they do in that section of the country in the early fall. I went over again to see the result, but I found that the straw held the soil together like it does bricks or hair does plaster. There was no soil blowing to speak of and for the first time in years. The strawed ground was also holding more moisture

for the growing crops. I figured right then and there that if straw wasn't good for anything else it was worth the trouble of spreading just for this.

After his wheat was up about three inches, I went over to see Zack again. To make the story short, I never saw wheat look finer in my life the next spring, and when harvest time came around his increase over the year's crop before he spread the straw, was over five bushels an acre, and even beat his last crop, which was a record. He had raised eleven bushels an acre off of that field and the first year after he got his spreader, he got over fifteen. This year it made better than sixteen. The field had 80 acres. So I guess over 400 bushels of wheat more than any year before wasn't a bad profit.

That fall I bought a "Perfection" Straw Spreader. I got an extension on the mortgage and things looked brighter.

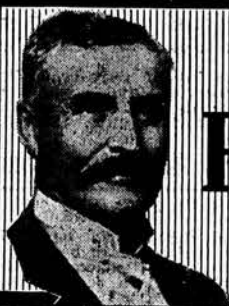
I decided to give it a good trial. I put my whole 80-acre field in wheat and spread straw over the field as a mulch. Then I spread some straw and barnyard manure over forty acres of grass. I bought three stacks of straw from a neighbor and spread it. In about a week some of my neighbors began to drop in to look my spreader over. Some of them offered to pay me \$5 a day if I would come over to their places and do some spreading. They had learned the truth about Zack Gordon's big increase. I made over half the price of my spreader in a week's time, spreading straw for my neighbors.

One year after I got my straw spreader I was a different man. Every straw that touched the ground was like a fairy's magic wand. That 80-acre wheat field—say, honestly, I never saw or heard anything like it. The profit from that

year's work put me on my feet. My soil didn't blow away—it kept moisture better than I ever hoped it would and the total value of my crops was just \$425 more than first year I used the "Perfection" than it ever was before. It was the talk of the farmers all around.

At this writing the mortgage on my farm is paid off. I own my own implements. I am now regarded as a successful farmer. Of course I am not saying that a straw spreader did it all. It took a little work, a little planning and a little attention to business on my part. But the straw spreader did give me a start.

The low price, ease, simplicity and durability of the "Perfection" Straw Spreader make it something that no farmer can afford to be without. It is making me \$500 a year in hard cash. If you want to know what it will do for your land, just write to the people who make it—the Union Foundry & Machine Company at Ottawa, Kan., and ask them for one of their free books on straw spreading and fertilizing. My land is worth about \$10 an acre more than it was a while ago. I wonder why? I could sell the farm now for a good round sum and get it all in cash. And it was only a short while ago that my farm was the joke of the neighborhood. Now my wife and kids are happy and have clothes and comforts like other folks. Incidentally the same banker who once turned me down for a loan of \$50 has just offered to loan me the money to buy the Zack Gordon farm. Wife and I think we can clear it in three years—guess we will make the deal. It is nearer town and the house has a furnace, a bath room, and other modern conveniences.—(Advertisement.)



Let Me Send You This PERFECTION Straw Spreader To Use 60 Days **FREE!**

You can enjoy an increased profit of \$5.00 per acre and more by using the **Perfection Straw Spreader**. I am ready to send you the proof—to satisfy you in every way that you can increase your wheat yield as much as five bushels per acre, and corn, alfalfa and other crops in proportion. Hundreds of other farmers in Oklahoma, Kansas, Nebraska and other portions of the wheat belt are enjoying increased profits of from \$500.00, \$600.00, \$700.00 and some as much as \$1,000.00 per year more by spreading straw with my new

Perfection Straw Spreader

Get the book—send for it today and read what farmers like yourself are doing. 45 Kansas farmers increased their wheat profits last year \$13,574 by spreading straw, an average profit of \$301.53. 37 Oklahoma farmers averaged an increase of \$250.75 the first year they used the **Perfection**. A large number of Nebraska farmers made about \$300.00 more each, and using the **Perfection** did it.

A ton of straw contains more fertilizing value than the best barnyard manure. Straw is overflowing with nitrogen, phosphorous, potash and other crop increasing products. This is a startling fact, but is absolutely true and will be confirmed by your State Agricultural College. Thousands of practical farmers have proved this fact to their own satisfaction. I proved it long ago, but not until I had burned hundreds of big fine straw stacks that would have increased my farm profits several thousands.

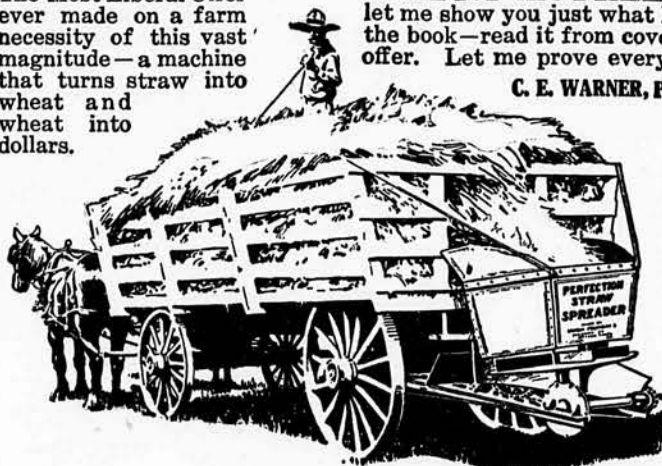
60 Days' Trial—A Whole Year to Pay

After you get my book and have read straw spreading facts, I know you will want to try the **Perfection Straw Spreader** on your farm. I will send you a **Perfection** without a red cent in advance. Try it as your own—use it as if you paid spot cash for it and then if you decide to keep it after the trial, I'll give you an entire year to pay it.

The Most Liberal Offer ever made on a farm necessity of this vast magnitude—a machine that turns straw into wheat and wheat into dollars.

Send for the FREE Book Today—Don't Wait—Don't Delay let me show you just what hundreds of others are doing—farmers like yourself. Get the book—read it from cover to cover and then take advantage of this friend-to-friend offer. Let me prove every statement—write me now—**Today**.

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I am interested in increasing my crop yields. Send me your Big Free Offer and Special 60 Day Trial Offer on the **Perfection Spreader**.

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