

KANSAS FARMER

For the improvement



of the Farm and Home

Volume 52, Number 14.

TOPEKA, KANSAS, APRIL 4, 1914.

Established 1863. \$1 a Year

"THERE were giants in those days." There are giants in these days also, if we will only look around us and observe them. One of the handiest of these modern giants is the gasoline engine or tractor. The giants of old were supposed to be very large and able to do the work of five or six ordinary men. This modern giant will not only do the work of several men but of several horses as well. He will run your separator, turn your churn, saw your wood, pump your water, cut your fodder, grind your corn, plow your land and many other things. The ancient giants were troublesome, hard to manage, and great eaters. The modern giant is tractable, always handy, always ready and willing to work, never gets tired, never runs away when you want him most. He is kept at very little expense. A drink of gasoline, or kerosene, when he is thirsty, and a little oil is all he needs, and that only while he works. Such a giant is a handy thing to have around, for at a touch you can rouse him to life and activity, ready to do your slightest bidding.

—Thomas Owen

GASOLINE ENGINE CONNECTIONS

DYNAMO - LIGHT
POWER

PUMPS - FIRE PROTECTION
IRRIGATION
HOUSE - BARN
SPRAY

LAUNDRY - WASHING MACHINE
WRINGER

MILK HOUSE - SEPARATOR
CHURN

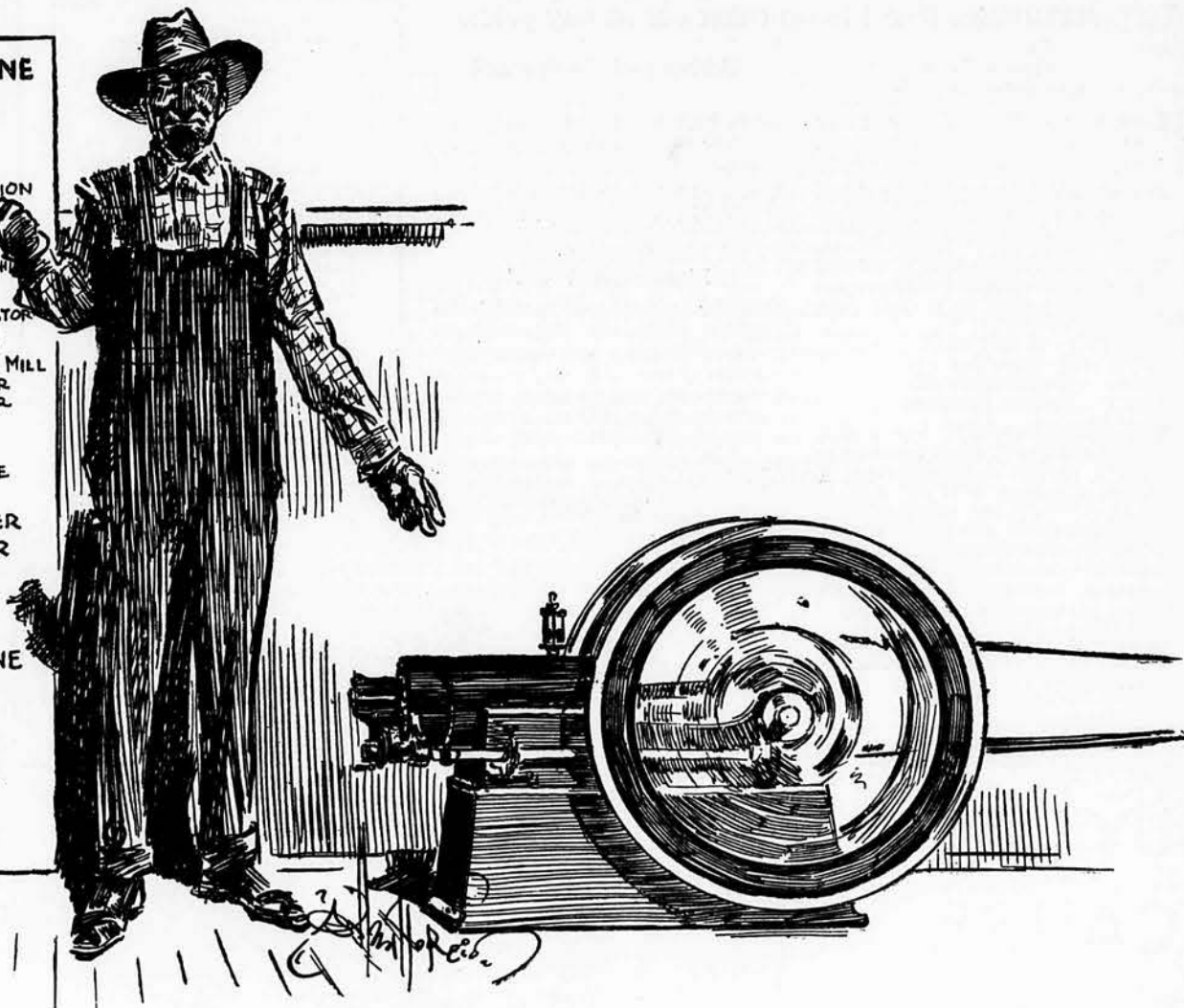
GRANARY - FANNING MILL
GRINDER
SHELLER

SHOP - FORGE
LATHE
GRINDSTONE
DRILL

ENSILAGE CUTTER
GRAIN ELEVATOR
SAW

HAY BALER
HAY FORK
MILKING MACHINE

WHEAT BINDER
WHEAT HEADER



The Little Giant of Modern Days

Studebaker

SIX

\$1575

ELECTRICALLY
• STARTED •
ELECTRICALLY
• LIGHTED •
SEVEN PASSENGER
FULL-FLOATING REAR AXLE

Hunt Among the Highest Prices For a Car Worthy of Comparison With This

Don't be afraid to aim at a much higher price in seeking the equal of this Studebaker SIX.

Judge it by cars costing from several hundred to a thousand dollars more. Follow the comparison—point by point.

Start with the seating capacity. The Studebaker SIX carries seven. Not six, but seven—in comfort, without crowding.

Its measurements, front and rear are identical with cars costing much more.

And it carries its seven passengers more economically—because it carries them without the wasteful bulk of heavier cars.

Without reducing the space, it cuts the weight tremendously—by scientific design and a proportion of lighter but strong steel forgings and stampings, found in no other car at any price.

Money Can't Buy a Better Axle

Look next at the full floating rear axle. No car at any price can improve upon it.

It's not a semi-floating; or a three-quarter floating; but a full floating rear axle.

This axle constitutes a 30,000 pound-inch factor of safety—you couldn't better it if you paid \$5,000.

Full Supply of Timken Bearings

The Studebaker SIX has a full equipment of Timken bearings—not a partial equipment—but a full equipment.

So you couldn't do better in the matter of bearings if you paid \$2,500—or more. (We are the largest buyers of Timken bearings in the world, by the way.)

Now, study the system of starting and lighting—the Studebaker-Wagner.

Unsurpassed Starting and Lighting

There isn't any better system than the Studebaker-Wagner separate unit.

You couldn't buy a better if you paid \$5,000—it simply isn't made.

A Strictly Manufactured "Six"

Consider now, the way in which the car is built—the proportion of manufactured and assembled parts.

No car in the world—at any price—is more thoroughly manufactured than the Studebaker SIX.

Studebaker does not make the tires or the wheels.

But we do make all our own castings, stampings and forgings—all

our own springs, and bodies, and upholstery—our own crown fenders, and cowls, and even our tops.

A Motor Beyond Compare

You know something about Studebaker motors. We've built more than 120,000 of them.

This SIX motor was built and rebuilt, tested and re-tested, for three long years, before it was offered to the world.

The experiment was all over and out of it before many another "Six" was even conceived in the draughting room.

Go right on up to the costliest cars—you won't find a sweeter or a smoother or a quicker or a more flexible motor than this.

Hunt, Hunt—We're Glad to Have You

So, we repeat—start high above the Studebaker price in seeking another car worthy of comparison.

We not only welcome comparison—we urge it.

In bigness, in beauty, in power, in silence, in seating capacity, in manufactured strength, it convinces every man who examines it that he need not pay more than \$1575.

Send for the Studebaker Proof Book. It tells how we manufacture Studebaker cars in the Studebaker factories.

STUDEBAKER
79 Piquette Ave., Detroit

Send For This Folder

This is an extract from a folder just issued which you should read. It tells of the tremendous life-saving importance of the Studebaker Full Floating Rear Axle.

"If the shaft breaks will the wheels fall off?"

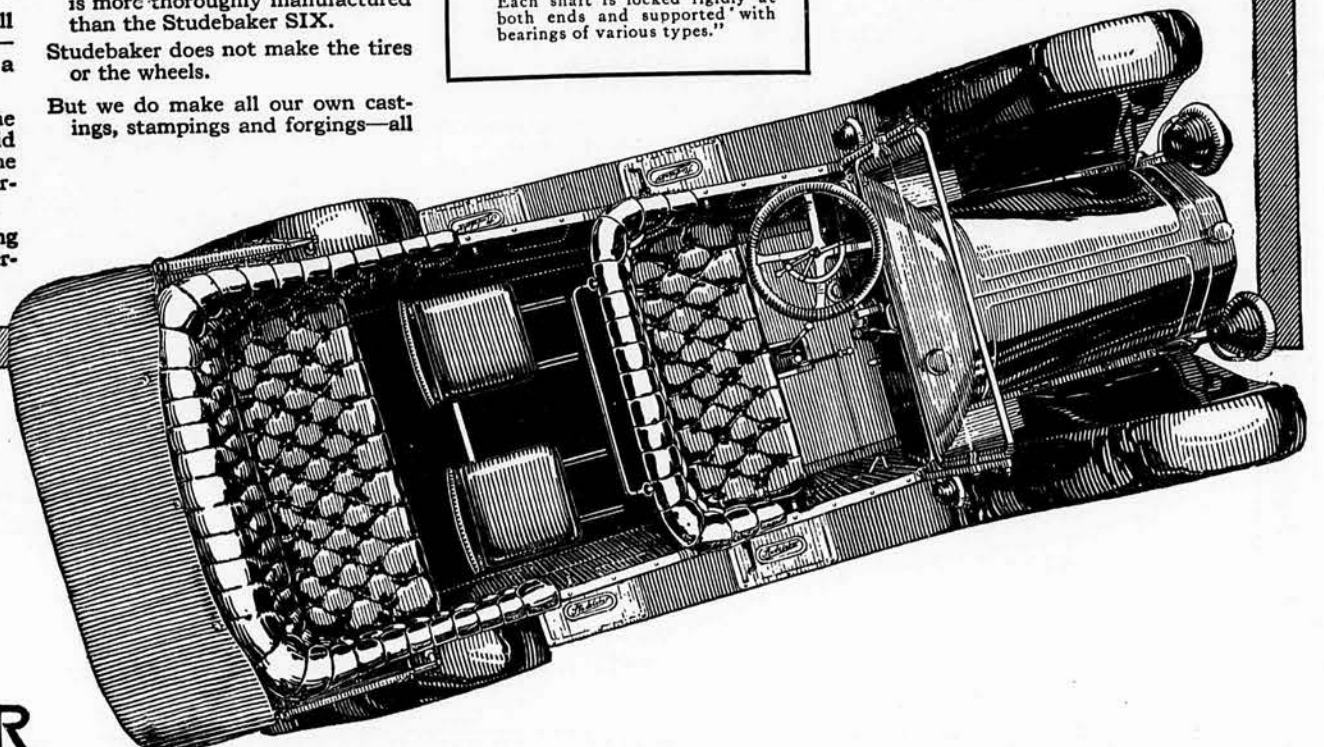
"That is the acid test. In the floating axle the rear wheels are independent of the shafts for their connection with the car. Full floating axles do not break. Broken axle shafts occur only in non-floating types of construction in which, when a shaft breaks, a wheel loses its moorings.

"In the primitive, semi-floating type the axle shafts are asked for a wide range of service. In addition to turning the wheels, the shafts must support them and the entire weight of the car which rests upon these wheels. Each shaft is locked rigidly at both ends and supported with bearings of various types."

F. O. B. Detroit

"FOUR" Touring Car	- - - \$1050
"SIX" Touring Car	- - - 1575
"SIX" Landau-Roadster	- - - 1800
"SIX" Sedan	- - - 2250
Model "25" Roadster	- - - 875
Model "25" Touring Car	- - - 885
Model "35" Touring Car	- - - 1290
Model "35" Coupe	- - - 1850
Six-Passenger "SIX"	- - - 1550

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BECAUSE
IT'S A
STUDEBAKER



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30 cents per agate line—14 lines to the inch. No medical or questionable needed advertising accepted. Last forms are closed Monday noon. Changes in advertising copy and stop orders must be received by Thursday noon of the week preceding date of publication.



KANSAS FARMER

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GUARANTEED CIRCULATION OVER 40,000

OUR GUARANTEE

KANSAS FARMER aims to publish only the advertisements of reliable persons or firms, and we guarantee our subscribers against loss due to fraudulent misrepresentation in any advertisement appearing in this issue, provided, that mention was made of KANSAS FARMER when ordering. We do not, however, undertake to settle minor claims or disputes between a subscriber and advertiser, or be responsible in case of bankruptcy of advertiser after advertisement appears. Claims must be made within thirty days.



EDUCATION AND THE FARM.

There is probably no one thing that has a greater bearing on the success of the farmer of today than the securing of a good education. It is true many farmers with a limited amount of schooling have succeeded fairly well, but these same men would have attained to far greater success if they had had the opportunity for better educational training. No one ever heard the well educated farmer complain that he wasted valuable time in his early life in attendance at school. Just recently some farm management surveys of three representative areas in Indiana, Illinois and Iowa have been reported. Here, as in a previous investigation made in New York, it was found that the men having the best educational training have been making the largest incomes. In the course of these farm surveys, 247 farms operated by tenants were investigated. In order to determine the real influence of education the educational data were tabulated. A study of the results secured by these tenant farmers having but limited capital is most interesting. They were divided into groups according to the amount of capital available. In the group having over \$3,000 in capital there were 40 who had common school education only. The average labor income of this group of common school farmers amounted up to \$1,086; the average annual labor income of the 23 high school trained farmers amounted to \$2,087. The high school education here meant almost double the annual labor income.

It is undoubtedly true that many farmer boys leave the farm because they see no future in it. Farming is a business the same as any other great industry, and our young men, both those growing up on the farms and in the villages and cities, should be taught early in life some of the fundamental principles covering the profitable conduct of farming operations. The young men of today will not turn from the business of farming as an occupation if it can be shown to them early in life that this great industry can be profitably conducted and will furnish as great opportunities to the highly trained man as any other occupation which might be chosen. There should be a full understanding of just how farm profits and losses are made. The solving of these many business problems of the farm and the making of farming a profitable enterprise will do away with the problem of keeping the boy on the farm. It will solve itself.

WATERS TO PHILIPPINES.

Kansas has been honored by the appointment of her first son by the Federal Department of Agriculture to make an inspection of the bureaus of education and agriculture in the Philippine Islands. President Waters of the Kansas Agricultural College has been granted a leave of absence that he may accept this appointment. He will leave Man-ber 1. He will inspect the bureaus as above stated and will continue on an agricultural investigational tour which hattan May 15 and return about Octo-may take him around the world.

The educational system of the Philippines has been developed to a high degree since the United States came into possession of the islands. This has done much toward establishing a permanent agriculture in the Philippines. Some of the islands have not yet been organized. President Waters will make a study of local conditions and will suggest systems best adapted to the islands and formulate plans for developing them. This is the third time President Waters has been invited to visit and lecture before the university at Manila and make a study of Philippine agriculture. At other times the invitation came at a season when it was impossible for him to leave Kansas. The Board of Administration has designated Dr. Willard as acting president during President Waters' absence.

The people of Kansas will be pleased that this appointment has come to President Waters. He deserves the compli-

ment. A change of work and scenery will do the president much good. It is certain that he will return to Kansas with much of benefit to the state and the institution over which he presides. Kansas and the president are to be congratulated.

LONG TIME FARM LOANS.

The subject of farm loans has always been interesting and important, but at no time in the history of Kansas has always been interesting and important, but at no time in the history of Kansas has the subject been more important or of more general interest than at present. To this date there have been no state or federal measures which have promised loans for a longer period than at present prevails. It seems essential that in a very great measure farm loans on suitable terms must be provided through some state legislation and which will encourage the loaning of money on long time by insurance companies, by banks and other financial organizations. It is feasible that the state school fund be loaned on farms as is done in Oregon and in several other states. However, the Kansas school fund, in proportion to the amount of money needed, is but a drop in the bucket, but the loaning of it on farm lands will help some. There are several avenues through which arrangements may be made for long time loans on farm lands, some of which avenues are already established, but other avenues may be opened through other organizations. For example, through organizations similar to the building and loan associations now found in every city.

In last week's KANSAS FARMER, Dean Miller of the Extension Division of Kansas Agricultural College, gave his view of those things needed by the tenant or the young man who seeks to become a farm owner. It was his idea that longer time for loans is more important than a lower rate of interest. We think he is right. His views are the most sensible we have heard expressed on this subject.

FREE SEEDS AGAIN.

It seems strange that the intelligent men we send to Congress should hang with such tenacity to the privilege of franking to their constituents back home the little packages of seeds of various kinds, with the "compliments of So-and-So." Absolutely the only excuse that can be offered for the continuance of this free seed farce is the opportunity it offers to the member of Congress to keep his name before his constituency. In spite of the recommendations from the Secretary of Agriculture to cut out this enormous expense, Congress has again gravely voted by a strong majority to continue the appropriation for the seeds, which they are even now franking out through the mails to their constituents in various parts of the country, whether they happen to live on the farm or in the tenement district of a great city. During the debates which recently took place in Congress, some member facetiously inquired whether Patrick Henry did not say, "Give me free seeds or give me death." Apparently our

Congressmen consider free seeds of vital importance to their political life, at least.

Various organizations of farmers have repeatedly condemned the free seed distribution. Few farmers have any use for them whatever, and the continuance of this graft is an unwarrantable tax on the public. We shall probably continue, however, to have free seeds sent to us with the compliments of our members of Congress through all time to come.

SUMMER SCHOOL.

There is each year an increasing demand for trained teachers in agriculture, shop work, mechanics, the sciences, and home economics. The necessity for vocational training in the common schools is becoming more and more apparent. The Agricultural College of Kansas has peculiar advantages for training teachers in vocational subjects. This splendidly equipped plant for the teaching of these vocational subjects is having its usefulness greatly enlarged by the summer school which is being conducted each year for the benefit of teachers. The pamphlet making announcements for the courses to be given this year in the summer school are now ready for distribution. Sixty members of the college faculty will be on the board of instruction for this year's summer school, several new courses being offered. The school will begin June 19, 1914, and will continue six weeks.

It would be expected that thorough courses would be given in agronomy, animal husbandry, dairying, horticulture and poultry, but those desiring work in English, mathematics, history, German, physics, chemistry, zoology, ethnology, botany or music will not be disappointed. A course in photography has even been arranged for.

One of the special features will be a course in home economics for rural schools. This subject will be presented under rural school conditions, using rural school apparatus. Beginning July 6 there will be a special ten-day school given for rural leaders. This school or conference has for its purpose the unifying of methods of work among rural teachers, Sunday school and Y. M. C. A. workers. Prof. E. L. Holton, Manhattan, should be addressed for full information relative to the summer school.

We cannot get around the fact that men farm for money. Farmers who abandoned the growing of live stock in Kansas and other states did so because grain farming, for the time being at least, brought them more money for their labor. This change was not made because grain farming was especially preferred or because the desirability of maintaining soil fertility was deliberately ignored. Prices at the present time are extremely high for all live stock productions. Those who have turned to grain farming will naturally turn back to live stock farming as a result of this condition and the change will come much more quickly when farmers appreciate the great possibilities of decreasing the cost of production by the use of silage and alfalfa.

RAPE PASTURE FOR HOGS.

In the recent hog feeding bulletin from the Kansas Experiment Station, a study of the results secured shows that where spring shoats were grown through the summer on pasture with a small amount of grain, and finished in the fall and winter in dry lots, the average cost for producing the gains was from 15 to 20 cents less per hundred than where similar shoats were full fed through the summer. The experiments reported in this bulletin have showed in every case that abundant pasture was a most important factor in producing pork at a low cost. It has also been found that rape pasture produced gains fully as cheaply as alfalfa pasture.

The man who has no alfalfa pasture should by all means utilize the rape as a substitute. This plant grows very rapidly, producing a large and succulent growth. As soon as the hogs become accustomed to rape it makes one of the best of pasture crops. It is a cool weather plant and for that reason can be sown early in the spring. Rape can be sown as soon as the ground is in condition to work. The seed is inexpensive and with a good seed bed, four or five pounds per acre is sufficient. The seed cost for an acre should not exceed 40 or 50 cents.

A good, mellow seed bed should be prepared, and the richer the ground the greater will be the production of forage. The crop will ordinarily be ready to graze in six weeks from the time it is sown. When it has reached a height of ten or 12 inches the hogs may be turned in. If it is allowed to get too large and rank the hogs may not eat it readily. Where several lots are available it is a splendid plan to make successive seedings so that the hogs may be moved to a fresh lot as soon as one is grazed down. If rape is not grazed too closely it will continue to grow when the hogs are removed, and later they may be turned on again.

At the Missouri Experiment Station, pork has been produced upon rape pasture at the rate of one pound of pork for every 2½ pounds of grain fed. With pork at 8 cents a pound, this would mean that this acre of rape had returned a forage value of \$31.42. No farmer should go without hog pasture when it is so easy to secure it by the seeding of waste lots to rape.

ARGENTINA CORN.

Argentina has now invaded the American markets with corn. This corn is being sold at prices and in shipments to suit the buyer. These offerings of Argentina corn will undoubtedly continue to be large. Corn will probably be sold at prices below that asked by the holders of old corn in this country. Under the condition prevailing this year Argentina is undoubtedly able to undersell United States corn, and the holding up of the prices here will be a splendid opportunity for this country to unload its surplus corn at a big profit in our markets. The acreage of corn in Argentina is about the same as that of Iowa or Illinois. The average production, however, is much less, being about 35 bushels per acre, according to available statistics. In normal years it is questionable whether Argentina can compete with the great corn-producing sections of this country. Flinty varieties only are produced, and for feeding purposes this flinty corn must be ground. Without grinding, it cannot be used successfully, and this fact handicaps the South American corn in competing with our dent varieties.

The Kansas State Fair Association will hold its annual exposition September 14 to 19 in Topeka. George E. Clark, for twelve years a resident of Shawnee County and a breeder and exhibitor of pure-bred cattle and hogs, was last week elected secretary. The prospects for this year's exhibition equalling that of last year in every respect are extremely favorable. Arrangements are being made to induce an exceptionally fine display of Shawnee County agricultural products and live stock.

Write It In Your Contract

Write "Kansas inspection" in your contract when you buy corn, oats, etc. Make your purchase subject to Kansas inspection and you will get the quality for which you pay.

Do not buy from the fellow who will not sell subject to Kansas inspection.

Kansas farmers have lost thousands upon thousands of dollars the past fall and winter because they accepted corn and oats of a lower grade than they paid for and could't help themselves because they did not specify "Kansas inspection".

Kansas has a good grain inspection law but the Kansas City Board of Trade has been fighting it for years. The members have made every effort to discredit it and defeat the law. It is to be presumed that it is to their personal advantage to do so.

That is a pretty good reason why the farmers of Kansas should be for it and write "Kansas inspection" in their contracts.

GENERAL FARM INQUIRIES

Something For Every Farm—Overflow Items From Other Departments

IN your issue of February 28 I find an article, "Costs in Feeding Live Stock," which I have read with interest and surprise; with interest because I realize the necessity for better farm accounting than is generally practiced, and with surprise at your criticism of the methods by which a Mr. C. M. Bennett, whom you quote, computes the costs of feeds. I heartily endorse Mr. Bennett's views and consider it very unjust and unwarranted to accuse him of "artificial juggling of figures," to "discriminate in favor of live stock" on the strength of his statements as you quote them. Instead of his deductions being "certainly most illogical," I think your position is untenable as well as illogical. In your apparent effort to discriminate in favor of live stock you seem to start from the supposition that the cost of production of feeds must necessarily be below the market value of same; but "it is a poor rule that will not work both ways." Suppose you turn it the other-end-to and take the last season for instance, when every bushel of corn raised in this state was produced at a tremendous loss, and probably cost as many dollars to produce as it ordinarily does cents, would you charge this loss to the live stock, or would you then apply Mr. Bennett's "illogical" rule and take the price on track, plus cost of hauling to the farm?

We farmers are often upbraided by college professors, editors of agricultural and other papers, etc., for our apparent failure to apply good business methods to farm management, but the worst derelict among us would probably suggest a lunacy commission if a farmer was found who would be content to feed corn to live stock at 40 cents per bushel when he could get 60 cents by selling it. If there are other factors (and I admit there are) that might make the marketing of feed by the live stock route preferable to selling it direct, then the proper way to do is to credit the live stock with these items, such as the value of the work of draft animals, the barnyard value of fertilizer produced, etc., and then the balance account, even if feed is charged at its actual cash value at the farm.

Now please do not get the idea that I wish to discredit the work of the agricultural press or the agricultural college; I simply want to sound a note of warning to both, not to allow their eagerness to foster certain lines of agriculture to cause them to "juggle figures" at the expense of other lines, lest they destroy the very object they strive to attain.

To emphasize my confidence in KANSAS FARMER on general principles, I enclose herewith check for two years' subscription of same.

Yours for better farm bookkeeping and better farming methods in general.
—A KANSAS FARMER WHO SEEKS THE TRUTH, NO MATTER WHERE HE FINDS IT.

We are glad indeed to publish these very clearly expressed views of our correspondent. We would suggest that those who may read this article refer back to the article in our issue of February 28 in which this matter of cost accounting in feeding live stock was discussed. As with many differences of opinion, a different understanding of the terms used is responsible for the apparent differences in viewpoint of our correspondent from the thoughts suggested in the article. There are so many different enterprises under way on the average farm that systems of cost accounting are sometimes very difficult to work out. We still maintain that in a system of cost accounting on live stock production the cost of producing the feed should be used, whether the feed has cost more or less than its actual market value. If, in such a year as has just passed, corn, which had cost \$1.50 per bushel to produce, should be fed to an animal, the animal would necessarily be charged for the corn at the cost of producing it. Later the same animal might be fed corn which had been purchased and hauled out from town, which had cost only 75 cents when laid down on the farm.

The excuse given by the author quoted in the previous issue, for not using figures as to the feeds used in animal production, was that the securing of these figures was an exceedingly difficult proposition and for that reason a simple way out was to assume market value for the feeds in the system of cost accounting for the animal production.

The profit and loss account is the

one in which we are the most vitally interested, and in our eagerness to get at this final aim of all cost accounting it has led to the confusion arising from the use of the various terms involved. It is only by working out fairly accurate cost accounting systems on the different enterprises carried out on the average farm, that it is possible to determine the proper place to credit the profit or loss of the business as a whole. It is necessary, however, in the working out of the various cost account items that profits on any particular item which may enter into these cost accounts, be left out of the consideration.

Our system of cost accounting on the production of the corn crop, for instance, charging up every legitimate item of actual cost entering into the operations, might show us that it had cost us 40 cents a bushel to produce this crop. If it is worth 60 cents on the market we can easily determine our profit per bushel, when sold, by adding to the actual cost of production the cost of marketing and deducting this final cost from the market price. In the cost accounting system which we may carry out in the handling of some phase of live stock production after determining accurately the cost of the product and charging it only with actual cost of the various items, the result may show us that when the product is sold at its market price the corn which has entered into the product has realized a return of 75 cents per bushel. This would not necessarily mean that corn production is given no credit as a profitable enterprise, but that good animals had returned 15 cents more profit a bushel for

habit has been so thoroughly confirmed that it cannot be broken by correcting the diet and the hog is a valuable one which cannot be sacrificed, some protection can be offered to the chickens by hanging a leather blinder over the face, attaching it to the ears with hog rings.

More About Commelina.

The following letter has been received by J. C. Mohler, Assistant Secretary, State Board of Agriculture, relative to the plant known as commelina:

The commelina to which you refer is very likely commelina crispa, a plant belonging to the commelinaceae or spiderwort family. This family includes both perennial and annual herbaceous plants, most of the 350 species of which are found in tropical regions, but a few of them occur in temperate climates. Among these is the commelina crispa or curly-leaved day-flower, a species which is found in the sandy and rocky soils of Missouri and Nebraska, southward to Texas and New Mexico. It is an herbaceous perennial plant, the stems of which usually extend along the ground or are at least only sub-erect.

Regarding its drought resistance, there is at present only meager data. It does not occur in Southwestern Kansas under extremely dry conditions, but is found growing on the sandy soils of this region where the drought conditions are not usually so severe as on the heavier soils and in addition to this the plants are usually scattered.

The fact that it is receiving attention at this time in the newspapers is probably due to the efforts of H. Willis Smith, Garden City, Kansas, who has

siring the fence hog-tight must stand that expense himself. The following section of the law entitled, "Hog-Tight Fence," has a bearing on this question: "Whenever any owner of land enclosed in part by a partition fence, desires to make hog-tight any part of the fence inclosing his premises, constructed or maintained by the owner of the adjoining land, he may attach to such partition fence in a secure and workmanlike manner, woven wire at least two feet in height, so as to prevent hogs from getting through such fence. Where both parties desire to have a hog-tight partition fence the same law would apply, on dividing the expenses, that would apply on any other kind of partition fence."

Setting Bermuda.

After years of experience, we open furrow with lister as deeply as possible, about 3½ feet apart. Before doing this, have in the field the bermuda roots cut into pieces about a foot long. Soak the roots in water for several hours just prior to taking to the field. Keep them in boxes or sacks to prevent drying.

For planting, place the roots in a sack or tin pail, tying this over the shoulder, and follow the lister closely before the soil dries, dropping a piece of root about every three feet. Have a man follow with a hoe, covering the roots entirely with about two inches of the moist soil. Step upon the root in passing, to firm the soil. If the second team is at command, harrow or cultivate the ridges, throwing some dirt into furrow to retain the moisture. Later cultivate as for corn. In cultivating, should the young bermuda be covered slightly with dirt, it will come through.

The bermuda will be slow in starting, but later it will grow luxuriantly. Should the season be favorable, the ground will soon be covered.

The bermuda growing upon the ridges and the latest to set may winter kill, as it is not deeply rooted, but it will come again from the parent stem planted so deeply in the bottom of the listed furrow.

It is generally pastured during the autumn and furnishes as much pasture the first season as the native grass does at its best. It is best not to pasture too closely the first season, leaving some of the foliage for mulching during the first winter.

Two things to remember about bermuda are: Secure the improved, big, creeping, hardy variety, and set it deep into moist soil.

Another method of setting, which is cheaper but not so good, is this: Drop roots into every third furrow, following the plow. Disk and harrow each day's planting before leaving the field. Cultivate with harrow.

For new timber land or stony ground, use a single shovel with a coulter running from the beam to the point of the shovel, to open the furrow. Drop and cover and harrow.

Upon embankments or where too rocky to use ordinary tools, open the soil with a spade and set as one would set cabbage plants.

If wet, the roots can be kept two weeks before setting, but they are perishable and the sooner set the better.

Bermuda makes a permanent pasture, but we prefer to plow it under occasionally. It will re-set itself only two weeks later. Cultivation is the life of the soil. We have learned to disk alfalfa to admit the air and sunshine and to prevent its becoming root-bound. The same principle should be applied to bermuda.

For setting bermuda upon the lawn, many set the roots thicker as a good stand is desired at once. For this, a spade is good, setting the roots one or two feet apart. Or, open a furrow with the hoe or garden plow. String roots continuously, cover with hoe and use hand rake or hoe to keep the weeds down and the soil in the best of tilth.

Do not use the lawn mower until the ground is fully covered with bermuda. A bermuda-carpeted lawn will be for your comfort. Walk upon it at your pleasure. It will do it no harm. Use water if convenient. It takes water to make the plant food available. Bermuda, like the child, grows best when well fed and cared for. In mowing, save the grass for chickens. It is nearly equal to bran.—F. A. MITCHELL, Chandler, Okla.



SHEEP ARE COSMOPOLITAN IN DIET.—THEY EAT 90 PER CENT OF ALL VARIETIES OF WEEDS.—THE BEST TILLED CORN FIELDS HAVE TONS OF GRASS AND WEEDS BY FALL.—SHEEP ARE ONLY ANIMALS ABLE TO TURN THIS WASTE MATERIAL INTO FOOD AND CLOTHING.

the corn marketed in that way than if it had been sold on the local market. If the final results should show that the animal production returned less for the grain or other feeds that are consumed, than they would bring on the open market, the farmer certainly would be justified in selling those products instead of marketing them by means of live stock.

We trust that more effort will be made by our thinking farmers to determine the cost items concerned with the various enterprises of the farm.

Chicken Eating Hog.

The inquiry comes from M. P., a reader, Coffey County, regarding the prevention of a hog from catching and eating chickens. This correspondent has a hog six months old that is crazy after chickens. The correspondent states that the hog has pulled mouthfuls of feathers from the chickens but has not tasted one as yet.

It is sometimes very difficult to break a hog which has thoroughly acquired the chicken eating habit. It is usually due to an improperly balanced diet. A lack of sufficient variety in the ration and especially a lack of protein make the animal crave animal food. Properly balancing the ration, including some tankage, will tend to correct this difficulty. Some hog men have reported breaking chicken eating hogs by giving them all the tankage they would eat. This, of course, makes them temporarily sick and the claim is made that they will not afterwards be so crazy for animal food. The diet should be properly balanced, however, in any case. If the

been developing it as a possible solution of the forage problems connected with farming on his extremely sandy soils. He is a farmer who takes deep interest in working out the problems connected with agriculture in his part of the state.

Our tests of this plant in the experiment station at Hays, Kansas, and Amarillo and Chillicothe, Texas, have not made us feel very enthusiastic regarding its future possibilities. This may be due to some extent, however, to the fact that our plantings were made only recently and the plant has not as yet had a chance to thoroughly establish itself. Its character of growth, however, would make it so difficult to harvest that I fear it would be available only as a pasture plant. The slowness with which it obtains a foothold is also against its use as a hay plant. If we are to judge its feeding value from chemical analysis, it would seem to rank very high. I am quoting below an analysis of this plant which was made by the Bureau of Chemistry of the Federal Department of Agriculture.

Moisture, 6.50 per cent; ash, 14.85 per cent; other extract, 2.18 per cent; protein, 13.09 per cent; crude fiber, 23.75 per cent; nitrogen free extract, 39.75 per cent.—H. N. VINALL, Washington, D. C.

Hog-Tight Division Fence.

An inquiry comes to KANSAS FARMER from C. W. Y. of Brown County, as to whether the Kansas law required a man to maintain one-half the hog fence on a line where the adjoining owner desires to pasture hogs on his side. A legal fence, according to the Kansas statutes, is not a hog-tight fence. The party de-

ALFALFA PREMIER CROP

Poor Seed Bed Preparation Cause of Most Failures to Secure Stand—Acid Soils Must Be Limed—Inoculation is Needed Where Bacteria Is Not Present

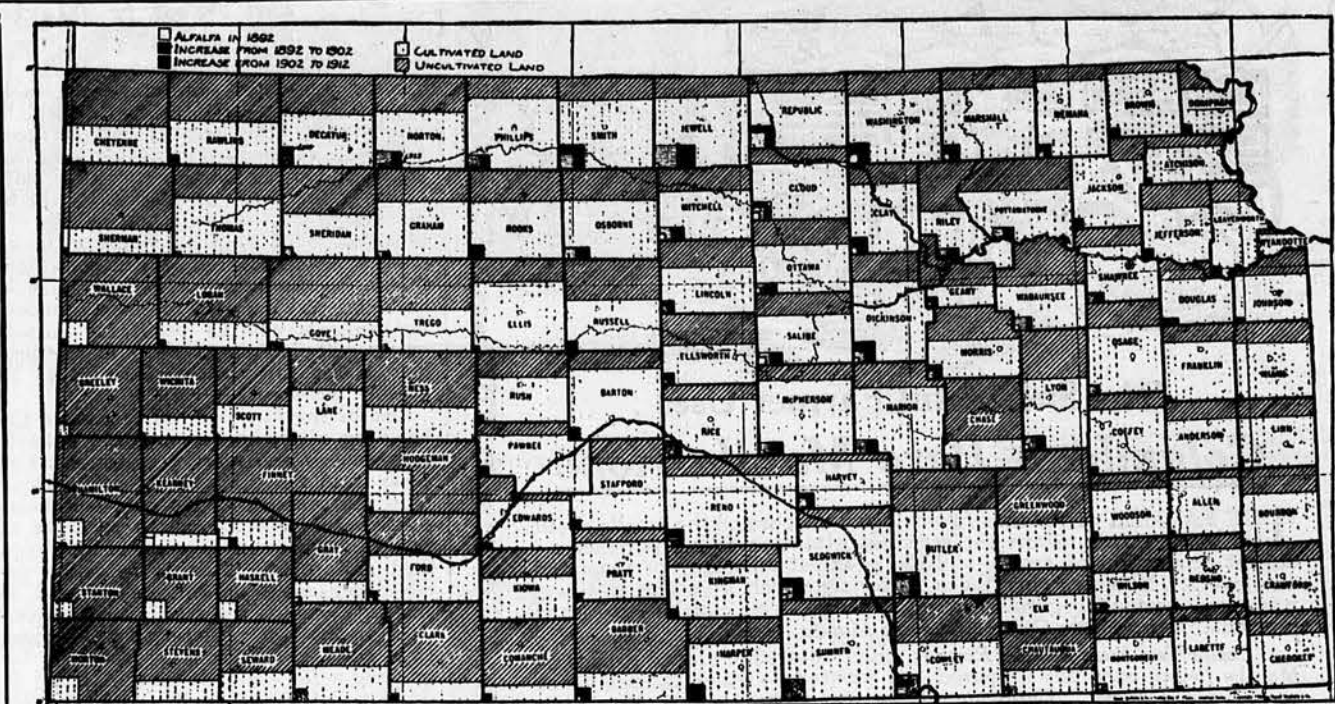
ALFAFA has become well nigh indispensable to the live stock grower of the Middle West. From comparative obscurity it has come into prominence during the past twenty years in a manner never before equalled by any other known plant. In Kansas the acreage of alfalfa has increased from 62,584 in 1892, to 458,485 in 1902 and to 1,000,783 in 1912. Jewell County has 58,984 acres, or almost 13 per cent of its total cultivated area seeded to alfalfa.

Its great value as a feeding crop for all kinds of stock has been the means of introducing it over practically the whole of the Middle West, and those who have had the most experience in its use are loudest in its praise. In all sections of this territory where cattle and sheep are finished for market, alfalfa is the only roughage ever used to any great extent. It is greedily eaten by all classes of farm animals and is a most valuable feed for all purposes. The steer feeder and mutton producers of Kansas, Colorado and Nebraska would be lost without it, and as a means of putting pork upon the market at a low cost it cannot be excelled.

The map on this page, which has been reproduced from bulletin 197 of the Kansas Experiment Station, is arranged to show the increase in alfalfa production in the state during the past twenty years. During the first ten years of this period the acreage increased 632 per cent and during the second ten years 118 per cent. The central third of the state produces the bulk of the alfalfa grown. Through this section the soil is especially adapted to its growth and the annual rainfall, which averages 30 inches, is ample for giving good returns. The alfalfa of Western Kansas is grown almost entirely along the streams, the rainfall of this section being insufficient to produce the crop successfully on the uplands. In quality the crop produced through this area is especially high, owing to the favorable conditions for properly harvesting and curing.

As will be noted from the map, great interest has been taken during the past few years in the introduction of alfalfa through Northeastern Kansas. The acreage has also been greatly increased during this same period in the counties of Harper, Sumner and Cowley in south Central Kansas. In Southeastern Kansas the crop has made little headway. The soil of this section is so often acid in condition and the subsoil so tight as to be unsuited for the alfalfa crop. It perhaps may be grown successfully to some extent with a proper knowledge of the essential soil conditions. The first efforts to introduce it through this territory probably resulted in more actual harm than good to the farming conditions of this section of the state. The mere arousing of the enthusiasm of farmers to the extent that they were led to purchase the seed and sow it was not enough to secure success under the conditions prevailing.

Alfalfa enthusiasts should always recognize that certain conditions are essential for the successful growth of this plant. Means of creating these conditions are gradually being worked out in states farther east and north, and the great value of the plant makes it well worth while to use every effort possible to introduce it successfully through this territory where conditions are not naturally right at the present time. The question as to whether alfalfa can be grown successfully in certain areas is not a simple one. Oftentimes a group of complicated problems must be studied from several different angles by differ-



THIS MAP SHOWS THE PROPORTION OF CULTIVATED AND UNCULTIVATED LAND IN EACH COUNTY, AND THE PROPORTION OF THE COUNTY IN ALFALFA IN 1892, 1902 AND 1912.

ent groups of specialists. An examination of the soil will not show conclusively what is going to happen when alfalfa seed is planted. A careful study of all these problems through the means of various experimental plots may be necessary before the existing conditions can be sufficiently corrected to make the crop a success.

THE ALFALFA SEED BED.

The great value of alfalfa as a crop and the important relation it bears to live stock farming should stimulate increased interest in increasing its acreage throughout Eastern Kansas the coming year. According to the recent bulletin already referred to, an improperly prepared seed bed is responsible for more failures than any other one factor. Alfalfa should never be seeded in a deep, loose seed bed. The young plants almost invariably perish later in the season when started upon a seed bed of this kind. The good seed bed should be firm, well settled, but with the surface soil mellow and pulverized as deep as the seed is to be sown. A seed bed of this character permits the plant to secure a proper root hold and the capillary water of the subsoil is always available.

Through Eastern Kansas the practice of seeding in the fall has been generally more successful than spring seeding. Many, however, seed alfalfa with success in the spring, and where the proper conditions are present there are those who will undoubtedly find it to their best interest to put out a few acres of alfalfa this spring instead of waiting until fall. For spring seeding, fall plowed land gives the best conditions for preparing the proper seed bed. This land should be thoroughly worked with the disk and the harrow until the necessary mellow, finely pulverized surface is secured. A corn field which has been carefully cultivated the previous season and is free from weeds and grass can oftentimes be very simply prepared in the spring by

the careful use of the disk and harrow. This method is always to be preferred to spring plowing. On land which is well supplied with available plant food this method of seed bed preparation may result in securing a successful stand.

If the soil is poor and deficient in available plant food, it is not likely that the best of results will follow this method of seeding. While the alfalfa plant is able, after it is well established, to secure its necessary nitrogen direct from the air, it is absolutely essential for the newly germinated plant to have an abundance of available nitrogen in the soil. In Eastern Kansas it will be found that fields which have been well manured with barnyard manure the year previous, will be in a condition to supply this ready available plant food.

The benefit to be derived from such use of barnyard manure in securing a quick stand of alfalfa on poor upland fields, has been carefully tested out at the experiment station. An upland field was leased for this purpose. It had been cultivated for about 30 years and had never been manured in the past. In the fall of 1906 ten tons of manure were applied to one acre of this field. The field was seeded to wheat. The yield from this field was 35.09 bushels, whereas an unmanured acre of the field yielded but 18.06 bushels. Alfalfa was seeded the last of August and the following year, 1908, 8,560 pounds of alfalfa were taken from the manured acre and 4,104 pounds from the unmanured acre. The next year, 1909, the manured acre yielded 11,856 pounds of alfalfa hay and the unmanured 8,541 pounds. It will be seen that the result of this preliminary supplying of the soil with available plant food resulted in doubling the yield of alfalfa the first season and increased the yield nearly one-third the second season. It was stated that the stand on the unmanured acre showed a rather sickly, yellow growth the second season and if the year it was

seeded had not been especially favorable for starting alfalfa, this stand would have failed entirely. This point should be given careful consideration by those planning to seed alfalfa this spring. The application of barnyard manure the year preceding may very easily be the deciding factor between failure and success in securing a stand of alfalfa.

CONDITIONS IN EASTERN KANSAS.

According to the studies made by our experiment station, the eastern third of Kansas may be divided into two quite distinct alfalfa regions. In Northeastern Kansas the principal difficulty in establishing alfalfa in the past has been that the soils in that part of the state are apparently lacking to some extent in the necessary alfalfa bacteria. Alfalfa never starts vigorously where these bacteria are not present, even though the soil conditions may be especially suitable. Some of the old, worn fields of this part of the state have also been deficient, at the time of seeding, in available plant food so that the young plants started slowly and were winter-

In the southern part of this section there occurs three types of soils—limestone soils, sandstone soils and shale soils; the limestone soils upon which alfalfa can usually be started with comparative ease, occurring northward toward the Kaw River. This type of soil is less common toward the south and in Cherokee County there are practically no limestone soils, with the exception of very small areas in the northwestern part of the county. Upon the shale soils, which are usually poorly drained and sour or acid, alfalfa has almost invariably failed completely. Alfalfa never will thrive on a poorly drained soil, and even though a successful stand may be secured in the start, it will be killed out by the first wet spell.

Only one really successful stand has been reported on the shale soils of this part of the state. O. A. Rhoades, who lives four miles southeast of Columbus, Kansas, has five acres of alfalfa seeded in 1911, which up to the present time has made excellent growth. This land, however, was thoroughly under-drained with tile. Two tons of ground limestone was added per acre and it was manured at the rate of 20 tons of barnyard manure per acre the year before seeding. The soil was likewise inoculated with alfalfa bacteria at the time of seeding. This experience of Mr. Rhoades would indicate that it is possible, through a clear understanding of the conditions essential to success with alfalfa, to secure satisfactory stands even in Southeast Kansas. While this crop may never be as extensively grown through this territory as in regions more especially adapted to it, every farmer should at least try to secure a few acres of this most valuable crop. Even a few acres in alfalfa will be of great advantage in the handling of live stock, and the more live stock that can be handled the greater will be the opportunities for the production of barnyard manure. In time, by studying closely the requirements of the crop and applying the barnyard manure produced, the acreage may be gradually increased.

(Continued on Page Nine.)

Grow Your Own Protein—Do Not Buy It

ALFALFA IS EQUAL TO BRAN
Bran Costs - - \$21 Per ton
Alfalfa - - - 5.15 " "

Rent for Five Years	\$25.00
Seed	2.00
Preparation and Seeding	5.00
Manure Lime Inoculation Etc.	4.00
Cutting Twelve Times	36.00
	\$72.00

Total Yield Five Years Fourteen Ton
\$72 ÷ 14 = \$5.15, Cost Per Ton

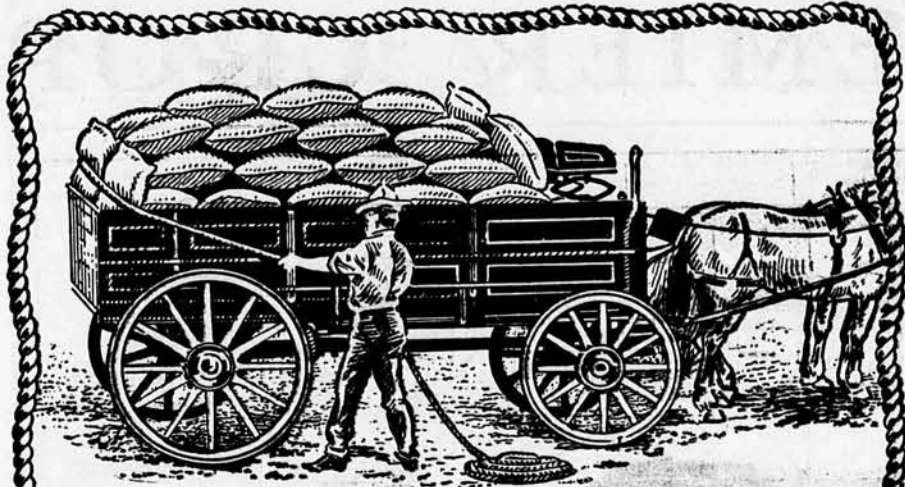
Although Kansas leads all other states in alfalfa, its acreage could be doubled with profit. It is the premier crop for the live stock farmer. Alfalfa and live stock increase farm value by enriching the soil, thus producing larger crops of corn, wheat and oats.

Alfalfa Should Be Grown on Every Farm

1. IT IS A PROFITABLE CROP
2. INCREASES FARM VALUES
3. EXCELS ALL OTHER CROPS IN YIELD PER ACRE—IN FEEDING VALUE—AS DROUTH RESISTER AS A SOIL ENRICHER
4. No harder to grow than clover
5. Make a beginning—Start now Grow some alfalfa
6. Motto: Alfalfa on every farm

FARM PASTURES

*Subject Demand Care—Experimental Study
and Must be Marked Out For Each Farm*



The Successful Farmer Uses Columbian Pure Manila Rope

THE FARMER who makes farming pay watches all the details about this place. This means the strictest attention to his purchases—fullest production of crops—and the greatest efficiency of tools and employees. He buys only those materials which give him the best wear and service regardless of cost price. You can be sure he is particular to purchase *Columbian Pure Manila Rope*.

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Commercial Twines—Clothes Line, Etc.

COLUMBIAN ROPE is the Cheapest Because it Wears the Longest

You will need *Columbian Rope* this year. Your dealer is now placing orders for the rope he will sell this season. He will be glad to get *Columbian Rope* for you if you ask him. Better speak to him now, and when the rope comes, ask him to show you the *COLUMBIAN GIRL* on the Burlap Covering. Every coil is stenciled like this.

Send for "Story of Good Rope and How the Government Tests It."

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Quick Work Brings Dollars

Every day you save in plowing—every inch of extra depth you get—means better crops and bigger profits.



15-30 horse power

The GasPull is light—weighs only 11,000 lbs. Handy—will turn a 15-foot circle—fast under a light load, powerful under heavy; pulls 4 to 6 plows—just what you need for deep plowing, rapid seeding, quick harvesting and summer-fallowing.

The GasPull furnishes economical power for all kinds of belt work, as well as for such traction jobs as hauling or road making.

The GasPull is easy to run—low platform, convenient levers; one man can easily operate engine and plow.

We have 49 branches and 11,000 dealers to co-operate with farmers. Supplies and parts always at hand. Be sure to get GasPull catalog No. 352.

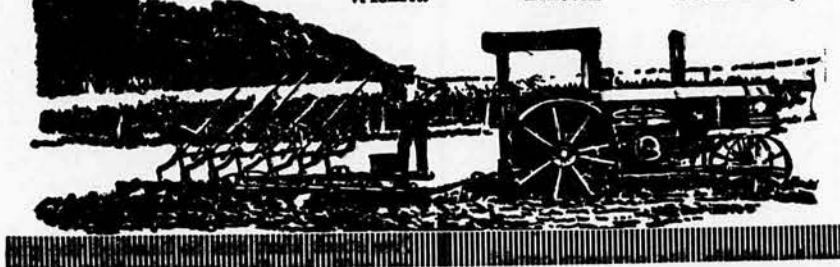
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Chicago Power-Farming Machinery Illinois
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ADVERTISING PAGE FOR READY BARGAINS
READ KANSAS FARMER'S CLASSIFIED

It is evident that the farms will be one of the main sources of our meat supply in the near future. This will be necessary if the present rate of consumption of meat products is kept up. In order for the farms to increase their capacity for meat production it will be necessary for some changes to be brought about in the system of farm management followed. When these preliminary adjustments have been made so that the growing of a few meat producing animals can be profitably carried on we will find the capacity of our corn belt states for meat production to be greatly increased.

One of the fundamental factors in the handling of the meat producing animals on farms is the matter of pasture and cheap feed for the winter. It has long been the practice of the corn belt meat producers to depend on the purchase of feeders for the consumption of his rough feed and grain. This is becoming increasingly more difficult on account of the high cost of the feeder on the market. In the new adjustment which must take place, provision must be made for growing a few animals on the farms; in other words, a portion of the farm must be devoted to the problem of producing the cattle needed instead of depending on the purchase of feeders from outside sources.

Except on our most level prairie lands practically every farm contains some land that is not suitable for tillage purposes. Of course a larger per cent of this kind of land is found in the hillier and rougher portions of the country. Through eastern Kansas there has probably been many an acre of land plowed up and cultivated which should have been left in permanent pasture. These lands were rich and fertile, and for that reason proved very productive during the first few years. Owing to their rolling nature they are now badly washed and have become unproductive. The only method by which such a farm can be brought back to its original state of fertility is to use all lands of this kind for pasture purposes. In this way the soil can be largely prevented from further erosion and the handling of live stock which is a necessary incident to the pasture will mean the bringing of fertility to the worn field.

It is likely that in a great many instances considerable work will be required to get such lands into shape to produce satisfactorily even as pastures. After they have once been well improved, however, they will require little attention to keep them in a high productive condition.

The farmer with fields on his farm which have been handled in such a way as to become unproductive can well afford to spend the time and expense necessary to reclaim a few acres each year, thus adding very materially to the value of his whole farm both from the standpoint of its value upon the market and from the standpoint of producing increased income.

It is undoubtedly true that at the present time little effort is being made to improve and develop pastures on the small farms of our state. Far too little is known as to the best methods to follow in bringing about such improvement. In some cases the land is so badly washed that it will not even grow grass, and manure must be spread to bring up its fertility; bad washes and ditches must be stopped to prevent the further erosion and loss of soil. There undoubtedly is much untillable land over our state which has been allowed to grow up into brush. This is unproductive and of course must be removed before such land can be successfully seeded to grass and begin to produce revenue. We need more information and experience as to the best combination of grasses to use in re-setting the permanent pastures of our state. These problems are all important and well worthy the careful consideration of our farmers. Every acre about the farm should be a productive acre and it is only by attacking these various problems and working out the solution that this can be brought about.

Some of the very richest lands of our state are classed with the waste lands because of the overflows from streams which continually take place. Such soils are usually exceedingly rich. Some of them can undoubtedly be reclaimed for productive purposes by co-operative effort along the line of establishing draining districts having for their purpose the straightening of streams and the

carrying out of other methods to lessen the dangers of overflow. Some of these lands, however, could be handled as pasture lands with profit. They might just as well be growing something that could be made useful as allowed to grow up to brush or foul weeds.

It is absolutely essential that every idle acre of the farm be set at work under the prevailing conditions at the present time. With the demand for products continually increasing, the conversion of many idle acres into revenue producing acres as permanent pastures would seem to be a most feasible proposition.

It has so long been the belief that cattle could not profitably be grown where farm lands are valued at from \$100 to \$150 per acre, that we have made no attempt to utilize these few waste acres, which almost every farm possesses, as a means of growing a few cattle in the corn belt territory. The wintering of the animal has practically been solved by the introduction of the silo. As has already been noted in KANSAS FARMER columns it has been shown by the Kansas Experiment Station that enough silage can be grown on an acre to supply all the silage six or seven cows will require during a hundred and fifty-day wintering period. This was accomplished by utilizing straw, which has ordinarily been classed as a waste product. This means that silage from five acres with all the wheat straw the animals would eat, which amounted to something over a ton per head during the wintering season, would supply all the roughage needed to winter 30 head of breeding beef cattle. In order to supplement the cheap roughage, 150 pounds of cottonseed meal would be required per cow during the wintering period.

In purchasing and feeding this cotton seed meal it is well to bear in mind that each hundred pounds of the meal brings to the farm over seven pounds of nitrogen, three pounds phosphoric acid and one and one-half pounds of potash. If purchased on the open market in the form of commercial fertilizer this amount of fertility would cost in the neighborhood of \$1.50. When purchased and fed to stock cattle fully 75 per cent of it will be available for the building up of the poorer lands of the farm. In an article which appeared in KANSAS FARMER February 14 reference is made to the statistics of Jackson County which is a typical county of eastern Kansas. These statistics show that less than 25 per cent of the tillable land of this county is devoted to tame pasture, grasses and legumes. This acreage could be doubled with profit, and after proper attention is given to working out profitable systems of live stock farming there will undoubtedly be an increase in the use of the grasses and legumes on the farms in this portion of our state.

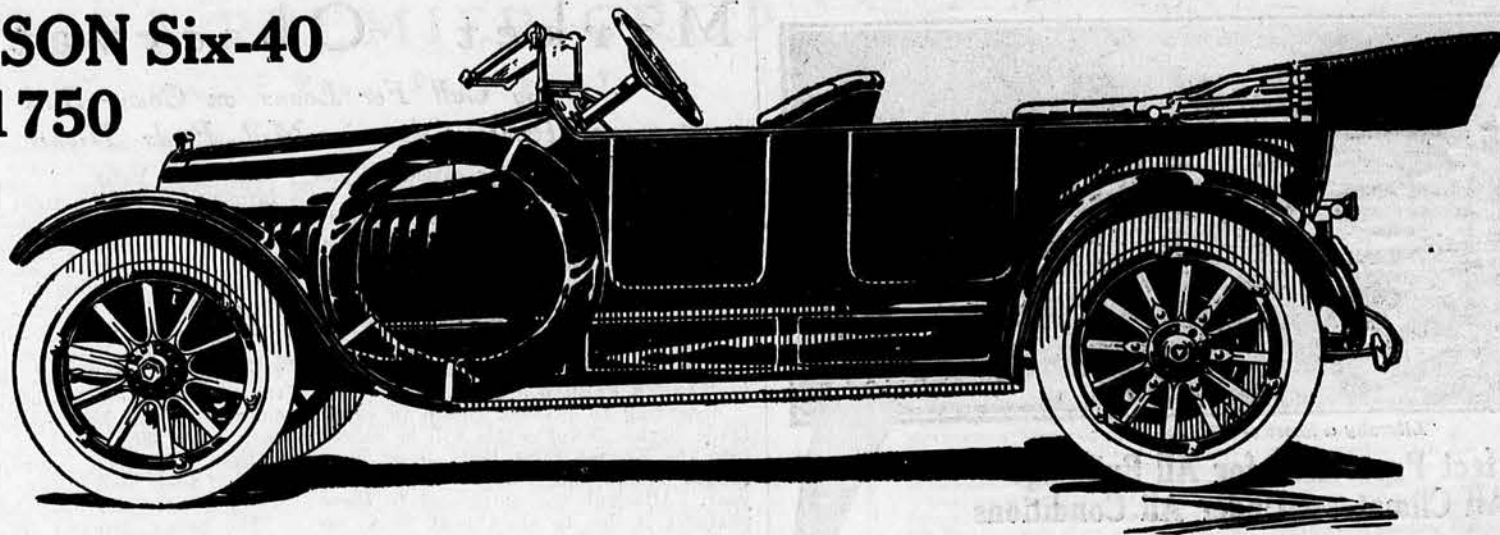
We noted recently in an exchange that a farmer of Jasper County, Indiana, where land is worth from \$125 to \$150 per acre, purchased in Chicago in July, 1912, a bunch of good Shorthorn cows which cost him at the rate of \$4.40 per hundred or an average of a little over \$37 per head. These young cows were in calf and only recently this same man brought back to the market a bunch of 625-pound yearlings which brought him \$9 per hundred or a little over \$56 per head. The price received for these yearlings more than offset the first cost of the breeding cows and the cows have increased in weight and are worth considerable more in the market than at the time they were purchased. This serves to illustrate that it has been possible to handle breeding cattle profitably even on very high priced land.

The hog consumes more food in relation to his weight than any other kind of live stock. He likewise produces greater returns for the food consumed than any other animal would produce from the same quantity of food. Experiment teaches that with proper fencing and the use of any of our legumes, preferably alfalfa, swine will earn more quick money than any animal on the farm. Salt, wood ashes and charcoal are good things to keep in the hog pastures, and a supply of pure water is very necessary.

One of the advantages of swine husbandry is that it gives quick and remunerative returns.

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Your Ideal Car

In this HUDSON Six-40 you will find, we think, your ideal of a car. Its lightness, its beauty, its price, will appeal to you. So will its economy and its new-style equipment. But above all, it's a Six—and a Light Six—at a price which last year seemed impossible.

It's a HUDSON

In the first place, this car is a HUDSON. That means it was designed by Howard E. Coffin and the 47 engineers who work with him.

This is the most famous engineering corps in the industry. It has built some of the greatest cars built in America. And for many years the chief of this corps has blazed the way which Motordom has followed.

The best car ever built by Howard E. Coffin is bound to meet your ideals in designing.

It's a Quality Six

Your ideal of a car is a Six. That is every man's ideal. No man can ride in a Six and ever again be content with a lesser car.

A high-grade Six rides like constant coasting. It is smooth-running, flexible, free from vibration. And one rarely needs to change from high gear.

Note how all Motordom is coming to Sixes, save in the cheapest cars. Every high-grade maker now, save one, features a Six for best.

The HUDSON Six-40 is a quality Six. Inside and outside—down to the smallest details—it embodies the best HUDSON standards. And it pays, as you know, to buy a quality car. One can never take pride in a skimpy car. And such a car, in the end, will cost more than a HUDSON.

It Weighs 2,980 Pounds

The HUDSON Six-40, through able designing, combines strength with amazing lightness. We have

saved from 450 to 1,200 pounds as compared with other cars in this class.

Think what that means in tire cost and fuel. A car 1,000 pounds heavier would be the same as carrying an extra six or seven passengers. It would add to your upkeep hundreds of dollars during the life of a car.

It's a Fuel-Saver

The HUDSON Six-40 has a new-type motor—with small bore and long stroke—a European conception. This type of motor has broken all records in low operative cost.

This light car with this motor consumes less fuel than any equal-powered car that we know. We have made many comparisons under many conditions, both with Fours and Sixes. But we have found no comparable car which goes nearly so far on a gallon of gasoline.

A Distinguished Car

The HUDSON Six-40 will strike you, we think, as the handsomest car of the year. It has an ideal streamline body, unbroken at the dash. All hinges are concealed. The upholstery is hand-buffed leather.

The tonneau has two disappearing seats, so the car will seat up to seven passengers.

The gasoline tank is in the dash. The extra tires are carried ahead of the front door. Thus we get proper weight distribution.

There is a "One-Man" top, quick-adjusting side curtains, dimming searchlights, electric horn.

And there is the Delco patented system of electric lighting and starting. Up to this season there has never been a car so perfectly equipped.

A Record Price

And this HUDSON Six-40 sells for \$1,750 f. o. b. Detroit. Think of that—a high-grade Six-40, designed by Howard E. Coffin, built to accord with the best HUDSON standards, at a price far below cars which nowhere near meet today's ideals like this.

Then count what this lightness saves in tires. Count what this motor saves in operative cost. And count what one saves in depreciation by having a car of the coming type. There are many cheaper cars, smaller and lower-powered, which would cost you more than this in the long run.

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We can't build enough of these cars this spring to supply all men who want them. At this writing our factory is a month behind orders. So, if the car we describe meets your ideals of a car, you should see your HUDSON dealer at once.

Car, as pictured, with two extra tonneau seats, \$1,750, f. o. b. Detroit. Standard Roadster, same price.

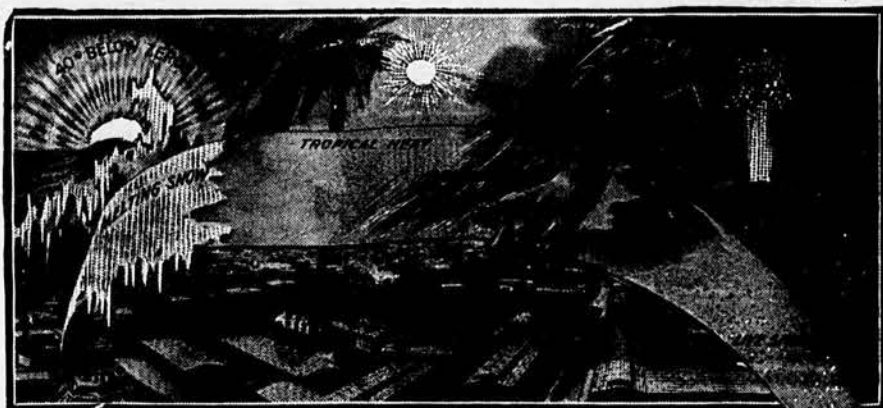
Convertible Roadster—a coupe in rough weather, an open roadster in fair weather, \$1,950.

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Our Larger Six-54

We build on the same lines the new HUDSON Six-54. In design, finish and equipment these two cars are almost identical. But the Six-54 has a 135-inch wheel base and more power. The price is \$2,250.

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The hottest weather can not cause J-M Asbestos Roofing to dry out or melt. The coldest weather can not crack it. Gases, chemical fumes or salt air can not injure it. And it gives perfect protection against fire. In a word, being mineral through and through, it is practically indestructible. There isn't a particle of perishable material in

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It is composed of Asbestos and Trinidad Lake Asphalt. Asbestos is a rock, and therefore everlasting. And Trinidad Lake Asphalt has withstood the terrific duties of street paving for over forty years.

J-M Asbestos Roofing is lower in first cost than shingles, tin or slate—and cheaper than all other roofings when cost-per-year is considered. Tin, iron and most prepared roofings have to be coated or graveled every few years. As J-M Asbestos Roofing contains nothing to rot, rust or otherwise deteriorate, it never needs a single cent's worth of coating or other protection. Its first cost is the only cost.

Comes in rolls and flat sheets, easy to lay. Also furnished in built-up form. J-M Roofing Cleats, packed in each roll, make absolutely water-tight laps, and give the entire roof an unbroken, handsome white surface. Sold direct if your dealer can't supply you. Write today for sample of the curious Asbestos Rock and Book No. 3080

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Your motor has approximately 1500 parts. To reach all friction points properly your oil must suit your motor.

No one lubricating oil can be efficient for all cars.

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It is a standard guide to correct automobile lubrication.

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It is safest to buy in original barrels, half-barrels and sealed five and one-gallon cans. See that the red Gargoyle, our mark of manufacture, is on the container.

On request we will mail a pamphlet on the Lubrication of Automobile Engines. It describes the common engine troubles and gives their causes and remedies.

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MINNEAPOLIS



Correct Lubrication

Explanation: In the schedule, 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." For all electric vehicles use Gargoyle Mobiloil "A". The recommendations cover both pleasure and commercial vehicles unless otherwise noted.

Model of	1910	1911	1912	1913	1914
CARS					
Abbot Detroit	A	Arc.	Arc.	Arc.	Arc.
Alco	A	Arc.	Arc.	Arc.	Arc.
Amos	A	Arc.	Arc.	Arc.	Arc.
Apperson	A	Arc.	Arc.	Arc.	Arc.
Autocar (5 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Autocar (6 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Avon	A	Arc.	Arc.	Arc.	Arc.
Buick (5 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Buick (6 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Case	A	Arc.	Arc.	Arc.	Arc.
Chalmers	A	Arc.	Arc.	Arc.	Arc.
Claire	A	Arc.	Arc.	Arc.	Arc.
Cole	A	Arc.	Arc.	Arc.	Arc.
E. M. F.	A	Arc.	Arc.	Arc.	Arc.
Emery	A	Arc.	Arc.	Arc.	Arc.
Exel	A	Arc.	Arc.	Arc.	Arc.
Exel (5 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (6 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (7 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (8 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (9 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (10 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (11 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (12 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (13 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (14 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (15 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (16 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (17 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (18 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (19 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (20 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (21 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (22 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (23 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (24 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (25 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (26 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (27 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (28 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (29 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (30 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (31 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (32 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (33 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (34 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (35 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (36 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (37 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (38 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (39 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (40 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (41 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (42 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (43 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (44 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (45 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (46 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (47 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (48 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (49 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (50 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (51 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (52 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (53 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (54 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (55 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (56 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (57 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (58 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (59 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (60 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (61 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (62 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (63 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (64 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (65 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (66 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (67 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (68 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (69 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (70 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (71 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (72 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (73 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (74 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (75 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (76 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (77 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (78 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (79 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (80 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (81 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (82 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (83 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (84 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (85 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (86 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (87 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (88 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (89 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (90 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (91 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (92 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (93 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (94 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (95 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (96 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (97 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (98 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (99 cyl.)	A	Arc.	Arc.	Arc.	Arc.
Exel (100 cyl.)	A	Arc.	Arc.	Arc.	Arc.

Market Observations

Big Call For Loans on Cows—Seed
Prices Advance—Mill Feeds Higher

STOCKER and feeder cattle are not developing the boom expected by many traders on the Kansas City market this spring. Kansas and Missouri, to be true, are short of supplies for grazing this summer, but the disappointing action of the fat cattle market is repressing bullish sentiment. Producers, it seems, are taking cognizance of the situation in the market as outlined in KANSAS FARMER a week ago.

According to present gossip in cattle trade circles, fewer cattle will be moved into the Kansas Flint Hills direct from ranges this spring compared with last year. Although the movement to these pastures is due to start next week, no one can say now just how it will compare with last year. If grass comes early and the Flint Hills can show attractive feed propositions, Texas cattlemen may decide to move their stock north late. Rates on pastures in Kansas this season are now from \$4 to \$6 per head, compared with \$6 to \$8 a year ago. The present leasing rates are practically the same as two years ago, but pasture owners are giving 25 per cent more land to the animal than in 1913 or 1912.

A Kansas City banker who handles vast sums in loans on cattle, outlined the other day, the view of financiers on the cattle market in a manner which merits careful consideration. This banker said: "Bankers are demanding wider margins than last year in making loans on cattle this spring. This is due to the extremely high prices prevailing for stockers and feeders and to uncertainty over the course of prices for finished cattle next summer and fall. Down in Texas, for instance, four-year-old steers are held at from \$65 to \$75, threes from \$60 to \$65, twos largely at \$50 and yearlings at \$35 to \$40. Cows are held up to \$65. Not so many years ago the aged steers brought no more than yearlings. It is difficult to figure out a profit on moving cattle at these prices, especially the aged stock, to pastures of Kansas and Oklahoma, grazing all summer and marketing next fall. For this reason, we are insisting on wider margins on loans, and in some instances this is preventing cattlemen from operating this season. This also means that the rangemen who produced the cattle will finish more than usual for market this season."

"While I do not regard imports of beef from Argentina as a factor threatening the future of our beef industry, I feel that the sales by the South American countries are holding our prices down in the face of reduced receipts at western markets. This is a period of re-adjustment in the American beef producing industry. "A feature of the financial end of the cattle industry, which is often overlooked as a trade barometer, is the big call we are now having for loans on cows. I believe that borrowers offering breeding cows and heifers as security for loans are fully three times as numerous as a few years ago. This means that the breeding of cattle is on the increase. My conclusion on the call for loans on breeding animals is confirmed by the decreased slaughter of butcher stock by packers. Bankers, of course, prefer short-time loans, so the borrower who seeks money on cows is not as welcome as the stockman or farmer who asks for money to be used for six months or less."

Stock and feeder cattle are selling up to \$8 at Kansas City. It is hard to buy a fair bunch around \$7, as the common grades are selling at \$6.50. Packers are obtaining the bulk of the killing stock at Kansas City at \$7.25 to \$8.35. In fact, feeder buyers are out-bidding packers rather frequently.

MOST FIELD SEEDS ARE STRONG.

The winding up of the seed purchasing season is witnessing the highest prices of the year for field seeds. The demand for all varieties, with the possible exception of alfalfa, has been unusually heavy for the past three months, and prices have climbed gradually to the present top level. The season for purchases by country dealers from the large terminal handlers is practically closed, but Kansas City supply houses say that the demand for some drought resistant, especially kaffir and cane seed, shows no diminution.

The demand for kaffir has been extremely heavy, and there is still a large call for the seed from Kansas, Nebraska, Oklahoma and Texas. Supplies in Kansas City elevators have been nearly exhausted, and dealers are asking up to

\$2.25 for kaffir in carlots. Interior farmers are paying from 25 to 50 cents above this figure for seed in 100-pound lots, and in some sections of Kansas, where the shortage of kaffir is acute and farmers are planning to put in a large crop, prices are reported above the \$3 mark. Kansas City seed houses are able to furnish this seed considerably under this price in small lots, but some farmers seem to hesitate about making purchases of them, because they are in the dark as to the quality of the seed. The Kansas City seed companies say that most of their seed is from the 1912 crop, which is the best available.

The heavy demand for cane seed is surprising handlers. The supply is exceedingly light, and advances have been made weekly. Kansas City dealers do not anticipate any contraction in the demand for cane seed until late in the summer, especially if the weather is favorable. Farmers are paying more than \$3.50 per 100 pounds for cane seed, while Kansas City dealers are selling to interior stations at \$2.75 to \$3 per 100 pounds in carlots f. o. b. Kansas City. Texas is the heaviest purchaser at present, and is taking carloads of cane seed at \$3 per hundredweight frequently. The crop of cane forage will be large in the Lone Star state, judging from the area to be sown.

Cane seed is in light supply and some trouble is being experienced by seed houses in filling orders. Kansas farmers have either a very small supply or no surplus, and are sending very little cane seed to Kansas City. Most orders are being filled out of stocks, for sales to date have been much in excess of the receipts in Kansas City. Prices have advanced nearly \$1 per 100 pounds in three months, and indications are that prices may go 50 cents higher if the demand from Texas and Southwestern states continues as expected.

Millet is not being bought in heavy amounts by farmers, but as the price of cane seed goes higher and the supply decreases, farmers are substituting millet more and more. Dealers say that the demand for millet depends altogether upon the trend of cane seed prices. Stocks of millet are light and the seed is quoted at \$1 per hundredweight under cane seed, or at a range of \$1.75 to \$2.25, the highest price being for re-cleaned seed. The big difference in the price reflects the greater popularity of cane seed over millet.

The opening of the spring farrowing season is being followed by much higher prices for mill feeds, especially shorts, middlings and low grade flour. In the past two weeks bran has advanced to a basis above \$1.30 per 100 pounds, while shorts have displayed net gains of 30 cents per 100 pounds. Middlings have also had a similar advance. Farmers in Kansas are paying around \$1.50 for pure white shorts, whereas a month ago the same product was bringing only \$1.20. Fancy white middlings are a scarce commodity at this time, and are worth from 10 to 20 cents more than shorts. Low grade flour is also commanding high prices. Most flour mills in Kansas are running on half time schedules; that is, just 12 hours per day. This cuts down the output of shorts and middlings materially. As indicated in this department a month ago, mill feed prices are likely to continue strong even on the present advance.

Corn has displayed some strength during the past few weeks, and this has been partly ascribed to the increased demand due to the larger purchases of hog feeders, but the market has no bullish undertone. Importations of Argentina corn are still a bearish factor. One cargo of Argentina corn, which arrived at Galveston last week, contained an apartment of 3,000 bushels of new 1914 crop corn. Arrivals of new crop corn from Argentina are expected to be rather heavy in the next few months, and these importations should check advances in American corn markets. However, the inferiority of Argentina corn for feeding purposes must be taken into consideration.

Mixed alfalfa feeds have advanced about \$1 to \$2 per ton in the last month. Alfalfa meal millers and jobbers say that the supply of No. 1 meal is exceedingly light, and that before new crop alfalfa is available prices are likely to go to the same level as last September, or about \$23.50 per ton. This would mean that alfalfa mixed feeds would advance to the same extent, or from \$3 to \$5 per ton over present prices.

ALFALFA PREMIER CROP

[Continued From Page Five]

In Northeastern Kansas where the problem is somewhat more simple, the alfalfa acreage will undoubtedly be greatly increased the next two years. In Leavenworth County the agricultural agent has made a careful study of the problems involved in securing stands of alfalfa, and 90 per cent of the plots sown in 1912 under his direction were thoroughly successful and made profitable yields even with the conditions prevailing during the 1913 season.

INOCULATION OF SOIL.

It has generally been conceded that artificial inoculation is unnecessary in Central and Western Kansas. Through the eastern third of the state the matter of inoculation cannot be overlooked. The alfalfa bacteria which live on the roots of the plants and assimilate the nitrogen from the air, must be present or the alfalfa will make only a poor, sickly growth. Where these bacteria are not present the alfalfa may start vigorously if the seed bed is properly prepared and contains sufficient amount of readily available plant food. After a few months of growth, however, in a soil lacking in inoculation, the plants are likely to show a weakly and puny growth, and oftentimes turn yellow and die.

One of the illustrations on this page shows clearly the nodules on alfalfa

son being that if exposed to the sun the bacteria will be destroyed and no inoculation will follow. In making this transfer of soil the general health of the field from which it is taken should be carefully observed, since there are undesirable plant diseases which might easily be transferred to the new field in this manner.

The other method of inoculation is by means of what are known as commercial cultures. These commercial cultures are simply growths of the proper bacteria which have been produced in the laboratory in a pure form free from all other bacterial growths. The manufacturers are now able to supply pure cultures of the necessary bacteria for practically all of the leguminous plants grown in farm or garden practice. These pure cultures are purchased in bottles and the seed is treated in accordance with instructions furnished by the company manufacturing it. Nearly all the commercial seed houses are handling these pure cultures at the present time. In the states farther east and to the north these cultures have been used with greater success than the transfer of soil method of inoculation. Whichever method of inoculation is followed, the one using it should thoroughly understand what is essential to success and should follow carefully the instructions given.

SELECTION OF SEED.

It never pays to use poor seed in securing a stand of alfalfa. The importance of securing a proper stand is too great to take any risks for the sake of saving a few dollars in the purchase of seed. Careful tests of the lower grades of seed often show that more good germinable seed is purchased for the same amount of money where the money is expended for the first grade seed. Much of the commercial seed on the market will be found to contain seed of dodder, bindweed, Russian thistle and other foul weeds. Home-grown seed is always to be preferred to the imported, and this year alfalfa seed is available in great abundance in Kansas. The botanical department of the experiment station at Manhattan is always glad to furnish careful tests of seed samples.

The amount of seed to use will depend somewhat upon the locality and the care with which the seed-bed has been prepared. A thoroughly well prepared seed-bed does not require anywhere near as much seed as one poorly prepared. The writers of the recent bulletin of the Kansas Experiment Station report that they have seen splendid stands of alfalfa obtained from four to six pounds of seed where the seeding was done under ideal seed-bed and soil moisture conditions. The authors of this bulletin state that from eight to twelve pounds of seed per acre should be ample. It is not good policy, however, to reduce the amount of seed sown to a minimum, for under the most favorable conditions a considerable percentage of that sown fails to grow or produce a plant.

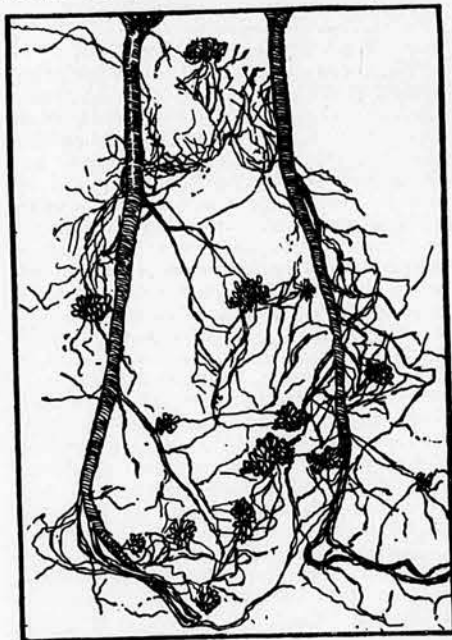
TIME AND METHODS OF SEEDING.

Where spring seeding is to be followed the preparation work should be begun as early as possible. If a proper seed-bed can be secured by the first of April, it oftentimes gives the best results to sow the seed at once. In many cases this early seeding will be more satisfactory than sowing later in the spring. It is very seldom that frost occurs after the first of April serious enough to injure the young alfalfa plant. With this early seeding the alfalfa plant has a chance to get at least an even start with the weeds and grass, which are the greatest detriment to spring seeding.

Another method of spring seeding is to give the land considerable early preparation, beginning as early as possible, this preparation being continued until the latter part of April. Several crops of weeds can be killed and the seed-bed will be worked into a very fine mellow condition by the repeated harrowing. Seed should then be sown about the first of May. It is impossible, however, to destroy anywhere near all of the foul weeds and grass. Crab grass and fox-tail are bound to appear and the alfalfa will have this to contend with to a considerable extent during the first summer. The grass and weeds must be kept mowed back, although it is not a good plan to mow the field too closely when the alfalfa is young and tender.

In Eastern Kansas, where the rainfall is sufficiently abundant, the use of a nurse crop sometimes gives very satisfactory results, the crop used being oats, barley, or in some cases even winter wheat. This nurse crop should be planted thinly, however, and should not

[Continued on Page Thirteen.]



WHERE PROPER INOCULATION IS PRESENT ROOTS OF ALFALFA PLANTS DEVELOP NODULES AS SHOWN IN ILLUSTRATION.—NODULES HAVE BEEN ENLARGED IN DRAWING.

roots. This illustration is from a pen drawing made from a photograph of roots having the nodules present. In making the drawing the nodules have been enlarged several times for the purpose of making them more easily seen. These nodules, it will be seen, exist on the smaller, fibrous roots only. In making an examination to see whether the nodules are present it is necessary to take up the alfalfa plant carefully, cutting around each side three or four inches from the crown. The whole plant should be lifted out with the dirt and placed in water. In this way the soil will be softened and can easily be removed from the roots without stripping off the nodules which may be present. If the plant is dug up carelessly the nodules may not be found, being destroyed during the process of getting the roots out of the soil.

As a rule the more numerous these nodules are on the roots of the plants, the more vigorous its growth. They usually increase in number as the alfalfa plant grows older. The condition of the soil also has an influence upon the development of the nodules upon the roots. The proper handling of soils so that they contain a plentiful supply of vegetable matter or humus, apparently tends to increase the development of the nitrogen supplying bacteria. All leguminous plants develop these nodules on their roots, each, however, having a different species of bacteria, although it has been fairly well established, that the bacteria of the wild sweet clover is identical with that of alfalfa.

There are two means by which soil lacking in the necessary bacteria may be inoculated. One consists in transferring soil directly from an old established field of alfalfa showing an abundance of inoculation. Three or four hundred pounds of this soil per acre should be distributed. It should be spread on the soil on a cloudy day and harrowed in immediately after spreading; the rea-

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1913 RECORD Magnificent Crops in all Western Canada

All parts of the Provinces of Manitoba, Saskatchewan and Alberta, have produced wonderful yields of Wheat, Oats, Barley and Flax. Wheat graded from Contract to No. 1 Hard, weighed heavy and yielded from 20 to 45 bushels per acre; 22 bushels was about the total average. Mixed Farming may be considered fully as profitable an industry as grain raising. The excellent grasses full of nutrition, are the only food required either for beef or dairy purposes. In 1912, at Chicago, Western Canada carried off the Championship for beef steer. Good schools, markets convenient, climate excellent. For the homesteader, the man who wishes to farm extensively, or the investor, Canada offers the biggest opportunity of any place on the continent.

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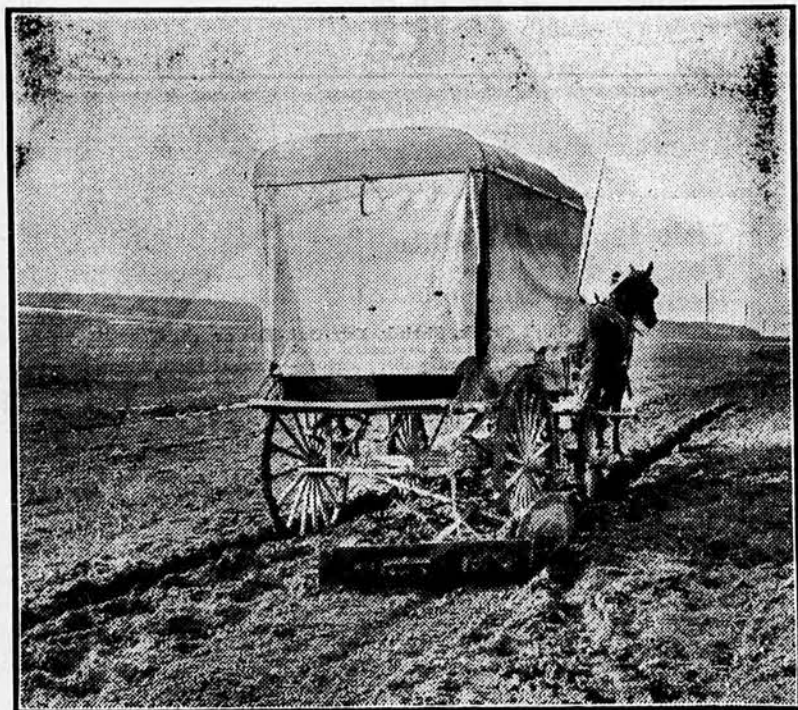
Geo. A. Cook, 125 W. 6th St., Kansas City, Mo.

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Weight, 75 to 130 pounds*

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FARM AUTO

For the Farm Auto Owner
Inquiries and Suggestions Solicited

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The bands should be adjusted so that they do not drag on the hub. There should be just enough clearance, and no more, between the band and hub to prevent dragging. The adjustment should be such that the bands grip the hub with full force before the pedal reaches the maximum of foot pressure. The brake bands should not be oiled with any sort of lubricant. The grit can be washed off the hubs and bands with coal oil or gasoline squirted on to the hub. The fibre in the band should be renewed as it wears out. The foot brake should not be used on each slowing down or stopping of the machine. "Drive ahead," as motorists say, and allow the car to coast and stop at the desired point without the use of the brake. This is a saving of the brake band and a saving on casings.

Motorcycle Dealers' Show.

Topeka motorcycle dealers are this week making their first motorcycle exhibition. All dealers in the city have the several models of their machines with motorcycle accessories on display in their shops and large numbers of visitors are attracted. Several manufacturing concerns became interested in the exhibition week and are making displays. The plan is being enthusiastically supported and is one which will appeal to motorcycle dealers even in county seat towns. Every day develops some new use of the motorcycle and dealers are expecting a big season in the sale of "pop-pops."

Use of Vulcanizers.

Subscriber, M. T. W., Jewell County, asks what we think of the practicability of the small vulcanizers.

Hundreds of motorists are carrying these vulcanizers as a part of their equipment. The day of the cold patch for inner tubes is past. The vulcanized patch is the only kind. The motorist can do his own repairing of inner tubes in a most effective manner by the use of these vulcanizers. We do not believe in carrying the vulcanizer in the machine unless a long trip is to be made. It is better to carry one or two extra tubes for road replacement and use the vulcanizer in the garage. However, the vulcanizer can be successfully used on the roadside. The vulcanizer is worth its cost in repairing casings in the case of cuts or when a small patch of the rubber tread has been knocked off. The vulcanizers are fool-proof in that they will not damage the tube or casing by becoming too hot. The receptacle of the vulcanizer is filled with gasoline and by the time this has burned away the proper heat has been secured.

Casings Better Than Ever Before.

Subscriber, A. M. E., Butler County, asks if we think casings are better made now than in the years past.

We think the best casings ever produced are those now being made. We must give the manufacturers credit for having learned by experience and so having proved the methods of casing manufacture until the casings of the present day are much more efficient than those of a few years ago. The driver must also be given credit for having learned by experience. He has learned that careful driving pays, also that it is worth while to keep the casing inflated as required. He has also learned that it pays to fill the cuts as they appear and thus prevent sand and dirt from separating the rubber from the fabric. It is safe to say that proper care of good casings will, these days, give the motorist six to seven thousand miles, thereby increasing almost two times the casing guarantee. Dozens of motorists are making tours of considerable length without carrying an extra casing, so thoroughly have they come to believe in the durability of the casings. In ordinary driving about the country or city, hundreds of motorists do not think of carrying extra casings. The fear of tire trouble on the road, has to a great extent become a thing of the past.

Keep Cooling System in Order.

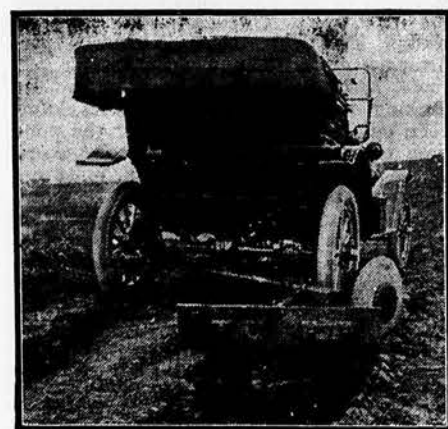
Many motorists neglect their cooling system through failure to run the fan at the necessary speed because of a loose

belt and also because of allowing scale and dirt to accumulate in the radiator. The cooling system should at all times be in good condition. Run the fan in summer to its maximum speed. Use in a radiator of about five gallons water capacity, a pint cupful of sal soda. This "breaks" the water and prevents scale accumulation. It will also loosen and dissolve the scale. The sal soda should be dissolved in water before being placed in the radiator. Use only clean water—that which is free from sand, dirt, straw and leaves. Wash the cooling system out occasionally by opening the pet cock in the bottom of the radiator, allowing water to flow in the water inlet, meanwhile keeping the engine in motion. This will flush out the dirt. A few weeks ago we met on the roadside a motorist whose engine was overheated. When he attempted to draw the hot water from the radiator and replace with cold water, the hot would not emit from the pet cock. When the cock was removed the water still did not run. The accumulation of dirt over the opening had to be removed. With a cooling system so filled with dirt, you can imagine how the entire system was clogged.

Working Roads Play Now.

With the opening of each motoring season there is a revival of road working enthusiasm. Much road work is at this time being done throughout the state. Every county in Kansas has designated county roads as required by law in order that the county's proportionate share of the state automobile tax may be expended thereon. It is reasonable to believe that within a few years Kansas will have an unexcelled system of dirt roads. The state is fortunate in that good dirt roads can be made and maintained at a minimum of expense. Kansas is more fortunate in this respect than most other states. After the roads are once given substantial culverts and bridges and graded to the proper width and satisfactory drainage established, the up-keep expense will be small and the character of the work required will be light.

The principal thing required by Kansas roads after the above has been done, is persistent dragging. This has the effect of filling the ruts, keeping the surface smooth and promoting thorough drainage. Practically every automobile club—and most communities in Kansas have them—is doing all it can to keep



TAYLOR ROAD MACHINE
ATTACHED TO AUTOMOBILE.

the roads smooth. Many clubs own a number of drags and club members do much of the dragging, but in the past it has been necessary to do the greater portion of this dragging as a special effort and involving the use of teams. The motorist may now, if he will, do this dragging while he enjoys a drive over his favorite road. This may be accomplished by attaching the Taylor Road Machine to the rear automobile axle, as illustrated in the above picture. The drag may be used a few miles on the outgoing trip, detached and left at the roadside while the motorist goes on and attends to his business. On his return the machine may be again attached and the stretch of road given a round-trip treatment with the drag. The machine may be attached to a spring or road wagon. There is, of course, some labor attached to this, but it is a little work mixed with the play. If the enthusiastic auto club will buy two or three of these machines and the club members will use them, the road condition in its locality can be greatly improved.

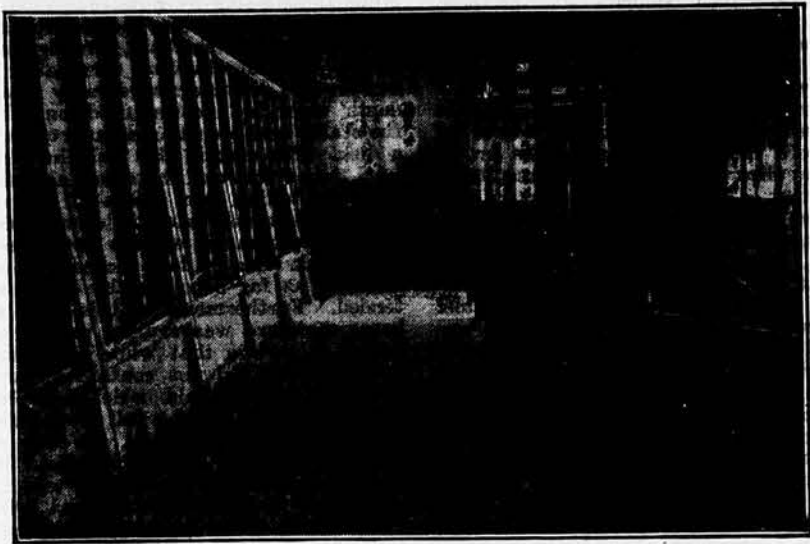
Sanitary Floors for Live Stock

Concrete Floors Effective in Preventing Vermin and Disease

POU TRY MEN and sheep and hog breeders are finding concrete a very satisfactory floor material for their buildings. Concrete floors have no cracks in which lice, ticks and similar vermin can breed and are likewise proof against the attack of rats and other destructive animals. Moreover, concrete floors do not harbor disease germs and can be easily cleaned and disinfected. Properly built and cared for, they are not damp and do not cause rheumatism.

The first step in building the floor is to remove all manure and other foreign matter and then to grade the surface

sidewalk construction. If the sand and rock are first class in quality, no finishing mortar is required. Such a mortar is generally mixed 1 part cement to 2 parts sand and is applied (1 inch in thickness) to the 3-inch concrete base before the latter has begun to set. To provide good footing for animals the floor should be finished merely with a wooden float. A steel trowel finish is entirely too smooth and, if made, should be roughened with a stable broom. Should removable wooden or gas pipe pen-divisions be used, make mortises for them in the floor at the proper points



CONCRETE HOG-HOUSE FLOOR WITH WALLOW AT END.

of the ground. If needed, lay all water pipes and the drains necessary for keeping the ground dry, for carrying off waste water and for conducting the liquids to the manure pit. Such earth filling as may be necessary must be dampened and thoroughly tamped. This work should be done as long as possible before building the floor. Keep the concrete from direct contact with the earth by covering the entire surface of the leveled-off ground with six to eight inches of coarse crushed rock or screened gravel.

For grading the surface of the floors use a carpenter's spirit level (or a water level) and a chalk line. A four-inch thickness of concrete is sufficient. Slope the floor one-eighth inch per foot in such direction that the rain or scrub water will cause the least inconvenience. For poultry houses this will usually be toward the door; for sheep sheds and hog houses, away from the animal's bed and in the direction of the gutters.

The usual proportions of concrete for such floors are 1 cubic foot of Portland cement to 2½ cubic feet of sand to 5 cubic feet of crushed rock or screened gravel, or 1 part of cement to 5 parts of bank-run gravel. These materials are measured on the basis that 1 bag of cement (loose) equals 1 cubic foot. Mix them thoroughly on a tight wooden platform (never on the ground) and use enough water to make the concrete "quaky."

Lay the floor in a manner similar to

by inserting short lengths of gas pipe or drain tile, or by tamping the concrete around tapering greased wooden cores, which must be withdrawn as soon as the concrete has stiffened.

With the proportions given above, 4 bags of cement (1 barrel), ½ cubic yard of sand and ¾ cubic yard of crushed rock will lay a section of floor 8 feet square by 4 inches thick. The cost for the materials alone will be about \$2.50. As to the labor, ordinary farm help can do the work very well.

Regardless of the material used for the floor, a certain amount of covering must be provided for floors of houses for poultry, sheep and hogs. Floors or poultry houses should be covered with a layer of sand or litter. The floor of the sleeping quarters of a hog house should be provided with a removable slatted wooden platform, which must be well supplied with bedding of straw or litter. Likewise the floor of sheep sheds should be kept bedded, especially during the lambing season.

Concrete floors are the cheapest, as they never have to be repaired or replaced. Moreover, they can be flushed out with a hose or thoroughly disinfected with oil or other substances without injury to the concrete. They are effective in aiding the prevention of cholera and foot-rot. On account of their sanitary qualities they greatly increase the profits of poultry, sheep and hog raising.

The Spring Cankerworm

AN unusually large number of adult cankerworms have appeared in the orchards during the recent warm days and the females have already deposited a large number of eggs. Unless a careful watch is kept of the orchard and steps taken to control these cankerworms, a serious outbreak of them may be expected this spring.

The wings of the male moth expand about an inch and are semi-transparent, brownish-gray, with three rather indistinct dark lines across the forewings. The females are wingless, small, and at first glance look more like spiders than moths. They are about a third of an inch long, of a dull brown or grayish color with a dark brown stripe down the middle of the back.

They pass the winter as pupae in the ground and emerge early in the spring. The female climbs up the tree and deposits her irregular masses of eggs under loose scales of bark, in cracks of the bark, in crotches of limbs, and in such sheltered spots as fruit spurs, leaf scars, etc. These masses usually are found on the under side of a piece of bark. There are usually about fifty eggs in each mass, yellowish-green in color, oval shaped and flattened on top. The eggs

hatch in about one month from the time they are laid.

As soon as the young leaves begin to expand the young caterpillars feed upon them. At first they bore holes into the leaves but later they devour them all except the large veins. The cankerworm caterpillar may easily be distinguished from others by their peculiar habit when disturbed of dropping from the tree by means of a silken thread by which they hang suspended in the air. In four or five weeks they become full grown and enter the soil at a depth of from two to three inches when they pupate.

The "cluster cup spray" applied just before the apple blossoms open in the spring, consisting of two to three pounds of arsenate of lead to every fifty gallons of water, with one and one-half gallons of lime-sulphur added as a fungicide, will ordinarily control them. In some years it may be necessary to apply a spray before the "cluster cup spray." If the orchard should be disked and harrowed just after the caterpillars have entered the ground to pupate, large numbers will be destroyed.—J. H. MERRILL, Assistant Entomologist, Kansas Experiment Station.



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THE FARM

The editor last week attended a public sale of live stock and farm machinery near Topeka. Of this sale three things came to our notice. The first was that the sale receipts, which amounted to slightly in excess of \$17,000, were mostly paid in cash and checks, few notes being given. The second, that there were about as many automobiles as horse-driven vehicles at the sale. These are two indications of agricultural prosperity in the Kaw Valley territory. Some 200 bushels of seed corn of 1912 crop was offered. Previous to the sale the corn had been tested by the Kansas Agricultural College and the owner of the corn distributed among the crowd printed slips setting forth the results of such test. A considerable part of the income from the sale was from cattle, ranging from calves to two-year-old steers, but not including cows. These sold at such long prices that it was difficult for the editor to see the value. However, those who bought were extremely optimistic in the belief that cattle prices will continue high and that the purchases made were on a safe basis. The man who sold this stock had accumulated the greater part of it during last fall and winter, having bought the surplus of neighbors who were short of feed. The man who accumulated this live stock fared no better in the production of corn than did his neighbors, but he saved every stalk that grew on his farm. He had two silos and these he filled with kafir and cane so far as that green roughage would go, and finished filling with corn. The remaining part of his corn was shocked and just so soon as one silo became empty it was filled with shocked corn put through a silage cutter and watered. After a few weeks the siloed corn fodder was fed with good results. The feeder represents that corn fodder can be more profitably handled in this way than in any other way. The siloed fodder was relished by the cattle and the waste was practically nothing. It was on such feed as this, saved with its maximum feeding value, that this man was able to winter cattle which his neighbors were compelled to dispose of, and we have no doubt that the prices at which the cattle sold included good pay for his time and feed and interest on investment.

At the above sale farmers were complaining that the ground was getting dry and rain was needed. Be it remembered that in this section of Kansas there has been little or no precipitation for five or six weeks. However, the fall and winter precipitation had, through rain and snow, been much heavier than usual, resulting in the thorough wetting of the soil to greater depths than ordinarily. To be sure, the farmers were complaining only of the condition of the top soil, which had dried out since the last rains or snows. The absence of moisture in the three or four inches or more of top soil following a wet fall and winter, is a good illustration of the manner in which evaporation takes place, even though the weather is not warm and the winds not more persistent than is usual. The fact is that for weeks the surface moisture has been evaporating and that in fact moisture is ascending from the subsoil at a more rapid rate than most of us realize and is passing off into the atmosphere. Every such atom of moisture accumulated in the ground during the fall and winter, when it passes off through evaporation, is eternally lost for crop production. This evaporation can be controlled to a very great extent through cultivation, and because this is so, is the justification for our having delivered, some few weeks ago, a preachment in these columns on the matter of early cultivation in order that the compact surface soil be broken up, a cloddy mulch provided, and the escape of moisture thus retarded. The farmers of Kansas must realize that moisture for the growing crop is a precious thing and that when once they have it in their lands it is worth while to conserve it. We one time heard a farmer remark, and which farmer had disked a piece of land early in the spring, that this one early disk made a difference to the crop grown on this land equal to at least one good rain. This illustrates the point we desire to

make, namely, that cultivation does delay evaporation and conserve soil moisture for growing crops, and having this moisture in the soil it is well worth caring for, because a "bird in the hand is worth two in the bush".

On the occasion of the visit to the this sale, involving a drive of eight or nine miles and passing by numerous fields in various conditions, we had an opportunity to make several investigations. In one field of standing cornstalks the surface was dry to a considerably greater depth than in another field on which the stalks had been broken and cut with a disk. The disk in this field had loosened the surface and there was abundant moisture within two inches of the surface. The uncultivated field was caked and compact on the surface and checked with crack three or four inches deep and was dry as far down as the cracks extended. Furthermore, in this field the lower moisture was rapidly passing off and it is certain that while the subsoil was moist it did not contain as much moisture as the field which had been disked. We examined a fall plowed field which had been harrowed. We do not know how many times this field had been harrowed but the surface was fine—so fine, in fact, that several winds would have done considerable damage. But this field was moist immediately below the fine surface. This field, we think, would have been benefited had it been disked instead of harrowed and the surface soil left in a more cloddy or granular condition. But the two fields which surface cultivation had been given were not losing their moisture and had not lost as much as the uncultivated fields. In this section of the state we have just experienced an unusual length of time without precipitation for this season of the year. No man can foretell what the spring or summer has in store regarding rainfall. The rainfall may be light. If so, crops dependent upon such rainfall will suffer, and they will suffer to a greater extent than crops which will be planted on lands in which the moisture has been conserved by cultivation.

Only a few weeks ago farmers' spirits ran high because the subsoil was more thoroughly wet, they believed, than for years past. Every man who tills the soil was glad that the soil contained this moisture. Not so many, however, seem to have realized that the amount of moisture in the future was doubtful and that it was money in their pockets to have all the moisture possible in the soil. It is very generally conceded that cultivation conserves moisture. We have, these days, come to regard this as a fact. Every man has information as a result of his own observation which leads him to this conclusion. The experiment stations have demonstrated that this is so. If we really believe that moisture can be conserved, and if we recognize, as we must, the irregularity of rainfall, then why is it not the part of wisdom to give such cultivation as is possible and so save as much moisture as is possible? Moisture in Kansas is the controlling factor in crop production, and this always will be so. The sum total of good field practice is to get the ground in the fall of the year in such condition as to absorb all the precipitation falling thereon and so soon as evaporation begins in the spring, cultivation should begin to conserve that moisture. The storing of water in the soil is a continuous operation and the results are cumulative. Filling the soil with moisture in years of plenty and conserving that moisture for the year of short rainfall, should be a continuous practice on the farms of Kansas.

Recent trips throughout Kansas this spring have revealed that many farmers are repeating the annual crime, namely, that of burning the cornstalks. It is a shame, in the face of all that we know regarding the value of decayed vegetable matter in the soil, that we should continue to burn off that vegetation which the soil produced and which so benefits the soil when returned thereto. There were few, if any, corn fields in Kansas which last year grew a normal amount of cornstalks. There are few, if any, fields in the state on which it would

have been difficult to dispose of the stalks so that they might have been worked back into the soil. The man who breaks his stalks, who then rakes and burns them, expends almost as much labor upon the field in getting it ready for planting as does the man who cuts his stalks with a cutter or who first breaks his stalks and crosses the field with a sharp disk. We do not consider that the breaking, raking and burning of stalks is economy from the standpoint of labor. Every man knows the value of manure to his fields. Rotten cornstalks have the same effect on the soil as does manure. The only manure that many fields ever get is that vegetation which grows thereon and which is plowed into the soil. This decayed vegetable matter acts as a binder to the soil, having the same action on the soil as hair in the old lime and sand plaster. This decayed vegetable matter absorbs and holds moisture. Soil well supplied with it does not dry out and does not bake on the surface as do soils devoid of humus or decayed vegetable matter. The presence of decayed vegetable matter adds some plant food to the soil, but also has the effect of making the plant food in the soil more available for the use of the growing plant. It has other effects, but these are the principal effects and each of which is so important as to warrant the attention of the man who cultivates the land. Almost every place visited by the editor, it is remarked by farmers that their land is not growing as good crops as it once did and that it dries out more rapidly and is more difficult to work. This condition exists generally in the lands of Kansas and, for that matter, of other states. It is proper always to inquire, when such complaints are made, as to what the land owner has done to keep his land in the condition in which it was when he first broke the virgin sod. It was then filled with roots and the decayed vegetable matter of hundreds of centuries had fallen thereon and become a part of the soil. It is the absence of decayed roots and decayed vegetation which has had the greatest deteriorating effect upon the soil, and it is to the working of such vegetable matter into the soil as is possible that the farmer must bring about an improvement in the physical condition of his land.

Brown Swiss Cattle.

We have an inquiry from W. F. L., of Franklin County, concerning the brown Swiss breed of cattle. This correspondent has been using only common stock and desires to get into a better class of cattle.

This breed is very well known in the United States. Their native home is Switzerland and they thrive in regions and under conditions which would not be regarded as very satisfactory in this country. They are a distinctly hardy cattle and probably would be especially adapted to the more elevated rough sections of this country where a breed of this rugged type is needed. In the fertile sections of the Middle West it is questionable whether the breed can compete satisfactorily with either our specially developed dairy breeds or the beef breeds.

They are commonly considered as dual-purpose cattle. They rank high in Switzerland and Germany as beef cattle, but it is not likely that cattle of their type will ever become very popular in the beef cattle markets of America.

Their dairy qualities probably are worthy of far greater consideration than their beef qualities. The cow, Brienz, to which reference is often made, in a public test at Chicago, 1891, averaged 81.7 pounds of milk per day for three days. The Michigan Agricultural College reported recently a yearly record of a brown Swiss cow, of 19,460 pounds of milk containing 798.25 pounds of butter fat. Up to this time the highest yearly record for a brown Swiss cow, was 16,609 pounds of milk. Owing to the scarcity of the breed in this country it will probably be difficult to secure first class stock without paying rather high prices. Our correspondent has been referred to parties advertising this breed.

Hominy Feed vs. Corn, for Hogs.

Under ordinary conditions in Kansas no commercial feed can compete with corn as the basal part of hog feeding rations. With the scarcity of corn at the present time, and the high prices prevailing, the question of utilizing commercial feeds as substitutes for corn is being given some attention by feeders of hogs. Kansas Experiment Station at Manhattan now has under way an experiment which has for its purpose the making of direct comparisons between one of the hominy feeds known commercially as "Homco" feed, and corn. This experiment began March 7. A bunch of fall pigs are being fed, there

being five lots consisting of nine hogs each. Two of the lots are being fed a growing ration; two a fattening ration and the fifth lot is to be fed the growing ration for 50 days and then changed to the fattening ration. The object of feeding this fifth lot in this way is to determine if possible whether it is more profitable to feed a ration for the first period that will tend to produce growth than to put the hogs on full feed of a fattening ration from the beginning.

The rations being fed to the two lots receiving the growing ration, as follows:

Lot 1—50 per cent Homco feed, 45 per cent shorts and 5 per cent tankage. Lot 2 receives a ration consisting of 50 per cent corn, 45 per cent shorts and 5 per cent tankage. Of the two lots being full fed with a fattening ration, lot 3 receives 62 per cent Homco feed, 30 per cent shorts and 8 per cent tankage; lot 4 receives 62 per cent corn, 30 per cent shorts and 5 per cent tankage; lot 5 is being fed the same ration as lot 1—50 per cent corn, 45 per cent shorts and 5 per cent tankage. After receiving this ration for 50 days they will be changed to the regular fattening ration consisting of 62 per cent corn, 30 per cent shorts and 8 per cent tankage.

This Homco feed is one of the general class of feeds known as hominy feeds. They are by-products resulting from the manufacture of corn into hominy and brewers' grits. They consist of the hulls together with a considerable amount of the starchy matter of the corn grain. This left over material furnishes a palatable, valuable concentrate of excellent quality. In digestible nutrients it compares very favorably with corn, containing almost as much crude protein, somewhat less carbohydrate material and a larger per cent of fat or oil. It has been fed experimentally to hogs by the Massachusetts Experiment Station in combination with skim milk, and found to be as valuable pound for pound as corn meal. The results of this experiment will be watched with considerable interest at the present time, owing to the scarcity and high price of corn for fattening hogs.

Alfalfa Premier Crop

(Continued from page nine)

be allowed to mature grain before being cut. The crop should be harvested early as a hay crop, thus giving the alfalfa plants a chance to occupy the soil early in the season. As a general method the use of the nurse crop is not to be recommended.

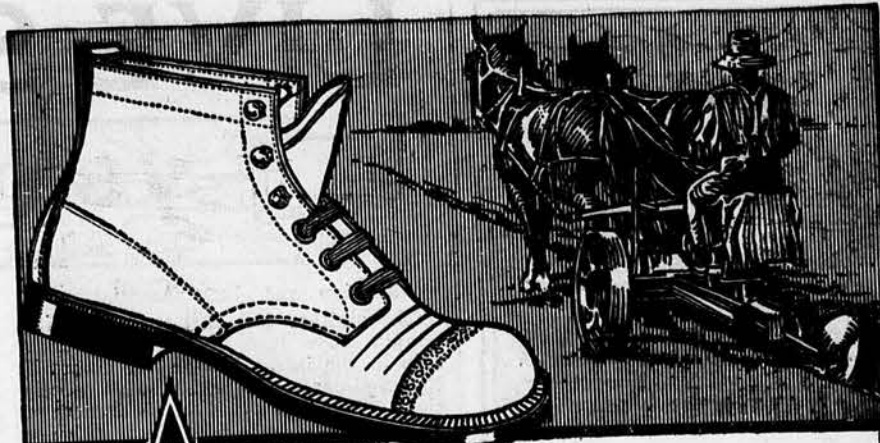
There are two general methods of seeding alfalfa, both of which have been used quite successfully. The broadcast method is probably the more common of the two. Seed is either sown by a wheelbarrow seeder, an end-gate seeder, or even by hand, and is covered very lightly by harrowing. If the land has been rolled with a corrugated roller just before seeding, it will be left slightly rough and the seed can be more uniformly covered by cross-harrowing.

The other method of seeding is by the use of a drill. Where a good drill is used the seed is placed in the soil in better condition for perfect germination than where it is sown broadcast and covered by harrowing. There are now small grass seed drills on the market which will drill the seed in rows from four to six inches apart. These are more satisfactory than the ordinary grain drill. Alfalfa seed as a rule should not be covered more than one inch deep. In light, sandy soil, it may be placed deeper than in a heavier soil.

INCREASING YIELDS OF ALFALFA.

If alfalfa is grown for hay and the hay sold direct from the farm, very little fertility is added to the soil and large quantities are removed from the farm. It is stated in the recent bulletin on alfalfa in Kansas that four tons of alfalfa hay takes from the soil nearly 18 pounds of phosphorus, 95 pounds of potassium and 135 pounds of calcium. Two hundred pounds of nitrogen are also removed with the hay, although most of this comes directly from the air. Alfalfa removes from the soil nearly three times as much phosphorus, two times as much potassium, and 180 times as much calcium as a 30-bushel crop of wheat, the straw being left in the field. Alfalfa does not exhaust the soil nitrogen as the wheat does, but it removes large quantities of the other elements of plant food.

In order to make use of the crop as a soil builder, the production of live stock must become an industry of the farm. In this way a large portion of the plant food in the alfalfa crop is returned directly to the soil and it may be actually enriched in nitrogen. The alfalfa farmer must almost of necessity be a live stock farmer.



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LIVE STOCK



Stallion and Jack Association.

The stallion and jack men of Coffey County have just taken a progressive step in the interest of better horses by the organization of a breeders' association. This organization is known as The Stallion and Jack Association of Coffey County. From the constitution and by-laws passed it would appear that this movement has for its purpose the enlisting of the co-operation of all owners of sires toward the raising of more and better colts. It is the intention to earnestly seek the help and co-operation of the mare owners of the community in furthering these plans for the promotion of the horse interests. All members pledge themselves to abide by certain rules, as to fees, price concessions, etc. These rules are to be publicly posted by all members at the place where their breeding animals are kept.

Stallion Registration.

C. W. Campbell secretary of the Live Stock Registry Board, reports that state licenses have been issued for 3,500 stallions during the last 50 days. The pedigrees of all these animals have been very carefully checked over.

Occasionally a worthless pedigree is discovered. One man tried to account for six generations in eleven years. A case was found where the sire claimed by the pedigree was not imported until a year after the colt was born. Records are on file in this office of all stallions ever imported into America and it is possible to check any pedigree received. Property worth \$4,250,000 is checked by this department every year.

When the present law was first put into operation there were more than 2,000 stallions advertised in Kansas as pure breeds that were grades and scrubs. Even at the present time 55 per cent of the sires used in Kansas must be licensed as scrubs or grades.

The Spring Stallion Show.

In a few places communities have taken up the conducting of a spring show of breeding stallions. The idea undoubtedly comes originally from Scotland where such parades of horses are very common in the spring. Such an exhibit or parade has for its purpose the showing of the available stallions in the neighborhood. It gives the farmers an opportunity to become better acquainted with the sires in their community and it has a general tendency to stimulate interest in better horses.

In making a show of this kind no prizes should be offered and there should be no judging of the animals exhibited except as the interested spectators may judge them individually. Exhibitions of this kind can be made at very little expense. The horses do not need to be fitted as is customary in large shows. Every stallion owner undoubtedly will be desirous of showing his animal to the best advantage possible and will naturally have him properly groomed and in good condition.

Stallion men in the community might well take up the making of a show of this kind some Saturday afternoon and thus familiarize the home community with the quality of the sires available.

Alfalfa and Live Stock.

Alfalfa growing would be useless without live stock. Stock raising is costly without alfalfa. The man who has alfalfa and the silo has learned the last lesson in economical handling of stock on the corn belt farm. The imperative demand of this insistent day is for greater yields per acre. The farmer who fails to heed the demand will fail of profit. It is as inexorable as death. Cattle can no longer be bedded in corn; Illinois lands are no longer that rich. Economy of production, increased yield and conservation of food values are essential to profit on high priced land. The elevator with its alluring price has cast a shadow over the soil of Illinois. Corn growing, profitable to the present generation for years, already gives evidence of the folly of stock abandonment, and with each recurring year the vice of farming without stock will be more disastrously emphasized. Corn, alfalfa and stock will redeem already depleted soils, save further deterioration, and in-

sure profit on lands unprecedentedly high in price.

The above remarks were made by W. R. Goodwin of Breeders' Gazette, in addressing a farmers' meeting in Illinois. In Kansas alfalfa is king; but even here, where we have more alfalfa than any other state in the Union, the possibilities of this combination of live stock with alfalfa and silage, have not been fully realized by many of our live stock farmers. We should have a big revival in alfalfa growing because it means more live stock and greater returns from a given area of land.

Freeing Hogs of Lice.

One of our readers from Crawford County who has a bunch of pigs four months old, writes for advice concerning the dipping of these pigs for lice. This reader says he learns numberless things from reading KANSAS FARMER and feels sure that we can be of service to him regarding advice on freeing his pigs from lice.

Hog lice multiply very rapidly, especially during the winter season. The use of crude petroleum or crude carbolic acid will effectually destroy them if properly applied. Dipping is quite often too expensive for the farmer with only a small bunch to handle. Where a dipping tank is available, however, it may be used with good success in destroying the lice, by keeping the surface of the water in the tank covered with a layer of the crude oil. During the winter season it is not generally a desirable practice to dip hogs and the oil may be applied by means of rubbing posts, or the hogs may be bunched up in close quarters and sprinkled or sprayed with the lice-killing mixture. Where the rubbing posts are used old sacks should be kept tied around the posts and saturated with the oil. When treated by bunching the hogs in close quarters the oil may be sprinkled over their backs with an old broom or the use of a sprinkling pot. If the mixture is properly prepared the ordinary cheap hand spray pumping costing 50 cents to \$1, may be very satisfactorily used. For use in the spray pump a very good mixture is suggested by Mr. Dawson in his "Hog Book." This mixture consists of 1/2 crude oil, 1/2 heavy machine oil, 1/2 gasoline, 1/2 kerosene. Where this mixture is kept thoroughly shaken up it will spray very nicely through a spray pump of this kind and be sure death to the lice. It is not wise, however, to spray brood sows which are to produce pigs later, with a mixture of this kind. The bedding in the sleeping quarters should be cleaned out frequently and thoroughly disinfected, since in this material is the breeding place of the lice.

Splint and Distemper Treatment.

One of our subscribers from Wabaunsee County writes for information concerning the removal of a splint from the front leg of a mare he owns. He wishes a remedy that will destroy the growth and not leave a scar. He also has a colt showing some of the symptoms of distemper. The most characteristic symptom given is a very bad smelling odor from the nose. The colt does not seem to be running at the nose very badly. This correspondent has been feeding some tonic stock food for a few weeks but can notice no improvement in the condition of the colt.

Doctor Dykstra of the Kansas Agricultural College answers this inquiry as follows:

Splints on horses usually cause lameness only when the growth is forming, or at the time when there is an inflammation present. At this time, the splint is classified as a temporary unsoundness. As soon as the inflammation disappears, the lameness also disappears unless the cords of the leg rub on it, which is very rare, and when the lameness has disappeared they are classified as a blemish. The tendency for this growth is to gradually diminish in size as the animal grows older. There is no known treatment that will cause them to be absorbed. It is claimed that rubbing them may hasten their disappearance.

Regarding the colt which you claim has distemper, I may say that the treatment of distemper consists in opening



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the abscesses under the jaw, or any other parts of the body where these develop and treating the abscess cavity with antiseptic washes such as a two per cent solution of carbolic acid. If the animal is very feverish and has no appetite, you might try the following mixture: Quinine sulphate, 2 ounces; fluid extract of nux vomica, 2 ounces; alcohol sufficient to make 16 ounces.

The animal should be given one ounce of this mixture in a little water three times daily.

I may say, however, that while you claim that your colt is affected with distemper, from the symptoms submitted by you it sounds as though it might be a decayed tooth which causes the discharge from the nose, therefore, I would suggest that you have a competent graduate veterinarian make an examination for you.

Feeding Hogs for Early Market.

The recent article in KANSAS FARMER on raising hogs profitably by Mr. Cottle, was read with great interest by F. A. S., one of our Crawford County readers. This correspondent is particularly interested in this subject, since he has at the present time a bunch of thrifty, pure-bred pigs four months old which he desires to finish for an early summer market. He is very anxious to learn how to make hogs weigh 275 to 300 pounds at nine months of age. Not every man is able to accomplish such results with hogs, but the genuine hogman who will study the business carefully ought to be able to do it when the conditions are such as to justify pushing them for this early maturity. There are times when the supplying of a limited grain ration and the larger use of pasture in the growing of the hog, results in greater profits than where they are pushed from birth to an early market. Oftentimes the fall pig can be made to return more net profit in being handled in this way, not attempting to put on the final touches until the fall.

If our correspondent's circumstances are such that he finds it to his best interest to push these hogs for the early summer market, he will find that practically a full grain ration, properly balanced, must be fed. The prices quoted on feeds are: corn 75 cents, wheat 82 cents, oats 45 cents, bran \$1.25 per hundred, and shorts \$1.50 per hundred. They are now being fed a ration consisting of corn, bran, and shorts. The bran should be dropped out of this ration. Even though corn is quoted at a high price it supplies the materials for fattening in such large proportion that this grain should be used as the basis of the ration. In order to properly balance it and secure the most rapid and economical gains, a feed relatively high in protein must be added. If a gallon or two of skim milk was available per pig every day, this would supply a very satisfactory supplement to the corn and shorts. In its absence, tankage or meal would be the cheapest protein concentrate to supply.

In a recent bulletin from the Kansas Experiment Station on the subject, "Hog Feeding," is found a summary of the feeding of 18 different lots of hogs on a ration consisting of corn, shorts and meat meal or tankage. These tests were all made without pasture. The amount of tankage varied from 5 to 10 per cent of the total ration, most of the lots receiving 8 per cent tankage. The shorts varied from 25 to 30 per cent of the total ration. The summary of the feeding of the lots which involved 207 head of hogs showed that during the feeding period an average daily gain of 1.35 pounds per hog was made, costing on an average of \$5.30 per hundred. Corn was priced at 50 cents a bushel; where ground, 95 cents per hundred; shorts at \$1.20 per hundred and meat meal and tankage at from \$2.05 per hundred to \$2.25.

We doubt if our correspondent could select a combination that would give him better results than this one in which tankage is used as five to ten per cent of the total ration, shorts 25 or 30 per cent and the balance corn. Where a small amount of skim milk is available the amount of tankage could be reduced. The pasture will help some but hogs which are being pushed for early market will not consume very large amounts of forage crops. The amount of feed to give would naturally vary with the increased weight of the hogs. A good rule to follow is to always feed them what they will clean up with a relish. During the time when good pasture is available limiting the grain ration to some extent will force a larger use of the pasture and while the actual gains will be slightly less they will be made more cheaply. In feeding a combination grain ration such as suggested, the feeds should be carefully mixed to-

gether in the desired proportions, if possible. Oftentimes it is not convenient or desirable to feed the corn in ground form. If this be the case the ground portion of the ration should be mixed together and fed in such quantities that the hogs will consume, in addition to this ground feed, about twice the amount of corn. The ground feed mixture should be wet at feeding time and fed in clean troughs.

Pure-Bred Bulls to Argentina.

The demand for high-class breeding animals of the beef breeds has resulted in sensational prices being paid for such animals in Argentina. In a December number of KANSAS FARMER we referred to the phenomenal prices paid for pure-bred cattle following the Palermo show in September. The breeders of pure-bred cattle in Great Britain seem to have been reaping the harvest in supplying the South American demand for breeding stock up to the present time. Europe and Great Britain have been taking most of the surplus beef from Argentina and for that reason South American ranchmen have been a little more closely in touch with the breeders of that country. American breeders are not willing to admit, however, that there are any better cattle bred in Great Britain than are being produced in this country, and present indications are that the British breeders can not continue to monopolize the South American trade in pure-bred cattle.

The South American republic is as yet an undeveloped country and beef production on a large scale will undoubtedly be one of its leading industries. American packing interests are doing a business in the country and a few trial shipments of high-class breeding animals have been made by some of the leading cattle breeders of the United States. D. O. Lively, chief of the Department of Live Stock of the Panama-Pacific Exposition, recently made a visit to South America and according to reports he saw a Shorthorn bull from a heifer which was included in one of these importations from this country, sell for \$32,500 in Argentina money.

In connection with the success with which these few shipments have met, it is a significant fact that at the present time a search is being made in this country by Argentina ranchmen for ten Hereford bulls, and likewise some Shorthorn bulls. This commission for the purchase of these animals is in the hands of William M. Carruthers, special live stock agent of the Union Pacific Railway. These animals are to be purchased only after making a most careful study of their pedigrees and show-yard winnings. Photographs and complete descriptions are to be furnished to the South American parties before the purchases are made. This search for bulls in this country would seem to indicate that the Argentina breeders have exhausted the available supply in England and are being compelled to look to the breeders of this country for their breeding stock.

The opening of a wider market for high-class breeding animals should be a great encouragement to cattle breeders of this country. We can undoubtedly expect in the near future an active demand for pure-bred breeding animals of all kinds. The era of farming without live stock is practically at an end in this country, and the equipping of every farm with high-class breeding animals will be one of the events of the epoch on which we are at present entering.

Aggressive action on the part of the record associations of some of our leading breeds in pushing out into new territory and in general promoting the interests of the respective breeds, are significant facts pointing in the direction of an increased demand for breeding animals. We have already commented on the action of the Shorthorn Association in placing in the field a western representative with Denver as his probable headquarters. It is possible that the Hereford Cattle Association may take a similar step in establishing a western office with a special representative in charge. Both of these breeds have made special appropriations with which to maintain high-class view herds at the Panama-Pacific Exposition at San Francisco in 1915.

Leaders of any cause very largely determine the success or failure of the enterprise. The fact that so many farmers' organizations have failed to accomplish what their members expected is not that the organizations were wrong, but that the leaders were either not qualified for leadership or too selfish to put the interest of their organization above that of themselves. If you wish to determine the character of any organization, look into the character of the men in charge.



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DAIRY



Our subscriber, "Barney O'Flanagan," Ellsworth County, writes an interesting letter relative to the butter fat production of Shorthorn cows as compared with cows of dairy breeding and as shown by the January report of the Dickinson County Cow Testing Association. We have in the past few years had several interesting letters from "Barney." We felt sure that his was a fictitious name. It is an inviolable rule of this office not to print letters or manuscripts from persons whose names are not known to us. Letters or articles may be signed by a nom de plume and to which the statements will be credited, but we must know the writer's real name. We have been endeavoring to find out who this man "O'Flanagan" was; but without success. We think, however, the letterhead on which he this time writes gives us his name. The letter reads:

"In KANSAS FARMER of March 21, is a report of the Dickinson County Cow Testing Association. I find that twenty-two Shorthorn cows gave an average of 38.6 pounds of butter fat for February, also twenty-eight Holsteins gave 39.6 pounds of butter fat for the same time, or only one pound more than the Shorthorns in twenty-eight days. Now, here is what I would like you to explain: Why do you say that the man who milks dual-purpose cows is fooling his time away? Now as there is a shortage of meat animals, would it not be better for you to change your text and give us a sermon on the advantages of ninety-five per cent of Kansas farmers milking good Shorthorn cows that will drop calves easy to raise, easy to sell at any age, and when the cows are no longer useful as milkers can be made into a fair quality of beef. Of such cows, more can be truthfully said than of your puffed-up special-purpose cows. Those who have more money than they need, can pay \$10,000 for a bull and like prices for cows and may be able to unload the increase of such cattle onto other rich men, but ninety-five per cent of farmers cannot afford to pay such fancy prices and come out ahead. I do not think there are five per cent of the men who milk cows who have the love, time or money to care for such high priced cattle. Now, taking everything into consideration and assuming that the Dickinson County testing figures are correct, do you think the dual-purpose cow deserves a better reputation than yourself and others as well, have been willing to give her? The dual-purpose cow can be bought throughout the United States at a very reasonable price, which cannot be said of your special-purpose breeds. You may say that the special purpose cows in Dickinson County are not a good average of the breed, but cannot the same be said of the Shorthorns too? The special purpose cow is all right for the man who has the love and talent to attend to her, but few of us are built that way."

Barney decorates his letter with some things not above printed and which refer particularly to what he calls the "prejudice of the editor" against the dual-purpose cow. These things are not printed because they are not of special interest to KANSAS FARMER readers. Those who have been following the dairy department in KANSAS FARMER closely, the last two or three years, will have observed that during this time the editor has to some extent changed his opinion with reference to the use of the so-called dual-purpose cow under certain existing agricultural conditions. If we recall correctly, some time last fall this department was devoted wholly to a report of a conversation the editor had with a thorough cow man who had recently made a visit to sections in Illinois and Indiana and in which sections there was a strong inclination among farmers to the milking of Shorthorn cows. In that article we permitted an admission on our part which ten years ago we would not have believed we would ever make. It was to the effect that under certain agricultural conditions, which, however, do not prevail generally throughout Kansas, there was a place for the Shorthorn as a milk cow. We believe, however, that there are conditions pertaining to individual farms in Kansas under the present system of farm organization and conforming to the makeup of the

farmer, which will justify the use of beef cows but which will produce four to five thousand pounds of milk per year. It must be remembered, however, that there are few of such cows to be found among herds which for years past have been bred for beef and without regard for milk. Admitting that there is a place for the cow of beef breeding which will give four to five thousand pounds of milk a year, it must, nevertheless, be remembered that to obtain such cow it will require years of breeding with milk production in view and in the more careful selection of cows with milking quality than the beef breeder has heretofore given. It is well known that there are milking strains of Shorthorns and that the cows of such strains are reasonably abundant and economical producers and are profitable under the conditions under which they are kept. However, there is no community to our knowledge, in the United States, in which such cows generally abound and in which they can be had at anything like common cow prices. KANSAS FARMER will soon print—having already had the pictures made—an article which will describe the milking Shorthorn as she exists today in her native heath. We desire that all our readers interested in cow milking, watch for this article. We desire, however, that all keep in mind that were the editor milking cows as he was up to ten years ago, and having had experience with both dual-purpose and special purpose, he would milk only one kind, namely, special purpose.

The report of the Dickinson County Cow Testing Association of which Barney speaks, presents just such figures as he quotes. These figures are highly complimentary to the Shorthorn cows. It is safe to say, however, that these cows are far removed from strictly beef breeding and have been fed and selected for milk for years. It would not be possible to find any considerable percentage of red cows and of Shorthorn foundation in breeding, which would equal these. However, any man, if he keeps his eye on milk production and has the perseverance in selection and breeding, can develop fully as good cows in a ten-year period, probably. Our correspondent must take cognizance, however, of the fact that persistent milk-giving is one of the essentials of large and profitable dairy production, and there are few cows, except those carrying dairy breeding, which possess persistency. It is evident that this is true of the cows in the Dickinson County Cow Testing Association, for the reason that in the year's report of the cows of that association, and which was printed in KANSAS FARMER of March 21, the ten best cows with one exception, were dairy-bred animals, whereas of the ten poorest cows only one showed any trace of dairy blood. Out of the forty-one cows that made in the year 1913, over 300 pounds of butter fat, there were only three cows which did not show dairy blood. This gives a good idea of the percentage of profitable milkers among those cows carrying dairy blood as compared with those carrying no dairy blood. It must be remembered, too, that of those cows carrying dairy blood a small percentage were pure-bred. The year's record also presents some evidence showing that those cows not dairy-bred but which are capable of standing near the top in dairy production during two or three months or possibly four or five months of the year, are those which failed to milk in liberal quantities ten or eleven months of the year. This is an important consideration and one which our subscriber should not overlook. It is evident that a one or two-months' test on a cow does not reveal her true value in dairy production, and that the use of the test and the scales for at least one year is necessary to arrive at relative cow merit.

It is only the man who has ideas far exalted above those of the common dairyman, who can afford to pay \$10,000 for a bull. The use, however, which such men will make of such animals undoubtedly justifies them in making the expenditure. It is only through buying the best at the price at which it can be had, that enables the breeder of dairy cattle as well as the breeder



My Ten-Year-Old Boy Turns with Ease the BEATRICE Cream Separator

Says Farmer Onswon

I've been up one side and down the other of this cream separator question for 20 years, and I'm for the Beatrice Cream Separator every time.

The Beatrice is the one high-grade separator that is sold at a reasonable price.

We all have some respect for our pocket-books. None of us farmers want to pay out \$100 to \$125 when we can get the same thing for \$65 to \$85.

Well, that's the cream separator situation. The Beatrice sells at \$85 for the largest size machine, 1000 lbs. capacity. Other high grade separators sell for \$110 and upwards for less capacity.

The Beatrice gives you—

Clean skimming, easy cleaning, easy running, convenience, long life, big capacity. It skims cold milk as well as warm milk.

Compare other machines with the Beatrice; you'll agree with me that you pay more for them than the Beatrice price, but you do not get as good a machine for your money.

Take my advice and investigate the Beatrice. Write to nearest office below for free catalog and name of local dealer near you.

**BEATRICE CREAMERY CO.
CHICAGO**

Des Moines, Ia., Dubuque, Ia., Lincoln, Neb., Topeka, Kan., Denver, Col., Oklahoma City, Okla., St. Louis, Mo.

The Selway Steel Post And Ready Made Corner System

The strongest line post and corner on the market. Everything driven with a sledge hammer. Our line posts are full of flexibility and life. Made of open hearth, non-rusting high carbon steel, every ounce placed where it will do the most good.

Our corner can be put up or taken down in 30 minutes with our triangle bracing and anchor system. The corner will positively stay where you put it. No holes to dig. For sale by dealers everywhere. Write us for booklet.

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Hill's Evergreens Grow

Best for windbreaks. Protect crops and stock. Keep house and barn warmer—save fuel—save feed. Hill's evergreens are hardy, nursery-grown—low priced. Get Hill's free illustrated evergreen book and list of Great Bargain Offers—from \$4.50 up per Thousand. 56 years experience. World's largest growers. Write: D. HILL NURSERY CO., Inc. Evergreen Specialists. 221 Cedar St., Dundee, Ills.



of beef cattle, to give to the farmers of the country, generally, breeding animals which will improve the breeding herds of the country. Beef-bred bulls have sold for \$10,000 or more, and have been regarded as worth the money, but of course, every farmer cannot afford to buy the best there is in beef breeding. The fact is that the demand for good cows of dairy breeding is that which governs the price of such animals. The same condition is true of the beef breeds. A Holstein cow which did not produce more than three or four thousand pounds of milk a year will not sell for as much money as a Shorthorn cow producing an equal amount, but a Holstein cow which will, produce 10,000 pounds of milk a year, will sell for more money than a Shorthorn cow or a cow of any of the beef breeds, which will produce only four or five thousand pounds of milk a year. Prices for both kinds of animals are pretty well regulated by the ability of the animal to return a profit on the investment and by the demand therefor. When our correspondent says or infers, that milking Shorthorn cows producing 38 pounds of butter fat a month and for enough months to bring the total annual production up to 350 pounds a year, can be had throughout the United States at a reasonable price, he is mistaken, provided he considers even \$75 to \$100 a reasonable price.

KANSAS FARMER does not deprecate the value of the red cow as a milk producer. We have repeatedly said that red cows—in fact, all the cows of Kansas—would more than double their production per year, if they were fed for milk. We have repeatedly stated that we believed that in the great majority of red herds of ten cows, and which herds had been milked for some years, that there were three or four good cows and upon which the selection and the grading up of a profitable milking herd, could be based. We stick to this opinion. We would, however, have it understood that for the small farmer whose pasturage and milking ability is limited, that he will make more money per year from ten selected dairy-bred cows than from common cows. The farmer will establish a milking herd sooner and easier and come into larger profit quicker, by using dairy blood than by attempting to select profitable milkers from a beef foundation. However, the farmer who has plenty of pasture, who can grow rough feed abundantly, who has adequate milking force and who can keep forty-five or fifty head of cattle on his farm and who has a desire to maintain cows and cattle on a stock basis rather than on a dairy basis, is justified in patronizing the milking Shorthorn and by so doing, in our judgment, will make more money and make it easier than if under the above conditions he should undertake to establish a dairy herd and limit his number to ten or twelve cows.

The question of special-purpose cows of beef breeding which yield four or five thousand pounds of milk a year, is a long way from definite settlement for any particular locality. The selection of the kind of cow to milk depends wholly upon the disposition of the individual farmer, and the question must be viewed from this standpoint. There are many men who are feeding and milking a class of cows, and which men are seeking dairy profit from cows which are not at all adapted to dairy purposes, and who are fooling their time away. These same men believe that the calves from such cows make better beef and more of it and more economically than the calves from the Holsteins or Ayrshires. Such men are fooling themselves both in the matter of beef and in the matter of milk. We believe in the farmer doing the best for himself and if he can make more money from a cow which produces eight or nine thousand pounds of milk a year, and a calf which does not have a maximum quantity of juicy steak, we believe in the farmer milking that cow and in allowing the man in town to eat fewer juicy steaks but those not so juicy but which maintain his body equally well. It would be poor policy for the farmer who has the beef idea so thoroughly instilled in him as would not permit him to forget it. He could not make a success of handling dairy-bred cattle. However, the small farmer whose mind is susceptible to dairy training, and who seeks to make the most money from the milking of a few cows, can well afford to consider cows of dairy breeding.

There is no cow in the United States so popular as the red cow. Farmers would rather have a red cow on their

farms, they would rather milk a red cow than one of any other color. The well grown calves of red cows will sell easier and at better prices for beef than will the calves of any other color. In view of these facts and the popular idea naturally following, we wish that the Shorthorn breeders of Kansas might take note of this demand and begin—some of them at least—developing milking Shorthorns. So to do, we think, would be remunerative and the stock would be in demand, but the milking Shorthorn can be developed only by milking and feeding for milk and by weighing and testing the milk and keeping a record of the cow's dairy production. Simply because a man has at the head of his herd a Bates bull, is no guarantee that the calves sired by such animal will prove satisfactory milkers. If the breeders of beef animals will develop milkers they will find in Kansas as well as in other states, a big demand for the results of their breeding.

Warbles in Cattle.

Probably most of the live stock men are familiar with the grubs or warbles that make their appearance in the spring of the year in the backs of the cattle. These grubs are at this time located just under the skin and have made a small opening in order to secure air. As far as possible, all these grubs should be destroyed at this time. The surest way is to squeeze them out and step on them. After this process it is a good plan to wash the back of the animal with some antiseptic solution.

If it is not possible to go over the animals and squeeze out each of the grubs, they may be killed by smearing over the back some material which will plug up their breathing holes. A mixture of kerosene and lard or some of the coal tar dips have been found to be very satisfactory for this purpose. The sprinkling of salt on the backs of the cattle is another method very commonly followed. The cattle lick each other's backs and apparently enough brine penetrates through the breathing holes to kill the grubs within.

The grubs which are not killed during the months of March, April and May, will emerge and fall to the ground, where they undergo a resting stage of several weeks. They then change into the warble fly. These flies lay eggs on the cattle and a fresh crop of warbles will be assured for the next season. The warbles are a constant source of irritation to the cattle during the spring, and reduce the value of the hides of those going to market.

Foreign Butter Competition.

The following communication recently came to KANSAS FARMER from one of our Mitchell County readers. It furnishes a sidelight on a matter which has been given considerable thought by those interested in the production of butter and other dairy products in this country:

Several times of late I have noticed items in KANSAS FARMER which led one to almost believe that many of the readers were ready to believe that the tariff was entirely responsible for certain conditions effecting those owning cows and making butter for the market, or selling butter fat. These items lament the fact that butter is coming to this country from other nations and the fear is expressed that never again will the Kansas farmer receive remunerative prices for milk, cream or butter.

I was up in Western Canada last season and found New Zealand butter in many towns. Alongside that product I found butter from the "states," as they call this country. New Zealand butter was selling at about the same price as good butterine, while American butter, either from Eastern Canada or the United States, was selling at a premium of ten to fifteen cents over either of the products mentioned. New Zealand or Siberian butter can never compete with good American butter. It will compete with butterine and other kindred products. Furthermore, the tariff, as it effects farm products, will, in my estimation, never be placed upon the basis that it was prior to the enactment of the present tariff. Farmers might as well make up their minds to that effect and shape their plans to meet all competition. Butter from Denmark is thought too much of in England to ever come to this country unless it be the lower grades, and they do not produce much, if any, low grade butter in Denmark. If Americans can sell butter in Canada in competition with New Zealand butter, which they have been doing for years, they can certainly sell butter in their own country in competition with butter from that, or any other country.—G. S. BATTERY.

What a DE LAVAL CREAM SEPARATOR SAVES over any other separator or creaming system

Quantity of cream that no other separator will recover completely, particularly under the harder conditions of every-day use.

Quality of cream as evidenced by De Laval butter always scoring highest in every important contest.

Labor in every way over any gravity system, and also over any other separator, by turning easier, being simpler, easier to clean and requiring no adjustment.

Time by hours over any gravity system, and as well over any other separator by reason of greater capacity and the same reasons that save labor.

Cost since while a De Laval Cream Separator may cost a little more than a poor one to begin with it will last from ten to twenty years, while other separators wear out and require to be replaced in from one to five years.

Profit in more and better cream, with less labor and effort, every time milk is put through the machine, twice a day, or 730 times a year for every year the separator lasts.

Satisfaction, which is no small consideration, and can only come from knowing

you have the best separator, with which you are sure you are at all times accomplishing the best possible results.

Easily Proven—these are all facts capable of easy demonstration and proof to any user or intending buyer of a cream separator. Every De Laval agent is glad of a chance to prove them by a De Laval machine itself—without the slightest obligation on your part unless entirely satisfied.

If you don't know the nearest De Laval agent, simply write the nearest main office as below.

The De Laval Separator Co.

165 Broadway, New York 29 E. Madison St., Chicago
50,000 Branches and Local Agencies the World Over

Heating Plans Free

Don't decide on your heating system for home, church, school or other buildings before getting free plans and factory prices from the Kalamazoo expert engineers. Real scientific service. Easily installed in old or new buildings. Plans furnished free also for future homes.

No Freight **A Kalamazoo** And Satisfaction
—No Delay Trade Mark Direct to You Stoves Guaranty—
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Cash or time payments. Satisfied customers everywhere. Ask for names near you. Write for FREE BOOK Explains many advantages and big saving. Ask for Catalog No. 922
Kalamazoo Stove Company, Manufacturers, Kalamazoo, Mich.
We make full line of Ranges, Stoves, Furnaces, Metal Kitchen Cabinets and Gas Stoves. Mention catalog wanted.



Hit hard



One quality: many styles and sizes.

Sledge-hammer blows can't break Majestic malleable iron!

That's why Majestic joints can be cold-riveted; oven made practically airtight, without putty—stays tight.

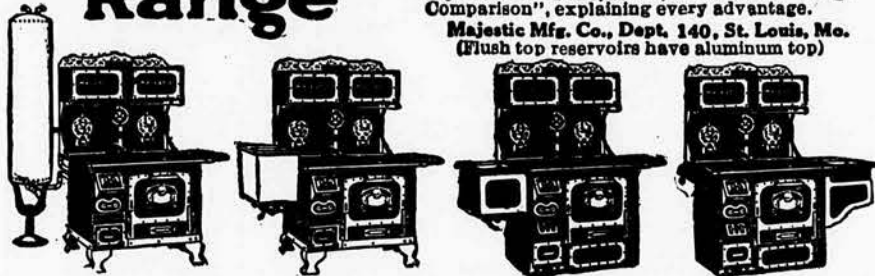
As cast iron breaks, ordinary stoves can't be riveted at all. They must be bolted, loosely, leaving cracks that are filled with putty, which soon falls out, allowing heat to escape and cold air to enter oven. This requires hotter fires, doubles fuel bill, causes heavy repairs and rapidly burns out range.

The whole front and top of a Majestic is unbreakable malleable iron, riveted to body of charcoal iron—resists rust 3 times as long as steel. Body lined with heavy, pure asbestos—held by open grating, heat hugs closer than with square top. You don't have to turn bread in a Majestic—heat is forced to front of oven, as well as back. Hot water reservoir of pure, nickel-plated copper; pocket pressed from one piece—no seams—can't leak. Reservoir and frame both move; no wear on bottom of reservoir. Oven door braced by unbreakable iron stakes; no springs. Rack slides easily and stays rigid and level under heavy weight. Cup catches falling ashes when emptying pan. Open end ash pan scoops up ashes inside as you slide it back. Ventilation under pan—floor can't scorch.

With or without legs.

Great Majestic

Malleable and Charcoal Iron Range



Brass Watches,
Trashy Sewing Machines,
Shoddy, Doctored-Up Pianos

Are Guaranteed 25
years by irresponsible
dealers who promise any-
thing to get your money NOW

ELBURN PIANOS

Are Honest Pianos
For Honest People
Sold by An Honest House

Stop and THINK a moment. The cheap sewing machines, plated watches and shoddy pianos are loudly advertised and much emphasis is put on the GUARANTEE. Puzzle Schemes, Guessing Contests and wholesale prices are used by mail-order houses to sell pianos.

A piano should be a life-time purchase and it is important to KNOW the house you buy from. Reliability is necessary. All pianos, when new, LOOK and sound fairly well, but in a few years, often in a few months, the cheap piano shows its miserable quality. The House of JENKINS has been here nearly forty years. It is the largest piano house in the Southwest, if not in the United States. Our word is good. We want you to know our ELBURN Piano.

In solemn earnestness we say to you the ELBURN is the best piano in the world at its price. We can save you \$50 to \$150. We do not brag but we do deliver the goods and live up to our word.

We will not misrepresent. Do not be deceived by loud claims or circus methods. If you want a piano on easy terms, a piano you will enjoy and be able to use for years, then write us.



Very
Easy Term

We can give you thousands of names of ELBURN owners and can give you addresses right in your own community.

Let us tell you about the ELBURN. Just write us this way:—Please send prices, terms and description of the ELBURN Piano.

J. W. JENKINS
SONS' MUSIC CO.
KANSAS CITY MO.

SEND FOR THE 1914 HAIL STORM DATES

Latest complete hail schedule for this year, sent FREE on request to any Kansas farmer. Gives information that is decidedly important to every grain grower. Just send your name on a postal to Desk 1, Kansas Mutual Hail Association, Sterling, Kan.

WATCH FOR THE NEW THINGS

It is not always the man who gets into the field at daylight and remains until dusk that gets ahead. Sometimes a man is so busy with his hands that he has no time to use his head.

Every implement or appliance that supersedes manual labor is a step toward a higher civilization and a more profitable agriculture.

Watch the advertisements in KANSAS FARMER for new and improved devices. You will at least keep yourself informed concerning them.

PEACH TREES

To introduce "Ince Trees" in your community we will make you a big special reduction on all leading varieties of peach and apple trees. Guaranteed true to name and of highest quality. Write today for special circular and catalog and save money on your trees.

INCE NURSERY COMPANY
1100 Mass. St., Lawrence, Kans.



A little flour sprinkled into hot fat before beginning to fry anything in it will prevent it popping and save many a burn.

To remove a scorched spot from white material try peroxide. Rub the spot immediately with a cloth dipped in diluted peroxide, then press it with an iron.

HOME CIRCLE



We have an order for pattern No. 6254, one-year size, from West Mineral, Kansas. No name is signed to letter. Please send in your name for pattern.

"No one is safe from the dangers of disease who is not habitually watching for the many pitfalls that beset his path."

The February issue of The New Era, which is issued by the Kansas Wesleyan Business College, contains much of interest regarding the school and its students and graduates. President L. L. Tucker, who succeeded T. W. Roach, is an able educator who is making a great success of the college.

Ten Great Inventions.

What are the greatest ten inventions of the past 25 years? Last July the Scientific American offered prizes of \$150, \$100 and \$50 for the best three essays on this subject of universal interest. The stipulations were made that the greatness of an invention would be measured in terms of practical success and general usefulness to mankind. The contestants were limited to "machines, devices and discoveries commercially introduced in the last twenty-five years"; they must be "patentable though not necessarily patented."

The judges had difficulty in selecting the winner, owing to the wide diversity of opinion among the contestants. No two competitors selected the same set of inventions. They finally decided to award first prize to William I. Wyman of Washington, D. C., whose selections are briefly summarized in the World as follows:

The Electric Furnace.—This produces a "heat so intense as to simulate some of the primal forces of nature." It alone has made possible the production of artificial gems, carborundum (hardest of manufactured substances), calcium carbide and artificial graphite. It has reduced the price of aluminum from more than \$12 a pound to less than 25 cents. It has made possible the fixation of atmospheric nitrogen and revolutionized the steel industry.

The Steam Turbine.—Has effected striking economies in steam consumption, abolished vibration, reduced engine space by from one to two-thirds, and is sending the old reciprocating engines to the scrap heap.

The Gasoline Automobile.—The benefits conferred upon mankind by the automobile are so widespread as to need scarcely any comment. Among them, however, must not be forgotten the creation of thousands of miles of improved highways.

Moving Pictures.—Have transformed the people's amusements and are becoming an ever more important factor in education, science, trade and recording current history.

The Aeroplane.—While this presents the least commercial utility of all the inventions considered, it is the most radical innovation in the whole history of locomotion and threatens to revolutionize warfare.

Wireless Telegraphy.—Has made possible the universal intercommunication of all the world, has robbed the sea of its terrors and saved thousands of lives.

The Cyanide Process.—One of the main agencies whereby the world's production of gold was trebled between 1890 and 1908. Has revolutionized the

metallurgy of the precious metals.

The Induction Motor.—This has made possible the transmission and utilization of alternating electric current and is mainly responsible for the rapid substitution of electric for steam power in the industries, conserving from 30 to 60 per cent of the energy formerly wasted in whirling line shafting and belting.

The Linotype.—Has made it possible to set type from five to ten times as rapidly as before; has saved time and expense and made the modern newspaper.

Electric Welding.—Makes it easy to join the most antagonistic metals with safety, surety and swiftness. It was the first radical change that the art of the smithy had undergone in historic times.

Messiah Festival.

The thirty-fourth annual Messiah Festival will be held this year, April 5-12, at Lindsborg, Kansas. The Messiah is to be rendered by a chorus of over 500 trained voices, supplemented by the Bethany Symphony Orchestra. The festival will be opened by Miss Alice Nielsen, the justly celebrated prima donna, on Sunday afternoon, April 5. Eugene Ysaye, probably the greatest living violinist, will appear in recital on Easter Sunday afternoon. A number of other well known soloists are also on the program, and there will be concerts by the Bethany Band, Bethany Symphony Orchestra, Musical Art Society, Children's Chorus—in all there will be eighteen concerts during the week. This is one of the conspicuous musical events of the country, and it is a wonderful opportunity for the music loving people of Kansas.

Recently the University of Wisconsin has devoted considerable attention to the subject of community music. They have applied to Bethany College for the details of the Messiah Festival, signifying the intention of using it in a bulletin which was to be sent out from the university in an endeavor to further interest the rural population in the subject of music.

What They Were.

Enraged over something the local newspaper had printed about him a subscriber burst into the editor's office in search of the responsible reporter.

"Who are you?" he demanded, glaring at the editor, who was also the main stockholder.

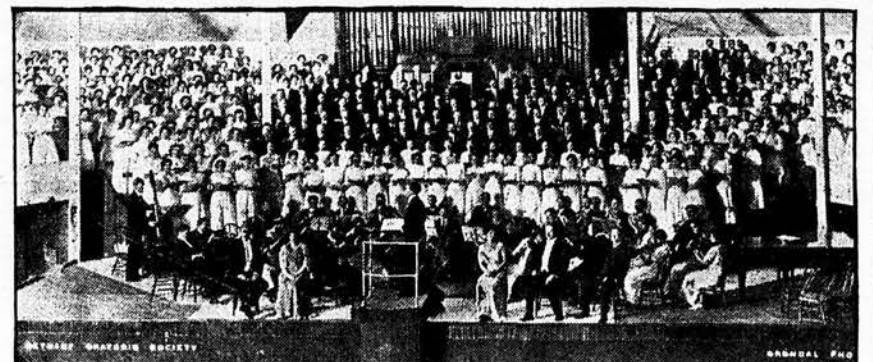
"I'm the newspaper," was the calm reply.

"And who are you?" he next inquired, turning his resentful gaze on the chocolate-colored office devil clearing out the waste basket.

"Me?" rejoined the dorky, grinning from ear to ear. "Ah guess ah's de cul'ud supplement."

As He Should Be.

"After you've been two weeks in the house with one of these terrible handy men that ask their wives to be sure and wipe between the tines of the forks, and that know just how much raising bread ought to have, and how to hang out a wash so each piece will get the best sun, it's a real joy to get back to the ordinary kind of man. Yes, 'tis so!" Mrs. Gregg finished with much emphasis. "I want a man who should have sense about the things he's meant to have sense about, but when it comes to keeping house I like him real helpless, the way the Lord planned to have him!"



MESSIAH CHORUS AND ORCHESTRA OF LINDSBORG, KANSAS.

-and they lived happy ever after

Love has found a way—

Now they can be married in June and have a cozy home full of good things and all on a modest salary. She had it all figured out—down to the last pie tin, selected from the big book of bargains which—for reasons we need not explain—had slipped to the floor.

So the big yearly Catalogue of Montgomery Ward & Company has made possible a low cost of living to millions of families. So has it month by month stripped merchandise of all unnecessary profits, and offered it in full value at low prices. The world's best creations, such as you might see in a huge Paris, London, New York or Chicago department store are sent to your home with these savings by Montgomery Ward & Company and you suffer none of the rush or distractions of shopping but make your selections from the Catalogue at your leisure with the family gathered round.

Many families, like this young couple, have not only started *from* this book but they have lived *with* it. So it may truly be written of thousands who have experienced its benefits—"and they lived happy ever after."

Join today the happy good-living, world-wide family of those who use the Catalogue of Montgomery Ward & Company. Join them today by simply writing us (use the coupon) for a copy of the latest Catalogue.

Montgomery Ward & Company, Dept. LL-15.
Send me free a copy of your new Catalogue. All I agree to do is to look it over.

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Cushion Shoes that relieve tender feet

Mayer Yerma Cushion Shoes are worn by people for comfort and relief from troubles due to sensitive feet. A soft quilted sole is built in so as to conform to the lines of the foot and absorb the jar of walking. Resists dampness—cool in summer, and warm in winter.

Mayer HONORBILT SHOES

Mayer Yerma Cushion Shoes are made in a large variety of styles for men and women—and are neat and dressy. Durable shoe quality is insured because they belong to the Mayer Honorbilt line. Either for relief from foot trouble or for solid comfort wear Yerma Cushion Shoes.

WARNING—Be sure and look for the Mayer name and trade mark on the sole. If your dealer cannot supply you, write to us.

We make Mayer Honorbilt Shoes in all styles for men, women and children. Dryden, the best weather shoe and Martha Washington Comfort Shoes.

F. MAYER BOOT & SHOE CO.
MILWAUKEE



No matter what your spring needs are, if a Dry Goods store can supply them the merchandise is here, at

—the Right Price

And there are no extras to pay for here—we ship the goods by parcels post free of charge anywhere in the United States. Send for samples of the new silks, wool goods, and wash goods for spring, stating the kinds and prices desired, so that we can give you good assortments of the goods you are most interested in.

THE MILLS DRY GOODS CO.

Topeka, Kansas.

PEDIGREEED SEED CORN.

Our Specialties for 1914: Riley's Favorite Pedigreed Field Corn—This corn has superior breeding qualities and the greatest amount of shelled corn to cob. Small cob, deep grains, rich yellow. A great yielder. Just the corn to fatten your stock. Boone County White—The best white corn ever originated. The largest yielding corn ever planted. Has won more first premiums than all other white corn put together. A great fodder producer, a splendid ensilage corn. Other varieties are Reid's Yellow Dent and Imp. Leaming. Send for 1914 circular. Write today. JAMES RILEY & SON, The Originators, Thornton, Ind.

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Business College
OTTAWA, KANS.

SEND FOR BOOKLET, "PROFITABLE Poultry Selling," issued by Kansas Farmer. Free for the asking to anyone interested in poultry. A post card request will bring the booklet by return mail. Kansas Farmer, Topeka, Kan.
When writing advertisers, please mention Kansas Farmer.

PLANT A FEW STRAWBERRIES

WITHOUT strawberries, your fruit garden is incomplete. They are the first fruit of the season to ripen and are always in demand.

Spring planting for strawberries is best, for the ground may be given a thorough cultivation to start the plant on its first year's growth. It is important that the plants make a good growth the first year and especially important that the make a good start in the spring. With spring planting, the cost and trouble of mulching for the winter, and the risk of winter killing, is avoided.

It pays to plant strawberries on a deep, rich, and well-prepared soil, for a much more rapid growth will be made and the fruit will be matured earlier than would be the case on poor land.

Strawberries are started by planting offsets from the mother plant. In selecting the sets for planting, choose from strong, healthy, and heavy-bearing parent plants. For home use it is desirable to make the fruiting season as long as possible. This can be accomplished by planting a mixture of several varieties.

As many of the best varieties have what is known as imperfect flowers—flowers in which the stamens are lacking—it is important that some variety

with a perfect flower be planted with them in order that a good crop will be produced on all the plants.

The horticultural department of the Kansas Agricultural College, recommends the following varieties as especially good for garden planting for home use: For the very early fruit, plant Crescent with Excelsior, Bedderwood, and Michel's Early varieties. For medium early mixture, plant the Warfield and Burbank with the Clyde, Senator Dunlap, Parker Earle, and Klondike. For a mixture that will give berries late in the season, plant a row of Haverland with Aroma and Gandy.

BEST VARIETIES TO PLANT.

The plants should be set in hills twenty-four inches apart. When the plants become older they should not be allowed to spread and cover the ground, but they should be kept in hills as originally planted, and only four or five of the best shoots should be permitted to root at each hill. This will make good cultivation possible, and this is one secret of a good strawberry yield.

New beds should be set out about every three years, as strawberries produce heaviest when the vines are two to three years old. From then on the yield will decrease.

FASHION DEPARTMENT—ALL PATTERNS TEN CENTS

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



6602—Ladies' Waist: This waist shows us again the narrow shoulder yoke produced by extending the upper edges of the back. The fronts are full and are gathered at the top. The sleeves are plain and full length or shorter. The neck may be finished with a rill or with the large collar provided in the pattern. The waist pattern, No. 6602, is cut in sizes 34 to 44 inches bust measure. Medium size requires 1½ yards of 40-inch material. **6575—Ladies' Dress:** This example of the popular one-piece frock shows a blouse with very low shoulder and plain sleeve, full length or shorter. It has the neck quite open, outlined by a large collar. The three-gore skirt is full at the top and plain in front, where there is a drapery suggestion at the knee. The dress pattern, No. 6575, is cut in sizes 34 to 44 inches bust measure. Medium size requires 4¾ yards of 44-inch material. **6604—Ladies' Shirt Waist:** This plain, tailored model has a box pleat at the closing, plain fronts and a small applied yoke in the back. There is also a patch pocket in front. The sleeves are the regulation shirt sleeve, ending at the wrist in the conventional cuff. The neck may have a band finish or a soft turnover collar. The shirt waist pattern, No. 6604, is cut in sizes 34 to 44 inches bust measure. Medium size requires 3½ yards of 27-inch material. **6604—Girls' Dress:** Much can be done with this model. It is of sacque cut with a medium sized box pleat down the centre of front and back, the closing beneath this pleat in front. There is a deep yoke facing in front, and this may be omitted. The neck may have the large sailor collar to trim it or it may be of plain outline. The dress pattern, No. 6604, is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 2¾ yards of 36-inch material. **6616—Girls' Dress:** This pretty style gives a frock with blouse and skirt. The blouse is plain except for the long line of closing which is trimmed with revers extending from the collar. The skirt is pleated all around and is attached to the blouse. Both open at the left side of the front. The sleeves are of bishop design and may be made full length or shorter. The dress pattern, No. 6616, is cut in sizes 6, 8, 10, 12 and 14 years. Medium size requires 3 yards of 36-inch material.

New Uses for an Old Friend

White hardwood floors should be mopped two or three times a week with water in which "20 Mule Team" Borax has been dissolved. The floor will remain beautifully white and no scrubbing is necessary.

Equal parts of Borax and Powdered Sugar will drive away cockroaches and water bugs. Simply spread it around wherever the pests appear.

For washing painted walls add a half a pound of Borax to a pail of hot water and use with soap. It removes all the dirt and grease and does not leave the walls or ceilings cloudy or streaky, and gives them a fresh, new appearance.

20 MULE TEAM



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The Marvelous Aid to Soap

Removes Germs and Odors

Used with Soap Wherever Soap is Used

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In convenient 10c, 15c and 50c packages. If your retailer does not supply you promptly, your choice of a 10c, 15c or 50c package will be mailed to you by Parcels Post, delivery charges paid, on receipt of the regular retail price.

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GET A FEATHER BED

SAVE \$17.50

LOOK! Greatest Value on Earth! One 40lb. Feather Bed, one 6 lb. pair of Pillows, all new, clean feathers. Amos-keep Ticking with Ventilators; one pair full sized Blankets, one full sized Counterpane. Retail value \$17.50. Shipped nicely packed for only \$9.92. Delivery guaranteed. Money back if not satisfied. Mail money order today or write for order blanks and full details to nearest factory.

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Fruit Trees, Shades, Seedlings, Ornamental Roses, Etc.

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COOPER & ROGERS
WINFIELD, KANSAS.



Profitable Poultry Selling

Send for this Free Booklet

The poultry breeder's percentage of profit depends quite a bit on selling costs. These profits are good, sometimes, and sometimes they are not. At the very best the average poultry breeder never got any more than his or her due. Usually it has been less. Not because the breeders don't know their business as breeders, nor yet because they are not good men and women.

No sensible breeder would allow the cost of raising stock to go twice as high as necessary. But sometimes the selling cost is allowed to get too high, because the wrong means of advertising are used.

To select the right selling means for Kansas and adjoining states means money saved to breeders, besides money made in the better prices to be had when using the right means. The booklet, Profitable Poultry Selling, has been written, and is free to poultry breeders everywhere who will simply write for it.

KANSAS FARMER
Topeka, Kansas.

Ask your dealers for brands of goods advertised in KANSAS FARMER.

Kitchen the Most Important Room

Government's Farm Architect Points Out Importance of an Economically Constructed and Comfortable Home

THE most important building on a farm is the home. The health, comfort and happiness of the family are dependent upon its construction and equipment, and unless these matters are looked after the sanitary dairy barn or the economically constructed buildings for stock are of little value. Happiness and contentment in the family are as essential to efficient service as improved tools and outbuildings.

Although the housewife spends, in many cases, a lifetime in her "workshop," the kitchen and the family rooms, she is not, as a rule, capable of planning a house in the highest degree serviceable and comfortable without assistance. Her help, however, is essential to the farm architect, as the result of his plans most vitally concerns her.

In 1910 the Department of Agriculture conducted a competition for farm house plans. About 660 plans of farm houses were submitted, not one of which was fully satisfactory. The larger number insisted on some particular pet notion and emphasized a single feature to the neglect of other important ones. The men and women who familiarize themselves with the work to be done and then apply themselves to the single task of devising means, are the ones who, with the co-operation of the farmers, and their wives, can best handle the farm house problem.

TO ECONOMIZE HOUSEWIFE'S STRENGTH. The possible economy in household labor and the conservation of the strength of the housewife are two important factors to be considered in the construction of a farm house. Pleasant and comfortable farm homes tend to hold families together; but the cheerless, unlovable and insanitary houses drive boys and girls to the cities. Investigation of prisons, insane asylums and houses of correction seem to prove the fact that the sins which account for the existence of these institutions are often bred in inadequate and unhappy farm homes. So this social aspect of the problem is considerable.

FEDERAL GOVERNMENT HELPS HOUSEWIFE. The Federal Department of Agriculture has now undertaken to investigate this problem systematically and to evolve, if possible, practical improvements for the benefit of the farmer's home.

Certain features are often overlooked in providing economical arrangements for the household when they might be easily provided for. One of the specialists of the Office of Farm Management learned from a woman in Pennsylvania, who had broken down from overwork, that she had been carrying coal from the barn for years. When the husband was asked if there was any reason why a coal bunker could not have been provided near the cook stove and filled directly from the wagon, he answered that there was none, but that no one had ever thought of it. This one detail has been found neglected in other cases where it could have been easily remedied, if only someone had thought of it.

After economy in the construction of the building and in the house work has been attained, attention will be given to developing beauty. Simplicity in line and good proportions are meant by the use of this word "beauty" and not so-called applied "ornaments." This simplicity is entirely in keeping with a general plan of economy.

ECONOMY NOT SYNONYM OF CHEAPNESS. Economy, however, is not a synonym for cheapness. Double strength glass may even be more economical in a tenant house than single strength, notwithstanding its greater first cost. A kitchen sink may be a paying investment although it excludes a bay window, or a fireplace, which has been the pet notion of the housewife. Screened-in kitchen porches, sleeping porches, double or triple windows and kitchen conveniences are fine economical features which even the smallest house plans may well consider. Separate dining rooms for families that generally eat in the kitchen are less important, as are "parlors." These separate rooms may have complete systems of plumbing, heating and lighting which involve additional expense. The kitchen is the most important room in the farm house.

ROOMS FOR DAILY USE NEEDED. For the average farmer, economy bars a room especially reserved for weddings and funerals. A back stairway in small houses is an unnecessary luxury. Large halls which are never used to live in,

but merely as thoroughfares, are a feature which can be dispensed with in the interest of a smaller outlay of money.

Other features that should give way to a comfortable and convenient kitchen are narrow porches, filigree work, numerous angles in walls and roof, useless doors. There should be an intelligent purpose for every cubic foot of space and for every piece of material about the building, if possible.

It may not be found practicable for the Department of Agriculture to furnish plans and specifications of farm houses worked out for particular individual needs. However, it is believed to be desirable to work out plans and specifications for the general needs of farmers and to illustrate and explain the plans so that the farmer may understand the principles involved and apply them when he remodels his present house. The Office of Farm Management is endeavoring to help the farmer and the farmer's wife along these lines.

Should Children Work?

By ALICE N. NOYES.

He said he could not go out to play because it was his washing day.

"Come, Leonard, turn on the gas for mother."

The four-year-old leaves his engine and comes running, for when it's baking day Leonard is permitted to turn the little knobs on the gas range.

Dangerous?

"He was only a tiny tot when he discovered that it was fun to turn the little knobs. He must learn that he must not touch them except when they are to be used."

"If I simply tell him he will forget, and sometime we may have a terrible disaster. If he gets impressed on his baby mind that the gas is to be turned on only when mother tells him he will be happy and proud to be helping mother."

Participation in household tasks becomes an opportunity for education.

Kipling's story of "How the Camel Got His Hump," will apply to children without tasks.

"We all get humps, camelious humps—

I get it as well as you—oo-oo Kiddies and grown-ups, too.

If I haven't enuf to do—oo-oo."

The movement to make children happy through work began in this generation, when Huckleberry Finn whitewashed his fence, but it received a new impetus when William Wirt, superintendent of schools in Gary, Indiana, saw a little boy sitting sullen and bored on his front steps and his mother hanging out clothes.

"Schools are doing this child a wrong," said the superintendent to himself. "We are encouraging him to think that the world of books is superior to the workday world, and that being a scholar is incompatible with helping with the housework."

Today children of Gary receive their education through tools; tinsmithing, plumbing, carpentry, sewing and cooking. Manufacturers welcome the coming of men to their shops who understand the principles of tools and machinery.

Philanthropies that provide play for the children are well under way. The movement to prevent children from being exploited in industry is also active. Both are essential. Yet if in fighting "child labor" we deprive our children of wholesome occupation and let them drift into idleness we shall be doing them great wrong.

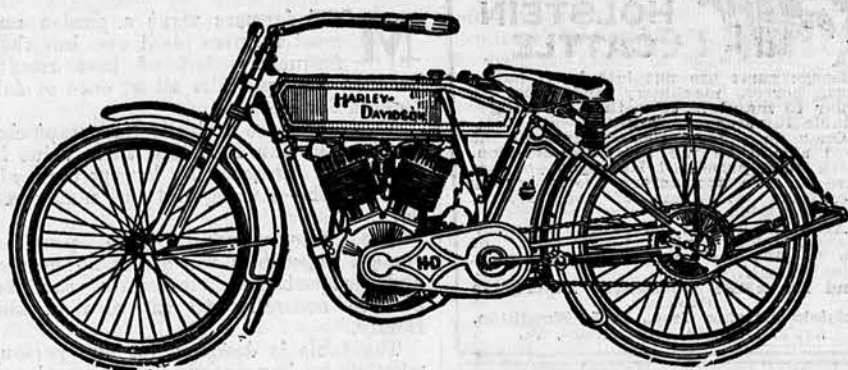
Children love to do the things they see their elders doing. They love to feel important and help.

I know the little son of a baker in New York who is old enough so that he wants to help in his father's business. He wants a job. The law forbids; so instead of happily trundling around the block, delivering bread, that boy is forced to loaf on the corners with a gang of idlers like himself, in danger of forming bad habits.

KANSAS FARMER is just starting another motorcycle subscription contest, boys! Better get in and win this one. E. B. Preedy of Richland, Kansas, won the machine given away February 28, with only 110 subscriptions.

An ounce of charity is better than a ton of advice.

WIN THIS MOTORCYCLE BOYS!



Given Away in a Big Prize Contest Just Starting

We pay you liberally IN CASH for every subscription secured. You CAN'T LOSE IN THIS contest. It costs you nothing to enter.

\$500 — In Prizes to Be Awarded to Those With a Little Spare Time — \$500

First Grand Prize.....	\$285 Harley-Davidson Motorcycle
Second Grand Prize.....	75 Talking Machine
Third Grand Prize.....	30 Talking Machine
Fourth Grand Prize.....	30 Gold Watch
Fifth Grand Prize.....	45 College Scholarship
Sixth Grand Prize.....	45 College Scholarship
Seventh Grand Prize.....	15 Gold Watch

This \$285 Harley-Davidson Motorcycle, the new 1914 two-speed model, with \$500 in prizes, will be given away absolutely free in a prize contest just started by KANSAS FARMER, Topeka, Kan. It costs you nothing to enter and you will be paid liberally in cash for each subscription secured. Send in your name and address at once, boys. You can win a Motorcycle and make money every minute of your spare time.

EARN A BIG CASH SALARY EACH WEEK. You don't have to wait until the end of the contest for your money. You will be paid each week. If you only have a part of your time to spare, enter at once. You can turn that spare time into cash, easily earned, and win a \$285 Harley-Davidson Motorcycle. It's easy, but you won't know how easy until you find out all about it. To find out, send your name and address to the Contest Manager, Kansas Farmer Motorcycle Contest, 625 Jackson St., Topeka, Kan.

The contest starts right away and closes Saturday, May 16, 1914, when the Harley-Davidson Motorcycle and the other prizes will be awarded to those having the most points. You get paid in cash for each subscription secured, whether you win one of the grand prizes or not. You CAN'T LOSE IN THIS CONTEST.

FREE OFFER TO ALL WHO ENTER AT ONCE.—Don't wait, send in your name and address today on the blank below and begin making money at once. To all those who send in their names within 20 days a FREE premium will be sent, together with a free outfit with which to get subscriptions and full information about the contest, complete description of all the prizes, together with our special EASY PLAN to get subscriptions FAST.

FILL OUT THIS BLANK AND MAIL TODAY.

Contest Manager, KANSAS FARMER Motorcycle Contest,
625 Jackson Street, Topeka, Kansas.

Dear Sir:—I desire to enter your Motorcycle Contest. Please send FREE OF COST TO ME THE FREE PREMIUM and FREE OUTFIT and your special EASY PLAN to get subscriptions FAST, with full information about the prizes and contest, and tell me how I can win the \$285 Motorcycle and earn from \$8 to \$18 per week at the same time.

My Name.

Address.

Street or R. F. D. State.

Send This Blank to Contest Manager, KANSAS FARMER.

The Newest DICTIONARY in the WORLD

(JUST OUT)

With a Year's Subscription to Kansas Farmer, only \$1.25.

704 Pages, Revised to Date and Printed in Large Clear Type.

Here is the newest Dictionary in the world—a great 704-page book just off the press in New York City, revised up to date and containing in addition to what you find in an ordinary Dictionary all the new American-English words added to the language in the past year. The foremost authorities from the great seats of learning have been brought together to make this the Standard Authority on Modern Language.

In addition to its being a Dictionary of the English language, it is a Dictionary of commercial and legal terms, a key to correct pronunciation, contains all the principles of grammar, orthography, etymology, syntax and prosody, rules of pronunciation and capital letters. An entire section of this book is devoted to synonyms and antonyms. It will help you to write your business letters. As a spelling guide alone you cannot afford to be without it. Such new words as *Pyron*, *Escalator*, *Osterize*, *Cavitation*, and dozens of others are given in proper order, with pronunciation, derivation and meaning complete. Besides what you would expect to find in an ordinary Dictionary, this Dictionary contains dozens of pages of newest information; a glossary of automobile terms; facts about the earth; legal holidays in the various states; money in circulation in the United States; value of foreign coins in U. S. money, besides many magnificent color-plate maps, valuable in locating places mentioned in daily newspaper dispatches. The page size is 5 1/4 x 7 1/4 inches. The book is printed on good white paper, in clear type, and bound in flexible rope bristol.

A Year's Subscription and the Dictionary for Only \$1.25.

By a fortunate arrangement with a syndicate of publishers printing thousands of copies of this new book, thereby greatly reducing the cost below all previous prices, KANSAS FARMER is enabled to offer this new 704-page Dictionary FREE and POSTPAID to anyone sending only \$1.25 for one yearly subscription, new or renewal, to KANSAS FARMER and the book. We guarantee that you will be pleased with your book and subscription, or we will gladly refund your money upon return of the book. ACT at once, before the offer is withdrawn. Send all orders to

KANSAS FARMER

625 Jackson Street

Topeka, Kansas.



To Make Dustless Dusters.

These dusters are very useful as all housewives are finding out. They are somewhat expensive as they come at the stores, but the home-made ones are within the reach. To make them buy the desired amount of cheap cheese cloth and cut it into the proper size and hem.

Then dip them into gasoline and let them dry. When treated in this way they will take up the dust instead of scattering it in the air to resettle on things in a few minutes. Also the application of the gasoline makes the cheese cloth soft enough to be used on highly polished furniture.

HOLSTEIN CATTLE.

Pure-bred Registered
**HOLSTEIN
CATTLE**

Large sums are put into land, buildings, horses, machinery and labor in order to maintain cows that are utterly unable to return a profit.

On a dairy farm the efficiency of the herd should be the first consideration. With good pure-bred Holsteins you are sure to earn a generous profit on any intelligent investment of your money, time and labor.

After the cost of her feed is deducted a good Holstein will return a profit of \$50 to \$100 per year in addition to a valuable calf.

Send for FREE Illustrated Descriptive Booklets.

Holstein-Friesian Assn., F. L. Houghton, Sec'y, Box 114, Brattleboro, Vt.

Bonnie Brae Holsteins

A choice lot of high-grade heifers and cows. Also high-class registered bulls.

IRA ROMIG

Station B. Topeka, Kansas

SUNFLOWER HERD.

Bulls! bulls! bulls! You never saw so many bulls; ages two months to one year. Every one bred for a herd header; every one a good one. \$50, \$75, \$100, \$125, \$150 and a few worth more. Just write and state how much you have to spare and I will describe one that will fit your pocket book. I would like to sell every one of these bulls in the next 30 days, and if low prices for high quality means anything, I will do it, too. Address:

F. J. SEARLE, Oskaloosa, Kansas.

Springdale Farm Holsteins.

For Sale: Gerben Josephine Duke, born August 12, 1912; dam, Princess Gerben Josephine; sire, Buffalo Aaron Johanna. This young bull is as good as can be found. Also bull calf born January 28, 1914, dam Peach Gerben DeKoi, sire Buffalo Aaron Johanna. No females for sale. Bulls and bull calves only. Write for photos and prices.

S. E. ROSS, Route 4, Creston, Iowa.

Butter Bred Holsteins

For Sale—A herd bull, also choice bull calves. Prices very reasonable. Write today. These bargains will not last long.

J. P. MAST, Scranton, Kan.

M. E. MOORE & CO.**CAMERON, MISSOURI.**

CHOICE BULL CALF, born October 1, 1913. Fine individual, nicely marked. Dam, A. R. O. 236 pounds butter, 530 pounds milk, 7 days; sire, son of Pontiac Korndyke with 79 A. R. O. daughters.

HIGH CLASS HOLSTEIN COWS

Both registered and high grade. Breeding stock for sale at all times. Write us your wants.

ARNOLD & BRADY, Manhattan, Kan.

CORYDALE FARM HOLSTEINS

Headed by Jewell Paul Butter Boy. Eleven choice registered bulls; ages, few weeks to 24 months. From large richly-bred cows with strong A. R. O. backing. Nicely marked. Splendid dairy type. Reasonable prices. L. F. CORY, Belleville, Kan.

GOLDEN BELT HOLSTEIN HERD.

Prince Hadria at head of herd. He has 26 A. R. O. sisters, 21 brothers and several daughters. Extra choice young bulls for sale out of 600-pound A. R. O. dams. Farm near town.

W. E. BENTLEY, Manhattan, Kansas.

FOR SALE—At reasonable prices, 25 high grade Holstein Dairy Cows, all young, good size and well marked. Not registered, but best to be had in the state at prices asked. A few young bulls coming one year old. Independent Creamery, Council Grove, Kan.

CHENANGO VALLEY GRADE HOLSTEINS
Two hundred nicely marked well-bred young cows and heifers, due to freshen within the next three months. Also registered bulls ready for service.

F. J. HOWARD, Bouckville, N. Y.

SIXTY HEAD of registered and high-grade Holstein cows and heifers, also a few registered bull calves.

O. W. HIGGINBOTHAM & SON, Rossville, Kansas.

HOLSTEIN BULL CALVES

For sale. Also a few females. SPRINGDALE STOCK RANCH, Concordia, Kan.

HOLSTEIN BULL CALVES always on hand, and worth the price.

H. B. COWLES, Topeka, Kansas.

FIELD NOTES**Poultry Raiser Invents Hatching Chart.**

Through a crude diagram which was in the form of a circle containing 21 spaces, one for each day of the hatching period, a poultry raiser made a suggestion to the company of which he purchased his incubator that has resulted in the publication of the only hatching chart in the world. This hatching chart and a valuable free booklet, entitled "Turning Eggs Into Chickens Into Dollars," will be sent postpaid to all who request it of the publishers, The Rayo Incubator Co., 1019 South Thirteenth St., Omaha, Neb.

The Rock Island Plow Company is making an excellent offer on their Great Western Cream Separator. In fact they are so enthusiastic over their separator that they are making an unusual offer of sending the Great Western Cream Separator on any kind of trial you want, under a five-year guarantee. They have issued an interesting booklet on their cream separator, containing butter fat facts and cream separator profits. This booklet also gives the methods of separating and results of extensive experiments, and this information should be very valuable to anyone interested. The Rock Island Plow Company, of 216-C Second Avenue, Rock Island, Ill., will be very glad to send you their booklet providing you mention Kansas Farmer.

Planting Table For Vegetables

By I. D. GRAHAM

MOST farmers want a garden and most farmers plant one, but they frequently fail of best results because they plant it all at once or fail to care for it.

Vegetables are a vitally important element of human food and their value is immensely increased by having them always fresh—a thing the city man can't do.

The accompanying table provides enough vegetables for about 20 people, and proportionate amounts can be planted according to the size of the family.

The table is designed for any person, whether he have any garden experience or not. Follow the table and you will always have fresh vegetables.

For early plantings select the highest and best drained part of the garden, and it is well to have the permanent and winter crops near together, as this aids in cultivation. Parsley, parsnip, cabbage,

cauliflower, salsify, carrots, winter beets, winter radishes, winter onions and late beans, potatoes and celery may be placed in one part of the garden.

The other crops should be divided into two plots so that when the early crops are taken off of one the other will come into use and the first can be replanted.

It is well to have a seed bed in some corner where such vegetables as must be transplanted may be started. It is also wise to have a hot bed or cold frame for starting very early vegetables.

Permanent crops, like asparagus and rhubarb, are not named, as they are started from roots. Melons should have a special soil of sand and manure placed in a large hole before planting. Do not use barnyard manure on potatoes, as they will have scab. Use fertilizers for potatoes and plenty of barnyard manure for everything else.

No garden is complete without a spray pump of some kind.

NAME, VARIETY AND QUANTITY.	TIME TO PLANT.	DIRECTIONS.
Bush Beans: Burpee's. 100-foot row.	May 1 and every 2 weeks.	2 inches deep; rows 2 feet apart.
Pole Beans: Burpee's Pole. 50 hills.	May 1 and every 2 weeks.	2 inches deep; hills 4 feet; pinch off at 6 feet high; 1 pint seed.
String Beans: Bountiful. Hogson Wax. 75-foot rows.	April 1 and alternate with planting every two weeks until June 15.	2 inches deep; 6 inches apart in row; rows 2 feet apart; 1 pint seed.
Beets: Red Turnip. Egyptian. Sunset. 100-foot rows.	April 15. Plant twice a month till July 15.	Soak seed over night; 1 in. deep, 6 in. apart; rows 2 feet apart; 2 ozs. seed to row.
Brussels Sprouts. Long Island. 100 early. Half Dwarf. 250 late.	Start under glass March 15. May 1 outside.	1/2 inch deep, 1 foot in row; rows, 2 ft. apart; hang in cellar for winter; 1 oz. seed to 1,500 plants.
Cabbage: Great Dane. 100 plants. Flat Dutch. 200 plants.	Under glass March 1; April 1, outside. May 1 for late.	1/2 inch deep, 2 ft. in row; rows, 3 ft. apart; winter in pit, roots up; 1 oz. seed to 2,500 plants.
Cauliflower: Dwarf Erfurt. 100 plants each planting.	March 1 under glass; April 1 and May 1 outside.	1/2 inch deep; 2 ft. in row; rows 2 ft. apart; rich land; 1 oz. seed to 2,500 plants.
Carrot: Half Long. Danver's Pride of the Market. 100-foot row.	April 1 to August 15.	1/2 inch deep; 6 in. in row; row 1 1/2 ft. apart; winter in sand or pits; 1 oz. seed to 100 plants.
Celery: Perfection. Kalamazoo. 200 to 500 plants.	Under glass, March 1 to April 15.	Set out in May, 6 in. in rows, rows 3 ft. apart; bank up in August; 1 oz. seed to 3,000 plants.
Corn: Evergreen. Country Gentleman. 75 hills each planting.	Plant every two weeks to July 1.	2 inches deep, 2 ft. in row; rows 4 ft. apart; manure and sucker; 1 qt. seed to 200 hills.
Cucumber: Ever Bearing. 5 hills.	May 1 and every week till July 1, one hill at a time.	1 inch deep, 4 ft. apart; 1 oz. seed to 5 hills.
Endive: Green Curled. 100 feet.	June 1.	1 foot apart in row; rows 2 ft. apart; transplant to cellar to bleach; 1 oz. seed to 100 ft. row.
Egg Plant: Black Beauty. 30 roots.	Under glass in March; June 1 outside.	1/2 inch deep; 2 ft. in rows; rows 3 ft. apart; store dry for late use; 1 oz. seed to 1,000 plants.
Kale: Dwarf Scotch. 200 plants.	Under glass April 15. Transplant like cabbage.	1/2 inch deep; 1 ft. in row; rows 2 ft. apart; mulch for winter; 1 oz. seed to 200 feet.
Lettuce: Tennis Ball. 50 feet.	Under glass March 1. Every two weeks to Sept. 1.	1/2 inch deep; rows 1 1/2 ft. apart; manure, shade and water; 1 oz. seed to 3,000 plants.
Cantaloupe: Rocky Ford. Netted Gem. 20 hills.	May 1.	1 inch deep, hills 4 ft. apart; pinch off shoots; special soil of sand and manure; 1 oz. seed to 50 hills.
Water Melon: Monte Cristo. Tom Watson. 10 hills each.	May 1.	1 inch deep, hills 4 ft. apart; special soil, sand and manure; pinch off ends of shoots; 1 oz. seed to 30 hills.
Onions: Southport White Globe. 100 feet. Southport Red Globe. 200 feet.	Sets, March 25. Seeds, April 10.	1 quart sets to 100 feet; sets 2 inches deep; seed, 1/2 inch deep; 1 oz. seed to 150 feet.
Parsley: Beauty. 50 feet.	April 1.	1/2 inch deep, 9 in. in row; rows 2 ft. apart; soak seeds over night; 1 oz. seed to 150 feet.
Parsnips: New Sugar. 50 feet.	April 1.	1/2 inch deep; rows 1 1/2 ft. apart; winter in ground; 1 oz. seed to 200 feet.
Peas: Early Gradus. Lightning Express. Marrowfat. 150 feet each.	April 1, then every two weeks till June 1, then August 15.	Early, 3 in. deep in double rows; late, 4 in. deep in single rows; 1 quart seed to 150 feet.
Pepper: Great West. 25 plants.	March 1 under glass; June 1 outside.	Very tender; 1/2 in. deep; rows, 2 feet apart.
Potatoes: Early Ohio. Red River.	April 1, early. May 1, main crop.	Early, 2 inches deep; late, 5 inches deep; 1 peck to 100-ft. row.
Pumpkins: Sugar. 20 hills.	May 1.	8 feet apart; winter warm and dry; 1 oz. seed to 50 hills.
Radish: Early Red King. Early White Turnip. New Icicle. 75 feet each.	March 25, every two weeks. April 5, every two weeks. August 15, winter.	1/2 inch deep; light, rich soil; 1 oz. seed to 100 feet.
Salsify: All America. 200 feet.	April 1.	1/2 inch deep; rows 2 ft. apart; winter in ground; 1 oz. seed to 100 feet.
Spinach: New Zealand. 100 feet each.	Every week April 1 to June 1, then Aug. 15 to Sept. 1.	1 inch deep; rows 1 1/2 ft. apart; winter under straw; 1 oz. seed to 100 feet.
Squash: Golden Hubbard. 20 hills.	May 1.	1 inch deep, 6 ft. apart; sand and manure; 1 oz. seed to 25 hills.
Tomato: Tee. Stone. Beefsteak. 200 plants.	Under glass March 1 to April 1. May 15, outside.	Rows 3 ft. apart; pinch off side shoots; 1 oz. seed to 2,000 plants.
Turnip: Golden Globe. 50 feet each.	May 1, August 15.	1/2 inch deep; rows 1 1/2 ft. apart; winter in pits; 1 oz. seed to 200 feet.



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For information concerning the great agricultural advantages of New York State, and description of 1,250 cheap dairy, fruit and general farms address **CALVIN J. HUDSON, Commissioner of Agriculture, Albany, New York.**

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SPLENDID STOCK FARM.
440 Acres, 4 miles good town, Frisco R. R., Butler County, Kansas; 60 acres alfalfa, 140 acres best alfalfa bottom, balance bluestem pasture; abundant water, timber, highly improved, two sets. Price, \$27,000. You can't beat it.
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Official publications concerning the soils, rainfall and crops of Wisconsin may be had free by writing **Wisconsin State Board of Immigration, Madison, Wis. State Capitol 555.**

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Suggested Program for April.

FIRST MEETING.

Roll Call—Responded to by naming one thing the Grange should do during the year.
 Paper—How can we better the social conditions for the country girls and boys?
 Discussion—Has our school been an entire success during the past year? What have patrons done to make it a success? Led by Brother —
 A Surprise Feature in charge of —
 Paper or Talk on—"Origin and Meaning of April Fool."

SECOND MEETING.

Roll Call of Officers—Responded to by each officer giving duties.
 Discussion—Should the United States increase the size and efficiency of the army and navy? If not, why not? Led by Brother —
 Debate—Resolved, that the government should buy and operate the railroads. Interspersed with readings, songs, etc. —L. S. Fry, State Lecturer.

Grange W. W. C. Meets.

The vanguard of Equity Grange Woman's Work Committee arrived at the home of Adelia B. Hester at about 11 A. M., last Friday, and when she finally became convinced that they intended to spend the day with her, it did not take her long to clear the field for action so that by the time the main squad arrived she had recovered her equilibrium and the house had assumed a short order company aspect. Baskets of good things to eat came pouring in till one might imagine it to be the department of the army commissary. By request Mrs. Hester turned the kitchen and dining room over to the invaders and with neatness and dispatch a sumptuous dinner was soon served and she was led to the head of the table as the guest of honor in her own home. Three times the table was filled and when all were served there remained enough to feed a like number again. Who said hard times!

Soon after the chairman called the members to order and after roll call wishes, comic or serious as suited the wisher, a splendid paper on "Consolidation of Rural Schools," written by Mrs. Fanny Vickrey of Emporia, was read by Mrs. Harry Ferguson; then followed a review of the handbook that Mrs. Hester has prepared for Grange Woman's Work Committees throughout the state. The consensus of opinion seemed to be that the handbook will be a great help. At 4 o'clock the company dispersed, thanking the hostess for a day delightfully spent, while she in turn thanked them.

Opposed to Increased Commission.

At a recent meeting of Earlton Grange, resolutions protesting against the raising of commission rates by the Hay Commission Association of Kansas City, were passed. This Grange considers the proposed raise of rates as unjust, and in the publishing of these resolutions which follow, requests that other Granges of Kansas and Oklahoma take up this matter and protest against injustice:

Whereas, the Hay Commission Association of Kansas City, Mo., has increased the commission on hay from fifty cents to seventy-five cents per ton, and

Whereas, we believe the price to be exorbitant and unjust to the producer, therefore be it

Resolved by the Earlton Grange, No. 1548, that we protest against such action. Be it further

Resolved, that we believe the membership of the Hay Commission Association should be reduced to a number whereby a commission of fifty cents per ton shall warrant profitable return for their time and money invested. Be it further

Resolved that the legislature of the

State of Kansas be requested to appropriate funds, and appoint a committee to investigate any irregularities that may exist among the members of the Hay Commission Association. Be it further

Resolved, that a copy of these resolutions be mailed to the Secretary of the Hay Commission Association.

College Credit for Farm Work.

The School of Agriculture at the Agricultural College will announce a new step in its next catalog. On the initiation of the principal the faculty approved the following plan for credit work during summer vacations on the home farm:

"On recommendation of the principal any student in the course in agriculture of the School of Agriculture may undertake home project work for credit during the summer vacation.

"The student must present a detailed plan to the head of the department having charge of the work in the college and have the plan approved by the head of the department and also by the Dean of Agriculture. The work shall include a definite plan of the project, written reports of progress and work done and a final report of results. The amount of credit given shall be determined by the head of the department but shall in no case exceed four credit hours for each summer's work. The

maximum number of credit hours which may be earned in this way is eight."

This means that boys who show sufficient energy and ability to justify it will be allowed to earn some credit toward a diploma by work done on the home farm during the summer vacation. The same principle has been recognized in industrial schools for some time. In these schools shop work has been done in factories and the school recognized the work as a part of the work required for graduation. The new step taken puts the farm in place of the shop and considers work done in the proper way on the farm a real contribution toward the education of the individual. Since there may be no disinterested and skilled foreman on the farm to supervise the work as is done in the shop, the student will be required to write reports and final results and present them in acceptable form to the head of the department in charge, or some person to whom he delegates authority. It is highly probable that in many cases the work may be visited by some of the demonstration force of the experiment station or by members of the extension division.

While to the individual student the chance to earn credit is the attractive thing from the standpoint of economy and efficiency in agricultural education, the credit earned is of secondary importance. Our schools teach much that is never put into practice. There seems to be a lack of training in applying the things learned.

The plan outlined will encourage boys still in school to attempt to apply what they are learning in school to their own

farms. Furthermore, they will attempt to make this application under expert supervision and guidance. They will be in touch with an expert who is acquainted with their plan and be in a position to judge of the character of work done and give proper advice. This ought to encourage an intelligent application of the best principles of agriculture.

In many cases this will result in still greater economy to the state through encouraging better farm practices on the part of the parents of the boys in school. It is a long time for the state to await dividends on its expenditures if we must wait till the boy getting a training in agriculture now can secure a farm of his own before applying what he has learned. On the other hand if while the boy is being trained in better farming methods, not only he, but his father improve their farm practices, the state gets immediate dividends on the investment in the boy. This is the most important and far-reaching influence which the plan will have.

Projects might be worked out in feeding and testing dairy cows, growing poultry, breeding or growing corn, potato tillage, or soil fertilization for potatoes, gardening work, hotbed management, spraying fruit or vegetables, live stock feeding and any number of other plans. In all cases some principles must be applied and an accurate account both of what was done and of the work or money expended must be kept.

There is no reason why such work could not be done by high schools if a standard of projects, plans and reports are required.—H. L. Kent, Manhattan, Kan.



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SAVE \$35.00 TO \$50.00

On the best, most modern, most sanitary and closest skimming cream separator in the world. Travel 20,000 miles. Look over every factory in the United States and all foreign countries, you won't find its superior at any price. The New Galloway Sanitary is the latest and greatest product of my big Chain of Factories. It's the mechanical masterpiece of all my years in the manufacturing business. It's absolutely in a class by itself. But I am not going to ask you to take merely my word or anybody else's word for my machine. Not for a single second. I am going to give you the opportunity of finding out the real facts for yourself.

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I'll let you try my New Improved Galloway Sanitary any way you wish. I'll send you one of my wonderful new separators, size you want, right to your farm for \$0, 50 or 90 days' trial absolutely free. I want you to test it out every way you can think of. Compare it with any other machine that you know of, no matter what the price. If anybody else is trying to sell you a separator, make them let you take their machine and set it, right up by the side of mine. Compare them at every point—easy running, easy cleaning, close skimming, mechanical construction, sanitary features, in any way you can think of and then keep the machine that suits you best.

If you think that there is any other separator in the world at any price that you would rather have than the Galloway, after you have given it a good, fair test, ship it right back to me at my expense. I'll agree right now to pay all the freight both ways so you won't be out a penny or under the slightest obligation if you decide not to keep the separator after having had the free trial. If you decide to keep it, I'll guarantee to save you from \$30 to \$50 besides giving you a separator that absolutely has no equal in the world at any price. Then on top of this remarkable offer, remember my New Galloway Sanitary is backed by a

10 Year Guarantee—\$25,000 Bond

Every single New Galloway Sanitary cream separator that leaves my factory has a straight 10-year guarantee on materials and \$25,000 legal bond back of it. You take no risk of my separator not only giving you the greatest of satisfaction for a 90-day trial period but for practically a lifetime. My 10-year guarantee and my bond are printed in black and white and there are no strings tied to them. They are regular contracts that protect every Galloway customer. Accept this most liberal offer with this positive protection back of it. Don't delay. Write me now. Get my catalog and full details of my Offer. Just fill in, cut out and mail the coupon.

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FREE Cut Out and Mail Coupon for My Free Catalog and Valuable Dairy Cow Book.

My New 1914 Book shows my New Galloway Sanitary Cream separator and explains my liberal, direct from factory, plan of selling it at the lowest prices ever made on a strictly standard, high grade separator. Don't fail to get this book and investigate my new separator before you think of buying any other style or make. It's money in your pocket for it means a saving of \$35 to \$50 to you.

Then when you send for my catalog I am going to give you full details of my New Special 1914 Offer—the most liberal offer ever made and a coupon which entitles you to a free copy of my valuable book of information—Galloway's Dairy Cow Book—regular price \$1.25. You want my Dairy Cow Book without fail. It's chock full of cow facts. It will help you make your cows pay you a whole lot bigger profit. It tells how to feed and stable your cows—How to build up a milk-producing herd—How to make top quality butter—How to test your milk and many other important things you ought to know if you want to make big money in the Dairy business. This book is free to you. Just fill in, cut out and mail free coupon or write me a postal. Then as a clincher, I am going to make you a still bigger offer—one that will help you get your separator partly or entirely without cost to you in the end. This is my Co-operative-Profit Sharing Offer that has helped thousands of men pay for their machines. No canvassing. No soliciting. Just a straight business proposition. Write me today. Do it before you lay this paper down. Address

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Double cases all over—best copper tank; nursery, self-regulating. Best 140-chick hot-water brooder, \$4.85. Ordered together, \$11.50. Freight Paid (E. of Rockies). No max. City or Racine. Write for book today or send price now and save time. Jim Rohan, Pres. **BELLE CITY INCUBATOR CO.** Box 18 Racine, Wis.

Tells why chicks die

J. C. Reefer, the poultry expert of 1601 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should write Mr. Reefer for one of these valuable FREE books.

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All leading varieties at \$6 per hundred. Turkey and geese eggs at \$1.75 per setting. We breed all leading varieties of standard poultry. Plymouth Rock is our leader. Stock of highest quality at let live prices. Write for descriptive circular and special matings. Address **W. F. HOLCOMB, MGR.** Nebraska Poultry Co., Clay Center, Neb.

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2,000 bushels seed corn, leading varieties. Texas-grown red seed oats. High-grade alfalfa seed. Kafir, sorghum and garden seeds. **BELOIT, KANSAS**

POULTRY



No better time than the present for hatching chickens. Have you sent for that setting of pure-bred eggs yet?

Look over the poultry ads in this issue, and see if there is not something advertised that would benefit you, whether chickens, turkeys, ducks or geese.

A very little thing will make all the difference between success and failure in the poultry business; and in either case the cause is generally with the poultryman and not with the breed of chickens he keeps. There is more in the feed than in the breed, and there is more in the proper care of fowls than the breed and feed both together.

As your chickens grow old, remember that they need more feed. The amount required to produce a pound of gain increases as the birds grow older. Increase the amount of feed each week so that they will have enough. If you go around the last thing before dark with a pail of feed, throw a little in each coop and you will soon know whether or not they have had enough.

It is often a temptation to shirk some of the less inviting work in the poultry yard, but in many cases these things are the very ones that should be done in a thorough manner. The care of the droppings is one of the unpleasant tasks, but it should never be neglected, for this is one of the menaces to the health of the fowls. Never leave them long enough to be offensive. If the droppings are taken out every day, all the better.

Be sure that the fowls have all the water they want to drink just before going to roost at night. Laying hens require a large quantity of water, and even when it has been before them the greater part of the day, they appear to have a craving for a hearty drink after they have taken their last meal. They will refuse water at four o'clock in the afternoon, and an hour or so later, after they have had their supper, drink as though they were half dead with thirst. The dry grain they eat needs lots of moisture in order to be properly assimilated.

Fowls that are confined to small pens or yards will naturally be impatient of restraint, and oftentimes contract bad habits because they have nothing else to do. The egg-eating habit and the feather-pulling habit are often contracted from idleness, whereas if they were kept busy they would have no time to form such habits. One of the best ways to keep hens busy is to scatter a handful or two of millet seed in the litter, which will keep them active from one meal to another. Give them the millet after they have had their regular meal.

The proper care of chickens consists of attention to lots of small details. Probably this is the reason that women are more successful as chicken raisers than men. The man of the house may often think that such small matters don't count, but they do, for a chicken's life is made up of such trifles. See to it personally that your fowls are properly housed each night, that they get fresh water, that they are kept scratching, that they are fed the proper kind of food, that old and young do not run together, that lice and mites are eradicated, that the eggs are gathered several times a day, that the chicks are shut up at night so as to be safe from rats and skunks. Do these small things, and the big things, in the shape of profits, will surely come to you.

There is no good reason why ground in a poultry yard should not be as pure as ground right out in the open field. While the fowls are continually on a small piece of ground, and make a runway of it, it does not gainsay the fact that the ground can be kept pure. One way of keeping the ground in good condition is to spade it frequently and rake in oats. This will mean a little labor, but that is necessary for the success of anything. Some of the oats will be picked up by the chickens, but much of it will sprout and be brought to light at the next spading. Another way of

keeping a small runway in good condition is to spade in some air-slaked lime. Keep the birds off from the ground for a few days after it has been spaded and the lime raked or spaded in. This will kill any germs that may be starting their work of destruction and put the runway in good condition again. In fact, by combining these methods, that is first spading in the oats and then the lime, you will make a complete job of it. If you have two runways where you could place the chickens in one for a few weeks, then turn them into the other runway, it would be all the better. If the weather and ground are favorable, it will be but a few days before the oats will sprout, and they will give the chickens a lot of green food, provide a scratching place for them, and at the same time be purifying the ground.

Cost of Feeding Laying Hens.

T. E. Quisenberry, of the Missouri Experiment Station, writes:

The hens in the last contest laid about twelve dozen eggs each on the average, which, if sold for 25 cents per dozen, equals \$3. The hens ate about 33 pounds of grain each and about 38 pounds of dry mash. The feed cost on the average about 2 cents per pound. This made the cost of feeding each hen approximately \$1.42. This left a profit of \$1.58 per hen to pay the expense of labor and other expense incurred. Twenty-five cents per dozen is a very conservative price to put on selected and guaranteed strictly fresh eggs. The best pen of hens laid 2,073, or an average per hen of 174 dozen, at 25 cents, equals \$4.31, or at 50 cents per dozen, would have equaled \$8.62 per hen. Each of these hens ate \$1.46 worth of feed, which left a profit of \$2.85 at a low estimate, or a profit of \$7.16 per hen if the eggs had sold at 50 cents per dozen. The poorest pen in the contest just laid enough eggs to pay for their feed and left nothing to apply on labor. There are many such hens in existence. One-half of the hens in existence are kept at a loss. How to make them profitable is the problem.

If pullets are intended for an egg-laying contest or are expected to be good winter layers, they must be hatched reasonably early. This applies to all varieties. If you can so arrange your hatches that the pullets will mature and begin to lay in October and November, they will continue throughout the winter, as a rule. This has been our experience with our own stock and with those entered in the egg-laying contests for the past three years. If your pullets are going to win or make a creditable record they must lay some winter eggs, and if they don't begin to lay in October or November the chances are they will not lay much until towards spring. Some may, but the majority will not. If your pullets are to lay eggs in winter when eggs are highest, they must be hatched early. A pen that lays well in fall and winter will net you more profit than one that lays most of its eggs in spring and summer when eggs are cheapest. If you intend to enter any stock in a laying contest next fall, you had better hatch a few pullets at once if you have not already done so. This experiment station expects to hatch all of its chickens before April 1, and hatched over 4,000 youngsters in January and February this year and the per cent of mortality has been very low. One of the best Leghorn farms in this country never hatches anything after April 15. If you intend to raise poultry, it behooves you to try to get all out of it that there is in it. If you are not equipped to hatch a few early chickens it will pay you to purchase a 120-egg or larger incubator and brooder. The best time to hatch Plymouth Rocks, Wyandottes, Orpingtons, Reds, Langshans, and similar varieties, is in January, February, March and April. The best time for Leghorns, Anconas, Campines, and such varieties is March and April. This is especially true if you want to win at the fall fairs and shows, and expect many winter eggs.

A Missouri pen carried off the honors in the egg-laying contest this month. It was a Springfield, Mo., Pen No. 32, Buff Orpingtons, and laid 205 eggs. The pen of White Leghorns from England still leads all others by 109 eggs. The high-

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est individual record thus far has been made by a White Wyandotte from Pennsylvania and a Buff Rock from Missouri, each laying 74 eggs. The average for all hens for the entire three months is 29 eggs. The two leading hens have laid nearly three times as many eggs as the average hen in this contest, and have laid as many eggs in the three winter months as the average Missouri farm hen lays in a whole year. The total number of eggs laid by the 1,040 hens this month was 12,391, which makes a grand total of 29,613 eggs for December, January and February.

White Diarrhea in Chicks.

The Storrs Experiment Station at Storrs, Conn., has been having remarkable success in feeding sour milk to young chicks afflicted with bacillary white diarrhea, and has issued a bulletin on this subject, from which we extract some conclusions. Of the sour milk diet the bulletin says:

"The advocacy by Metchnikoff of the sour milk diet has aroused much interest throughout the civilized world. So strong is Metchnikoff's belief in the benefits derived from the use of this diet that he regards it as an important agent in the deferring of old age.

"All kinds of bacterial processes are carried on in the human intestine. Being by nature carnivorous, the average person consumes much albuminous or proteid food. As a consequence certain organism known as putrefactive bacteria bring about changes in the intestines which, according to Metchnikoff, are injurious to the individual and gradually undermine his health; in other words, bring on the symptoms of premature old age.

"When a considerable amount of sugar is consumed the bacteriological changes which take place in the intestine are modified, and instead of putrefaction there is a certain degree of fermentation of a harmless character. In this fermentation acids are produced which have further retarding influence on the development of the putrefactive bacteria.

"Milk contains a large amount of sugar which is the ingredient that is responsible, along with certain kinds of bacteria known as fermentation organisms, for the souring of milk. Sour milk, then, contains these beneficial acid-producing bacteria in large numbers; it also contains acids and sugar, and therefore, according to Metchnikoff, it should serve the important purpose of suppressing intestinal putrefaction. Whether Metchnikoff's view is completely justified by facts remains to be seen. It seems quite certain, however, that in many types of intestinal trouble caused presumably by bacteria the use of sour milk as a food has met with success.

"Since bacillary white diarrhea is caused by bacterium which affects the intestine of chicks primarily the supposition that this organism might be influenced unfavorably in both the crop and in the intestines by acids and acid-producing bacteria was not to be set aside. Professor Hodge had already recommended the feeding of sour milk to quail and grouse. If sour milk has any beneficial action it should be particularly noticeable in fowl, because of the ease with which bacteriological changes can take place in the body before the food reaches the gizzard, where the acidity is harmful to bacteria. That is, the crop holds the food for a time, and as the conditions in it are highly favorable for bacteria they may gain a strong foothold and from here pass through the gizzard en masse to the intestine where further multiplication can take place.

"In employing sour milk as a possible agent in the prevention of white diarrhea it is quite apparent that it must be used early; that is, before the bacterium of white diarrhea has invaded the general circulation of the chick, and while it is still confined to the crop and intestine. Failure to appreciate this point perhaps explains, at least in part, our inability earlier in the course of our investigation to obtain decisive results in the few sour milk feeding experiments which were attempted.

"That the feeding of sour milk to chicks which are exposed to, or are suffering with, white diarrhea infection is beneficial is indicated clearly in the results of our experiments. In every instance the mortality was lower in broods which received sour milk than in the corresponding broods that did not. In several of the experiments the number of deaths in the pens which were not supplied with sour milk was at least double that of the pens which received it, and in one case the ratio was approximately 3:1. It should be understood that where sour milk was used it was given to the chicks early in life and kept constantly before them.

"The most surprising results which have been obtained in our feeding investigations are those which bear on the growth and vigor of the chicks. There was a constant gain in the weights of the chicks which were fed the sour milk over the corresponding broods which were not. At the time of this writing the average weights of the former are fully double those of the other groups. Not only is this difference most apparent in the pens which were infected, but also in the check or control pens.

"Besides the differences in weights, there were other important marks of difference in growth and vigor. The sour-milk chicks were of more nearly uniform size than the others, and they appeared more rugged almost from the beginning. Furthermore, the combs of the males were larger and of brighter color; the flesh of the sour-milk chicks was more firm, and the limbs appeared to be stronger and better developed. The males in the sour-milk pens began to crow earlier than the others.

"When one of the feeding experiments had been under way for about four weeks our attention was directed to an unusual condition in the open yards, or runs. In yards 2, 4 and 6 (all containing chicks which had not received sour milk) there was not a green blade of grass left standing, while in 1, 3 and 5 (sour milk pens) the grass was as green as a lawn. It appeared at once evident that the sour milk supplied certain food elements which are essential to the normal development of growing animals, and which are found in green foods."

The bulletin summarizes its results as follows:

"The original source of infection is the ovary of the mother hen.

"Eggs from infected hens contain the organism in the yolks.

"Chicks produced from the infected eggs have the disease when they are hatched.

"The disease may be spread through the medium of infected food and water; hence, normal chicks may acquire it by picking up infected droppings or food contaminated thereby.

"Infection from chick to chick apparently cannot take place after they are three or four days old.

"As a rule, infected chicks make less satisfactory growth than those that are apparently normal. For some time they appear stunted and weak, but may eventually undergo more or less complete development.

"Female chicks which survive often continue to harbor the infection, and may become permanent bacillus carriers. As such they are a constant source of infection.

"Infected hens are apparently poor layers, especially in their second and subsequent laying seasons.

"The period of greatest danger from bacillary white diarrhea lies within the first 48 hours. Chicks may acquire the disease, however, up to the time they are four days old.

"Hens may become bacillus carriers after they have reached maturity. The ovaries may become infected by contact of the hens with infected hens, or by artificial infection of the litter. The infection is, in all probability, acquired through the mouth.

"The feeding of sour milk to chicks appears to be a good means of preventing, or at least holding in check, epidemics of bacillary white diarrhea. Hence, whenever it is impossible or impracticable at once to introduce new stock, sour milk may be an important agent in lessening the dangers of great loss from the disease. The sour milk should be fed early; furthermore, it should be kept before the chicks constantly.

"Sour milk has an important stimulating effect on the growth and vitality of chicks, and for this reason alone it is a most valuable food.

"For the complete elimination of white diarrhea from a poultry farm it is necessary to reject for breeding purposes stock which harbors white diarrhea infection, and to obtain eggs or live stock from sources where white diarrhea infection has not been known to exist.

"It should be considered both a moral and legal offense for persons to sell or exchange eggs, chicks or mature stock which came from flocks that they know to be infected with the germ of bacillary white diarrhea.

"Every precaution should be taken to protect mature stock against infection by the white diarrhea bacillus. It is, therefore, important that mature hens, as well as growing stock, be kept in good clean houses and large yards; that they receive wholesome food and the best of care. Finally, that they be not allowed to come in contact with infected chicks or mature stock."



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FOR SALE—PURE SINGLE COMB White Leghorn eggs, \$4 per 100. Males score from 92 to 94. Laying pullets and hens at \$9 per dozen. H. M. Dittenbacher, Great Bend, Kan.

EGG BUSINESS FINE FROM SINGLE Comb White Leghorns, few dates open. Agent for Perfection Medication Roosts and Insecticides. Thole Wolf, Conway Springs, Kansas.

SINGLE COMB WHITE LEGHORNS— National Western Poultry Show, Denver, 1914, won \$50 cup, also national western sweepstakes trophy. Big free catalog. Baby chicks, eggs. W. H. Sanders, Box E-275, Edgewater, Colo.

SINGLE COMB WHITE LEGHORNS— Winners Kansas City, St. Joseph. Eggs from trap-nest bred 200-egg hens, \$7 per 100 up. Fertility guaranteed. Cockerels, hens, \$2. Catalog free. Woodland Poultry Farm, Stillwell, Kan.

MORDY'S FAMOUS ENGLISH STRAIN of Single Comb Crystal White Leghorns, snow-white with beautiful plumage, low broad tails, red eyes, combs as finely textured as velvet; high-scoring birds, large vigorous fellows. Eggs from first pen, \$3 per setting; from second pen, \$1.50 per setting. S. B. Mordy, Wakefield, Kan.

RHODE ISLAND REDS

R. C. R. I. REDS—HIGH SCORING GOOD laying strain, \$1 per 15, \$5 per 100. Mrs. Orlando Fitzsimmons, Belgrade, Neb.

SINGLE COMB REDS, RICKSECKER strain. Fifty eggs, \$2.50; 16, \$1. Gertrude Haynes, Meriden, Kan.

ROSE COMB REDS—EGGS, 15 FOR 60c; 100 for \$3.50. Baby chicks, 10c. Range flock. Mrs. Chas. Rucas, Carlton, Kan.

ROSE COMB REDS EXCLUSIVELY— Bean blood. Fifteen eggs, \$1; 100, \$5. Mrs. Chancy Simmons, Route 3, Erie, Kan.

ROSE COMB R. I. REDS, 75c FOR 15; \$3.50, 100; good utility stock. Adda Walker, White City, Kan.

EGGS—SINGLE COMB REDS—INCUB- ator lots. Mrs. Frank Wallace, Weldon, Iowa.

SPLENDID DARK R. C. REDS—EGGS, \$1.50 and \$2.00. Mrs. H. F. Martindale, Madison, Kan.

S. C. REDS, WINNERS, CHICKS 12½ cents prepaid. Mrs. P. D. Spohn, Inman, Kansas.

ROSE COMB RHODE ISLAND REDS— Eggs, \$1.50 up. Free illustrated catalog and list of winnings. F. A. Rehkopf, Route 7, Topeka, Kan.

ROSE COMB RED EGGS, HIGH-SCOR- ing pens, \$3, \$2, \$1.50 setting. Rose Comb Buff Orpington eggs, \$2. V. E. Gillilan, Garden City, Kan.

FOR SALE—EGGS FOR HATCHING, from select flock Rose Comb Rhode Island Reds, \$3 per 100; 75c per 15. J. P. Fengel, Lost Springs, Kan.

ROSE COMB REDS—THREE PENS OF big husky fine colored birds. Eggs, \$2.00 per 15, fertility guaranteed. Fred T. Nye, Leavenworth, Kan.

R. C. RED EGGS FOR HATCHING FROM five mated pens, from large prize-winning stock. Prices right. Mating list on application. Write at once. E. H. Hartenberger, R. F. D. 4, Box 1, Newton, Kan.

RHODE ISLAND REDS

Meyers & Stover Poultry Farms Fredonia, Kan.

Rose Comb Rhode Island Reds. Fifty-two premiums at recent shows. Eggs \$2 to \$5 per 15. Farm range, \$4.50 per 100.

Indian Runner Ducks

Pure White. Thirty-two first premiums, including Missouri State and all (8) at Kansas State Show. Eggs \$2.50 per 12; \$14 per 100. Fawn White. Show winners for years. Eggs \$1.50 per 15; \$8 per 100.

Bourbon Red Turkeys

Often shown, never defeated. Eggs \$3 per 11. Free Catalog.

SINGLE COMB WHITE LEGHORNS— Eggs, 15, \$1. H. Vinsant, McPherson, Kan.

BRED SPLENDID WINTER LAYING R. C. Reds 9 years. Eggs, \$4 per 100. Mary Bartley, Barnes, Kan.

PURE-BRED R. C. REDS—FARM range, \$3.75 per 100. Mrs. James Crocker, White City, Kan.

ROSE COMB RHODE ISLAND REDS— Heavy laying strain. Mated pens. Eggs, \$1 and \$1.50 per 15. Fred Ryan, Lincoln, Kan.

ROSE COMB RHODE ISLAND RED EGGS for setting. Pen No. 1 headed by son of "Bill Taft Jr.," first cock N. Y., 1910, \$5 per 15. Pen No. 2 headed by 92½-point cock, \$3 per 15. Lloyd Blaine, Haven, Kan.

SINGLE COMB REDS, PRIZE WINNERS, farm raised. Fifteen fertile eggs, best pen, \$2.50, prepaid. William Edwards, Westphalia, Kan.

ROSE COMBS—EGGS, \$5.00 TO .75 SET- ting. Chicks. Winners American Royal, Kansas State Fair, State Show, Oklahoma State Fair. Raymond Baldwin, Conway, Kan.

ROSE COMB REDS—EGGS FROM FLOCK 7 selected hens. Excellent laying and show strain. \$2 per 50, \$3.50 per 100. Mrs. E. F. Lant, Dennis, Kan.

WALKER'S STANDARD STRAIN S. C. Reds. Eggs from as fine matings as in Missouri at \$1.50 per 15. Incubator eggs, \$6.00 per 100. Walker Poultry Co., Chillicothe, Mo.

BRED TO LAY. THOROUGHbred S. C. Reds, \$1. setting, \$4 per hundred. Satisfaction guaranteed. Finest birds I ever raised. Belmont Farm, Box 69, Topeka, Kan.

RHODE ISLAND REDS, BOTH COMBS. Eleventh year of sending our guaranteed fertility and safe arrival. Low priced eggs considering quality of stock. Mating list free. H. A. Sibley, Lawrence, Kan.

SEND FOR MY S. C. RHODE ISLAND Red mating list. Eggs from my Kansas and Nebraska State Show winners very cheap. Drop me a line now and let me tell you what I have to offer. H. R. McCrary, Concordia, Kan.

RICH'S FAMOUS ROSE-COMB RHODE Island Reds—Large dark red birds, great layers, bred from the greatest prize-winning strain in the west. Bargain in eggs and chicks. Mating list free. D. Rich, Mt. Pleasant, Iowa.

RHODE ISLAND RED EGGS, BOTH combs. Great prize-winning winter-laying strain; 100% fertility guaranteed. \$1 per 15, \$5 per 100 and up. Catalog free. Red Journal one year free with every order. Red Journal Farms, 3042 Bremer Ave., Waverly, Iowa.

EGGS FROM R. C. R. I. RED HENS AND pullets that scored 90% to 94%, headed by cockerels that score 93% to 93%. Eggs, \$2 per 15, \$5 per 30. White and Fawn Indian Runner Ducks, eggs, \$1.25 per 12; \$4 per 50, express prepaid. S. J. Markham, Council Grove, Kan.

ROSE COMB RHODE ISLAND RED eggs. Five grand pens mated to roosters costing from \$10 to \$35 each. Fifteen eggs, \$2.50; 30 eggs, \$4; and 50 eggs, \$6. Good range flock, 30 eggs, \$2; 50 eggs, \$3; 100 eggs, \$5, and 200 eggs, \$9.50. Free catalog. W. R. Huston, Americus, Kan.

TURKEYS

BOURBON RED TURKEYS—FINE IN size and color. Eggs for sale, 11 for \$3.50. Mrs. J. E. Bundy, Goodrich, Kan.

EGGS, EGGS—BOURBON RED TURKEY eggs for sale this season; prices right. Otis Miller, Logan, Kan.

BOURBON REDS, FINE STOCK—EGGS, \$3 for eleven. Julia Haynes, Baileyville, Kan.

LARGE MAMMOTH BRONZE TURKEYS not related to stock sold previous years. Sadie Litton, Peabody, Kan.

BOURBON RED TURKEYS, PRIZE WIN- ners. Eleven eggs for \$3.00, with directions for raising. Palmer's Poultry Farm, Uniontown, Kan.

BOURBON RED TURKEYS, BUFF ORP- ingtons, S. C. W. Leghorns, Indian Runner Ducks. These are all from prize winning stock. Eleanor Poultry Ranch, Brighton, Colo.

EGGS FROM MAMMOTH BRONZE TUR- keys, first prize winners at Kansas State Poultry Show. White Runner Ducks and Buff Orpington chickens. Mrs. E. D. Ludwig, Waynoka, Okla.

BUFF COCHINS.

PARTRIDGE COCHINS, PURE-BRED. Eggs from "gilt edge beauties." M. F. Lienard, Burr Oak, Kan.

CORNISH FOWLS.

DARK CORNISH FOR 20 YEARS. STOCK and eggs. L. Madsen, Gardner, Ill.

PURE BRED POULTRY

WYANDOTTES

GOLDEN WYANDOTTES—GOOD COCK-ERELS, pullets, hens. J. K. Hammond, Wakefield, Kan.

COLUMBIAN WYANDOTTES—EGGS from selected matings, \$1.50 setting. J. J. Pauls, Hillsboro, Kan.

WHITE WYANDOTTE COCKERELS—Eggs, \$1.00 for 15. Alex Thomason, Havana, Kan.

SILVER WYANDOTTES, THE KIND that lay. Birds that can win in the show room. Send in your order. M. B. Caldwell, Broughton, Kan.

WHITE WYANDOTTE EGGS, MATING list free. Also Fox terrier pups. Ginnette & Ginnette, Florence, Kan.

LARGE FINE WHITE WYANDOTTE hens, nearly year old, 80c, \$1. Mrs. E. S. Louk, Michigan Valley, Kan.

SILVER AND WHITE WYANDOTTES—Eggs, 15 for \$1.25; satisfaction guaranteed. Michael Mehl, Bushton, Kan.

WHITE WYANDOTTE EGGS, \$1.50, 15; \$5, 100. Satisfaction guaranteed. Andrew Kosar, Delphos, Kan.

SQUARE DEAL POULTRY FARM—White Wyandottes only. If you want some of the best eggs in the West, write for list. G. W. Morris, Prop., Exeter, Neb.

PARTRIDGE WYANDOTTES, EGGS FROM prize winning hens scoring to 94, \$2 and \$3 per 15. Mrs. E. F. Lant, Dennis, Kansas.

FARM RAISED SILVER WYANDOTTES, carefully selected. Eggs, 15 for \$1.00; 100, \$5.00. Baby chicks, 100, \$10.00. Julia Haynes, Baileyville, Kan.

WHITE WYANDOTTES, NONE BETTER in state. Have shape and color and great layers. Write your needs. Alford & Talbot, Yards 823 Fourth, Hutchinson, Kan.

PARTRIDGE WYANDOTTES, FOUR shows this season. Nineteen firsts. Grand mating book. Write for one. Dr. E. P. Cressler, Peabody, Kan.

REGAL WHITE WYANDOTTES, EXTRA egg makers. Let me brook your orders now for eggs. Mrs. C. C. Brubaker, McPherson, Kansas.

WHITE WYANDOTTES—TWO PENS OF high-class birds. Utility flock of 60 select hens. Dodd's W. Wyandotte Farm, Girard, Kan.

PETERS' WHITE WYANDOTTES ARE winners both in the show room and egg basket. Eggs that will hatch for sale at \$2 for 15. Richard Peters, Gresham, Neb.

WHITE WYANDOTTES, CAREFULLY bred to meet standard requirements. Eggs for hatching, \$5 per 100; \$1.80 per 30. Mrs. Will Beightel, Holton, Kansas.

TWENTY-FIVE YEARS A BREEDER OF Silver Wyandottes, Barred Rocks, White Crested Black Polish, Cocks, cockerels, hens and pullets for sale. Pairs, trios and pens properly mated. Wm. Nelers, Cascade, Iowa.

BUFF WYANDOTTES—BOOKING orders now for eggs and baby chicks. A utility pen and two choice breeding pens mated. Eggs, \$1.50 and \$2.50 per 15; utility eggs, \$5.00 per 100; baby chicks, \$1.75 per dozen. Write for circular. Wheeler & Wyllie, Manhattan, Kan.

LANGSHANS.

BLACK LANGSHANS EXCLUSIVELY—Eggs. Rosie Tull, Walker, Mo.

BUFF AND BLACK LANGSHANS—NO better bred. Stock and eggs ready. J. A. Lovette, Poultry Judge, Mullinville, Kan.

BLACK LANGSHAN EGGS—FIFTEEN, \$1.00; 100, \$5.00. Indian Runner duck eggs, eleven, 75c. J. E. Gish, Manhattan, Kan.

BLACK AND WHITE LANGSHAN, ALSO Houdan eggs, \$2.00 per 15. Circular free. E. D. Hartzell, Rossville, Kan.

BIG BLACK LANGSHAN COCKERELS, \$1.50. Eggs, \$1.50 per 15. Annie Pearce, Kildare, Okla.

BLACK LANGSHAN EGGS, \$1.50, 15; 100, \$7.50. Baby chicks, 15c. Mrs. Geo. W. King, Solomon, Kan.

FAWN-WHITE RUNNER DUCK EGGS, \$1.25 per 15. White eggs. Mrs. E. Mills, Sabetha, Kan.

BLACK LANGSHANS—FIRST PRIZE Federation winners. Fifteen eggs, \$2.50; 30, \$4.50; range, 15, \$1.00; 100, \$5.00. Mary McCaul, Elk City, Kan.

SCORED BLACK LANGSHANS—EGGS, 15, \$1.25; \$1.50 by parcels post; 100, \$5. Baby chicks, 15c each. Mrs. J. B. Stein, Smith Center, Kan.

BLACK LANGSHANS—EGGS FROM two pens and farm flock. First pen headed by cockerel scoring 96. All prize winning stock. Write for prices. Geo. M. Klusmire, Holton, Kan.

EGGS—WHITE LANGSHANS, \$5.00, 100; Bronze Turkeys, \$2.00, 11; Toulouse Geese, \$1.50, 7; African Geese, \$2.00, 7; Rouen Ducks, \$1.50, 11; White Guinea, \$2.00, 17. W. L. Bell, Funk, Neb.

BLUE ANDALUSIANS.

THOROUGHbred SINGLE COMB BLUE Andalusians—Noted egg-laying strain of large eggs. Eggs, \$2.50 per 15. Satisfaction guaranteed. G. J. King, Holsington, Kan.

MINORCAS.

S. C. B. MINORCA EGGS, 75c PER 15; \$4 per 100. Baby chicks, 10c. Mrs. Hallren, Utopia, Kan.

BRAHMAS.

LIGHT BRAHMA EGGS, SQUARE DEAL. Sarah Bennett, Milford, Neb.

WARD'S LIGHT BRAHMAS, STILL UN-defeated. Eleven firsts, 8 seconds, 6 thirds, 4 fourths, 1 fifth, in the largest shows in Kansas. Thirteen yards of fine birds, Buff and Barred Rocks, Black Langshans, White Leghorns. Eggs, \$3.00 straight. W. H. Ward, Nickerson, Kan.

PURE BRED POULTRY

ORPINGTONS.

S. C. BUFF ORPINGTON EGGS, \$1 PER 15, \$5 per 100. Mrs. S. T. White, Rose, Kan.

WHITE ORPINGTON EGGS FOR HATCH-ing. Gustaf Nelson, Falun, Kan.

BUFF ORPINGTON EGGS FOR SALE. Eggs, \$5 per hundred and \$1 per setting. Ella Sherbonaw, Fredonia, Kansas.

COOK STRAIN S. C. BUFF ORPINGTON eggs for hatching. Write for prices. F. A. Soderstrom, Holsington, Kan.

S. C. BUFF ORPINGTON EGGS, \$1.50 per 15. Hillside Poultry Farm, Box 443, Okeene, Okla.

LAGRONE'S WHITE ORPINGTONS—Eggs from prize winners, \$2.50 and \$1.50 per fifteen. G. D. Lagrone, Sentinel, Okla.

WHITE ORPINGTONS OUT OF KEL-lerstrass \$30 setting. Won \$250 prize. Dr. Gruebel, Concordia, Mo.

WHITE ORPINGTON EGGS FROM KEL-lerstrass' best laying strain, \$1.50 for 15. F. D. Hays, 123 S. Erie, Wichita, Kan.

WHITE ORPINGTON EGGS FOR HATCH-ing, utility, \$8 per 100; exhibition, \$5 per 15. P. H. Anderson, Box F-53, Lindsborg, Kan. Booklet free.

WHITE ORPINGTON EGGS FOR SALE \$1.50 per setting. Four 1st, two 2nd and two 3rd at December show. Geo. A. Howe, Kingman, Kansas.

KELLERSTRASS C. WHITE ORPINGTON eggs for hatching, \$2.00 per 15. Vigorous trap-nested stock. Ralph Fuller, Glasco, Kansas.

WHITE ORPINGTON EGGS, FROM healthy, vigorous, proven winter layers, \$1.50 per setting, \$7 per 100, express paid. J. H. Lansing, Chase, Kan.

SINGLE COMB CRYSTAL WHITE ORP-ington eggs, 15 for \$1.25; 30 for \$2.25; 50 for \$3. Also Light Brahma eggs at same rates. Address M. R. Holt, Morrill, Kan.

FOR SALE—BUFF ORPINGTON EGGS by the hundred, from winners at Great Bend, Hutchinson and Wichita this year. Mating list free. Roy Sanner, Newton, Kan.

BARGAIN—GRAND WHITE ORPING-ton hens and pullets direct from Kellerstrass' finest stock, only \$1.50 each. J. K. Searles, North Tenth, Atchison, Kan.

BUFF ORPINGTON EGGS FROM FINE stock. \$1.50 per 15, prepaid. No better breed. Try them and be convinced. Send today. C. A. Taylor, Ames, Iowa.

WHITE ORPINGTONS, KELLERSTRASS strain. Eight hens headed by a magnificent cockerel. Eggs, \$1.25 per 15; three settings for \$2.50 by parcel post, prepaid. L. H. Cobb, Dunavant, Kan.

PURE-BRED SINGLE COMB BUFF ORP-ingtons. Pen headed by sons of Wm. Cook's (1912) First Madison Square Garden and Allentown, Pa., cockerels. Eggs, 15, \$1.50; 100, \$5.00. Adolph Berg, McPherson, Kan.

STEWART'S STAY-WHITE STRAIN White Orpingtons. Cross between best strains in America. Write for prices on stock. Eggs \$1.50, \$3 and \$5 per 15. W. C. Stewart, Liberal, Kan.

IRWINDALE FARM THOROUGHbred Crystal White Orpingtons produce heavy winter layers, also blue ribbon winners for our customers. Sale stock exhausted. Free catalog. Route 7, Topeka, Kan.

BUFF ORPINGTONS—HIGH CLASS stock. Eggs from our State Show, Hutchinson, and Newton winners, past three years, \$3.00 per 15. A square deal always. Wichita Buff Orpington Yards, Wichita, Kan.

SINGLE COMB BUFF ORPINGTONS—Pure-bred. Fine stock on bluegrass range. Eggs, 80c per 15, three settings for \$2.00, by parcels post, prepaid; \$3.50 per 100 by express, not prepaid. L. H. Cobb, Dunavant, Kan.

WHITE ORPINGTONS, KELLERSTRASS strain; eggs from pen of select layers, headed by cockerel direct from Kellerstrass. \$2.50 per 15; utility, \$5 per 100. Charles Pfeffer, Riley, Kansas.

S. C. WHITE ORPINGTONS—WON eight out of ten blue ribbons at all shows in Northern Kansas. All birds in pens have ribbons. Booking orders for eggs, or can deliver at once. Best pen, \$5.00 per 15; utility, \$10.00 per hundred. Ed Granerholz, Esbon, Kan.

DUCKS

WHITE RUNNER DUCK EGGS, 13, \$2; 26, \$3.50; 50, \$5; 100, \$9. Cherry Croft, Junction City, Kan.

INDIAN RUNNER DUCKS AND DRAKES, of heavy laying white egg strain. Ray Rhodes, Maize, Kan.

WHITE INDIAN RUNNER DUCKS, \$2.00, 13; extra quality stock from winners. Adda Walker, White City, Kan.

FAWN AND WHITE RUNNER DUCK eggs, \$1.50 per 13. Merle B. Peebler, Latham, Kan.

INDIAN RUNNER DUCKS—WHITE AND fawn and white. Eggs, white, \$2.75, 13; fawn and white, \$1.25, 13; \$6.75, 100. Mrs. Annie E. Kean, Carlton, Kan.

PURE WHITE RUNNER DUCKS, BUFF Black Orpington chickens, fancy breeding. Free mating list. J. F. Cox, Route 8, Topeka, Kan.

STANDARD FAWN AND WHITE RUN-ner Ducks—Wonderful layers of pure white eggs, \$1 setting, \$5 hundred. Satisfaction guaranteed. Mrs. Ida Thomas, Bosworth, Mo.

PRIZE WINNING WHITE INDIAN RUN-ner duck eggs, 15, \$1.50; 45, \$3.75; 100, \$7.50. Buff Orpington Ducks, 15, \$2; 45, \$5; 100, \$10. Fawn and White, 15, \$1; 45, \$2.50; 100, \$5. Light Brahmas, 15, \$1; 45, \$2.50; 100, \$5. Poultry book free. Frank Healy, Bedford, Iowa.

MY MAMMOTH PEKIN DUCKS HAVE the size you want. Large as geese. You should know about their winnings at Federation and State Show. Write for this information and prices of eggs. My customers do most of my advertising. C. J. Page, Salina, Kan.

PURE BRED POULTRY

DUCKS AND GESE.

PURE WHITE INDIAN RUNNERS AND Buff Orpington Duck eggs, \$2 per 15, \$5 per 50. Mrs. G. W. Goudy, Stromsburg, Neb.

PURE WHITE INDIAN RUNNER DUCKS—Eggs, \$3.00 for 15. W. Hardman, Frankfort, Kan.

ENGLISH PENCIL INDIAN RUNNER duck eggs, pure white, \$1.50 per setting. Pearl Grandfield, Maize, Kan.

QUALITY FAWN-WHITE RUNNER Ducks, \$1.25 each. D. Fleisher, Princeton, Kan.

LARGE WHITE EMBDEN GESE—Eggs, 6 for 75c. Kellerstrass White Orpington eggs, 24 for \$1. Maggie Fleisher, Princeton, Kan.

FARM RANGE EXTRA BIG BONED greenish glossy Black Langshans, all scored, prize winners. Eggs, 25c each. Osterfoss Poultry Farm, Hedrick, Iowa.

INDIAN RUNNER DUCKS, ALL VARIE-ties. Imported stock. White egg strain. Buff Rocks direct from Poley's \$7,000 stock, each \$2 per setting. Sarah Houston, Mercer, Mo.

INDIAN RUNNER DUCKS, FAWNS—Eggs, \$1 per setting, \$5 per 100. Ducks and drakes, \$2.50 each; large stock. J. L. Holbrook, Clayton, Mo.

WHITE INDIAN RUNNERS, PRIZE winners. Fifteen eggs, \$3.00; fawn and white, \$1.50. High scoring Single Comb Reds. Chas. Jobe, Sedan, Kan.

FAWN AND WHITE INDIAN RUNNER duck eggs. Myers and Berry heavy egg-laying strain. Fertility guaranteed. Eggs, \$1.25 per 15; \$6.75 per 100. Mr. Sam'l Megill, Cawker City, Kan.

SEVERAL BREEDS

SICILIAN BUTTERCUP EGGS—DOCTOR Stevens, Caney, Kan.

BRAHMAS, ORPINGTONS, REDS, LEG-horns, Turkeys, Geese, Ducks, stock and eggs. Emma Ahlstedt, Roxbury, Kan.

BUFF ROCK AND BLACK LANGSHAN eggs for sale, \$1 per 15 or \$5 per 100. Mrs. Newton Coffman, Rosendale, Mo.

HOUDANS, ANCONAS, SINGLE COMB Brown Leghorn eggs, reasonable. S. Durand, Millersville, Ill.

55 BREEDS PURE-BRED CHICKENS, ducks, geese, turkeys, collie dogs. Catalog free. Belgrade Poultry Farm, Mankato, Minn.

BUFF ORPINGTONS, S. C. BROWN LEG-horns. I have some extra nice birds for sale. G. F. Koch, Jr., Ellinwood, Kan.

ANDALUSIANS, SILVER WYANDOTTES, trap nested, good winter layers. Eggs, \$1.50 to \$3 per setting. Elmer Combs, Huntley, Neb.

EGGS—WINNING S. C. BLUE ANDALU-sians, Buff Leghorns, Bronze Turkeys. Circular. Clean sweep. Enid, Okla. John A. Huber, LaCrosse, Kan.

DARK CORNISH AND BARRED ROCKS—Eggs from blue ribbon winners. Write me for the mailing list you want. W. W. Graves, Jefferson City, Mo.

EGGS FROM CHOICE STOCK—WHITE-Faced Black Spanish Houdans, Anconas and S. C. Black Minorcas, \$1.50 to \$3 per 15. Russell Parker, Wilsonville, Neb.

WHITE WYANDOTTES, MAMMOTH PE-kin and Buff Orpington Ducks, Mammoth Bronze Turkeys. Eggs for hatching. Mrs. A. J. Higgins, Effingham, Kan.

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

THE SUNFLOWER POULTRY FARM, Kansas City, Kan. Office, 546 S. 11th St. Breeder of Barred Rocks, Buff Orpingtons, Rhode Island Reds and Black Minorcas, Pekin and Indian Runner Ducks. Settings from prize winning stock, \$2.00; second pens, \$1.00.

EGGS—TOULOUSE GESE, \$1.75 PER 10; Pekin ducks, \$1.25 per 11; Runner ducks, \$1 per 11; Rouen ducks, \$1 per 13; White Guinea, \$1.50 per 12; Bronze and White Turkeys, \$2 per 7. Parcel post egg boxes, 15-egg size, \$1.25 per doz.; 30-egg size, \$2 per doz.; 50-egg size, \$2.60 per doz. Sample by mail, 40 cents. F. A. Whitted, Monroe, Iowa.

ANCONAS.

MOTTLED ANCONA EGGS, \$1.50 FOR 15, \$6 per 100. W. Hardman, Frankfort, Kan.

MOTTLED ANCONAS, THE GREAT EGG producers. Mrs. M. J. Gallatin, Wahoo, Neb.

ANCONAS—EGGS FROM HIGH-SCORING heavy-laying strain. Write for prices. Irvin Smith, Clark, Mo.

ANCONAS AND 30 OTHER VARIETIES. Booklet free. Erle Smiley, Beaver Crossing, Neb.

ANCONAS—ALL THE REDS AND blues at State Show and Hutchinson and sweepstakes special over all breeds at latter place. Eggs, \$2.50 per 15 from pens; \$1 from utility flock. C. K. Whitney, Route 9, Wichita, Kan.

BABY CHICKS.

YOU BUY THE BEST THOROUGHbred baby chicks, guaranteed for least money, at Colwell's Hatchery, Smith Center, Kan.

CURE SICK CHICKENS WITH ANTI-Germ. Sample and catalog free. Address Mrs. Martha Haynes, Grantville, Kan.

BABY CHICKS SOLD OUT FOR MARCH delivery. Order now for April and May. Ten varieties. Get our circular. Six thousand eggs hatching all the time. Kansas Poultry Company, Norton, Kan.

PIGEONS.

GOOD HOMERS FOR SALE, MARTIN Glebler, Catharine, Kan.

FIELD NOTES

FIELD MEN.

O. W. Devine.....Topeka, Kan.
Jesse R. Johnson.....Clay Center, Kan.
W. J. Cody.....Topeka, Kan.

PURE BRED STOCK SALES.

Aberdeen Angus.
April 28—American Aberdeen Angus Breeders' Association, Spring Bull Sale, Omaha, Neb. Chas. Gray, Secretary, Union Stock Yards, Chicago, Ill.

Jersey Cattle.
May 11—H. C. Johns, Carthage, Mo.

Holsteins.
May 14—Combination and dispersion sale. F. J. Searle, Oskaloosa, Kan.

Poland Chinas and Duroc Jerseys.
April 29—Fred G. Laptad, Lawrence, Kan.

Poland Chinas.
Sept. 5—J. E. Will, Prairie View, Kan. Sale at Downs, Kan.
Oct. 28—Walter Hildwein, Fairview, Kan.
Oct. 28—George S. Hamaker, Pawnee City, Neb.

Jack Opportunity.

Sanders & Maggard, the well known and thoroughly reliable Kentucky Jack breeders, are now at Hiawatha, Kan., with about 20 head of as fine, big Jacks as were ever brought to this state. They are for sale privately and at very reasonable prices, as it is desired to close them out quickly. See advertisement in this issue and write at once.

Attention is called to the card of Austin Smith of Dwight, Kansas, breeder of big type Polands. Mr. Smith has sold his entire offering of big type bred sows and is now offering a choice lot of fall pigs of either sex. His offerings are strictly big type breeding and is a choice lot of individuals. He is pricing them to sell.

A Good Offering of Dairy Cows.

The attention of parties interested in good dairy stock is called to the advertisement of Mr. Elbert S. Rule, of Sharon, Kan. He is offering a fine lot of high-grade dairy cows and heifers, and dairymen or farmers will find what they want among the lot offered. There are 35 head of Holstein cows, 40 head of Jersey cows, 30 head of Jersey heifers, all coming in profit. Look up his ad and write for prices. Inspection of the offering invited.

A New Advertiser.

This week we start a card for Col. J. E. Markley, of Powhattan, Kan. Colonel Markley is a Kansas product and a farmer and stockman by training. He is a graduate of one of the leading auction schools and is well equipped for a successful salesman. He has had several years' experience as an auctioneer and is fast making good as a helper on pure-bred stock sales and taking full charge of big farm and stock sales. He lives in one of the best counties in the state and is fully determined to make auction work his life occupation.

Colonel Scott Makes Good.

Col. Charles M. Scott, a new advertiser in Kansas Farmer this week, is making good, and his name is familiar to farmers and breeders that read the advertisements of some of the best sales of both registered stock and big farm sales. Colonel Scott is of commanding appearance and puts up a fine argument in favor of better live stock. He has had years of experience as a breeder of registered stock and understands pedigree fully. He lives on a Brown County farm and all of his interest centers around things pertaining to the farm and live stock. He is a student and auctioneering is his chosen profession.

Sunflower Herd to Be Dispersed.

The disposal of the Sunflower herd of Holstein cattle is an event that will claim the attention of every Holstein breeder in this section of the country, and as well that of all who may be interested in high-class dairy cows. This sale will include the entire Sunflower herd, which consists of strictly A. R. O. and semi-official cows and heifers, headed by the herd sire, Tiranla Lady Aouda 5th King 61250 (the best son of King Walker), and therefore half brother to the three world's record daughters of King Walker. This is undoubtedly the greatest young sire ever used in the state of Kansas. He has one daughter with over 16 pounds of butter fat to her credit, and many others to be tested soon. Every female will be bred to him and there will also be a number of his heifer calves and yearling daughters and several sons in the offering. Sunflower herd offering will spell "quality." The well known herd of Henry C. Giesman, Omaha, Neb., and Ben Schneider, Norton, Kan., will consign a number of good representative females from their large herds, making a 60-head sale. May 14 is the date claimed for this sale by F. J. Searle, owner and proprietor.

The recent sale of Poland China bred sows held by W. M. Watt & Sons, Green City, Mo., was one of the good sales of the season. They had one of the great offerings of big-type Polands sold this season. The entire offering of 50 head, including a number of late spring gilts sold open, averaged \$60.02. Tom E. Fuller of Humphries, Mo., topped the sale at \$225. Watt & Sons have one of Missouri's best big-type herds and have added the tops of some of the best sales of the season to their already fine herd of sows.

Springdale Farm Holsteins.

Attention is called to the card of S. E. Ross, Creston, Iowa, owner of Springdale Farm herd of Holsteins. Mr. Ross is offering an outstanding young bull sired by Buffalo Aaron Johanna and out of Princess Gerben Josephine. This young bull is strictly high-class in every way. He is also offering a bull calf sired by Buffalo Aaron Johanna and out of Peach Gerben DeKol. Write him for photos and prices. He will interest anyone wanting high-class Holsteins.

Advertisers of live stock in Kansas Farmer find that the people reached are liberal buyers of high class, pure-bred stock. The advertiser whose letter follows, also reads Kansas Farmer and finds he can make himself a far more efficient salesman by following the suggestions made in its columns: Kansas Farmer. Dear Sirs:—Enclosed find check for \$3.50. I sold from running this ad all the surplus I had to sell. Now this proves to me that Kansas Farmer will give results. A \$3.50 ad sold for me \$425 worth of stock. I have received a good many pointers from Kansas Farmer. The article by W. J. Cody on handling the correspondence in selling pure-bred stock, was an eye-opener. I never had thought of a follow-up letter. My plan was to write one letter and quit.—S. E. Ross, Creston, Iowa.

Classified Advertising

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

SITUATIONS WANTED ads, up to 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

HELP WANTED.

MEN WANTED TO LEARN BARBER trade. Term not limited. Tools free. Call or write. Topeka Barber College, 327 Kansas Ave., Topeka, Kan.

WANTED—FARM SPECIALTY SALESMEN. Our men last season cleared from \$50 to \$100 weekly. Bain Bros. Mfg. Co., Cedar Rapids, Iowa.

SPARE TIME, NO CANVASSING. Report information, news, names, etc., to us. We have established markets. Particulars for stamp. "Nisco," D. B. G., Cincinnati, O.

LOCOMOTIVE FIREMEN, BRAKEMEN, electric motormen, conductors, \$65-\$140 monthly. Experience unnecessary. Particulars free. 801 Railway Bureau, East St. Louis, Ill.

MOTORMEN, CONDUCTORS, INTER-urban. \$75 monthly. State age. Experience unnecessary. Qualify now. Application, details free, Box M, care Kansas Farmer.

GIRL OR WOMAN WANTED TO DO general housework on farm. Liberal wages and a good long job for good help. State wages wanted and reference in answering this ad. A. W. Kilne, Route 1, Mullinville, Kan.

YOUNG MEN—WANTED, 50, TO JOIN us in the live stock business. New plan. Particulars free. Capital required. State age, occupation, resources, married or single. Address Willow Creek Live Stock Co., Janet, Wyo.

WE WANT FARMER AGENTS TO SELL our silos. Sixty tons, \$97.50, your station. Can't fall down nor blow down. In actual use four years. Fully guaranteed. None better at any price. Get literature. Bonita Farm, Raymore, Mo.

WANTED—FARMER AGENTS FOR FAM- ous Swedish cream separator, Primus. Wonderful one-piece skimmer. Easiest running, easiest cleaned, closest skimming machine in the world. Fully guaranteed. Big commission. Dept. "S," The Buckeye Churn Co., Sidney, Ohio.

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

MEN AND WOMEN WANTED FOR government jobs. \$65 to \$150 month. Vacations, steady work. Parcels post means many appointments. Common education sufficient. "Pull" unnecessary. Write immediately for free list of positions open to you. Franklin Institute, Dept. E 82, Rochester, N. Y.

YOUNG MAN, WOULD YOU ACCEPT and wear a fine tailor made suit just for showing it to your friends? Or a Slip-on Raincoat free? Could you use \$5 a day for a little spare time? Perhaps we can get you a steady job. Write at once and get beautiful samples, styles and this wonderful offer. Banner Tailoring Co., Dept. 731, Chicago.

REAL ESTATE.

AGRICULTURAL COLLEGE. EDUCATE your children. Buy suburban home. Write L. Arnold, Manhattan, Kan.

COMANCHE AND KIOWA COUNTY IMPROVED land and ranches for sale at owners' prices. Write us for description and prices. Testerman Land Co., Wilmore, Kan.

FOUND—\$20-ACRE HOMESTEAD IN settled neighborhood; fine farm land; not sand hills. Cost you \$200 filing fees and all. J. A. Tracy, Kimball, Neb.

REAL ESTATE WANTED—SELL YOUR property quickly for cash, no matter where located. Particulars free. Real Estate Salesman Co., Dept. 77, Lincoln, Neb.

FOR SALE OR EXCHANGE FOR KAN- sas or Missouri farm, fifteen-acre tract in orchard, improved, 1/4 mi. from city limits of Roswell. W. W. King, Roswell, N. Mex.

FREE GOVERNMENT LAND. NEAR 500,000 acres in Arkansas now open to homestead entry. Booklet giving list, law, etc., 25c. Township may of State 25c additional. L. E. Moore, Little Rock, Ark.

FOR SALE OR TRADE—1/4 SEC. WEST- ern land for good gas tractor, 4-cyl. gas or White Steamer. Have income property to trade for 1/4 sec. or more of S. W. Kansas land. A. G. Woelke, Pawnee Rock, Kan.

FOR SALE—160 ACRES IRRIGATED, fenced, 70 a. in alfalfa, new 7-room house. An ideal stock ranch, free range, \$7,616; \$4,000 cash, balance 10 years 6%. For particulars address H. R. Balding, Howe, Idaho.

KANSAS CITY BUSINESS PROPERTY, 150x50 feet, corner Fifth and Troost Ave., must be sold to settle an estate. A rare bargain in the fastest growing city in the West. Address K. C. Property, care of Kansas Farmer.

SOUTHERN MINNESOTA—SURE CROPS, great opportunities. Best soil. Corn crop leads Iowa and Illinois. Curtis-Sawyer Land Co., Herbert Sawyer, Methodist Minister, President. Write for list. Will Curtis, Secretary, St. James, Minn.

IDEAL FARM AND STOCK RANCH. 480 acres, fairly well improved, black sandy loam, 80 acres under cultivation, 300 acres hay land, 100 acres good pasture; near school and church. \$27.50 per acre. \$5,000 down, bal. 5 years at 6%. George Brewer, Ewing, Neb.

VALUABLE ADVANCE INFORMATION regarding free government and railroad lands, Montana, Arkansas, California and many other states. Millions of acres to be thrown open for settlement this spring. Special inducements to soldiers. Address Homeseekers' Department, Times Bldg., St. Louis, Mo.

REAL ESTATE.

HOMES IN THE OZARKS, THE GREAT fruit-growing; also grains, grass, stock raising; healthy, good water. J. F. Walker, Rogers, Ark.

FOR SALE—MY FARM OF 165 ACRES, 7 miles northwest of Holton, 4 1/2 miles northeast of Circleville. Price, \$90 per acre. A. Morgan, Holton, Kan., Route 3.

FARMS WANTED—WE HAVE DIRECT buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 43 Palace Bldg., Minneapolis, Minn.

BARGAIN; \$14,000 WITH CROP. MUST sell. 160 a. bottom land, 65 a. wheat and rye, alfalfa meadow, alfalfa pasture, plow land, two pastures. Best of improvements, including 6-room house, two barns, silo, granary, hog house with feeding machine, chicken houses. Write for full description. Jacob Mueller, Burrton, Kan.

\$500 CASH BUYS 3-ACRE CHICKEN ranch in Pecos Valley, New Mexico. Under irrigation, water right paid up, 6-room house; located 1/4 mi. from town of Malaga. Good schools and market. Place is clear of encumbrance. Good reason for selling. For sale by owner; no commission to pay. Address Wm. Colvard, 518 1/2 Polk Street, Topeka, Kansas.

FARMS IN THE SUNNY SOUTH ON easy terms from owner at low prices, where your land is earning money every month. Good grazing, fruit and general farming land convenient to railroads in the rain belt of East Texas where crop failures are unknown. Let us tell you how to get the most for your money. Owners, Box 16, Houston, Texas.

CENTRAL MISSISSIPPI, A STOCK PAR- adise. Year-round pasturage, no drouths, no ticks or diseases. Fine stock and grain farms in rolling section for \$7 to \$30 per acre. Also many magnificent plantations in world-famous Yazoo-Mississippi Delta for \$20 to \$50 per acre. Will be worth around \$500 after government takes over levee system. Write what you want. Season now best for trip down. S. P. Stubblefield, Yazoo City, Miss.

VICTORIA, AUSTRALIA, WANTS SET- tlers. Special inducements offered by State Government which owns lands, water, railways and free schools. Excellent climate, resembles California; no extreme heat or cold. Small deposit and 3 1/2 years for purchase of lands, adapted to every kind of culture. Citrus fruits, apples and pears; wheat, corn, alfalfa, sugar beets; dairying, hog raising, etc. Ample markets. Exceptional opportunities in irrigated districts. Reduced passages for approved settlers. Free particulars from F. T. A. Fricke, Box 34, 687 Market St., San Francisco.

HORSES AND MULES

SHETLAND PONIES—WRITE CHARLES Clemmons, Coffeyville, Kan.

FOR SALE—TWO EXTRA GOOD young jacks, three and five years. W. J. Strong, Moran, Kan.

FIVE YOUNG JACKS FOR SALE, ONE coming 4 years old, one coming 3 years old, and three coming 2 years old. J. H. Allison, Route 6, Butler, Bates County, Missouri.

FOR SALE—A BLACK JACK, LARGE body and bone, good ear, a good and sure breeder, 5 years old, guaranteed right. Colts to show. Price, \$600. R. B. Kerr, Ness City, Ness Co., Kan.

HART BROS.' NEW IMPORTATION OF Percherons and Belgians arrived October 8, 1913. The best lot of 2-year-olds brought over this year. Some will weigh 1,900 lbs. Great big fellows with size, bone and quality. Come see them at once. Address Hart Bros., Osceola, Iowa.

PATENTS.

PATENTS PROCURED OR FEE RE- funded. Official drawings free. Send sketch for free search. Patent Exchange, Jordans Bldg., Washington, D. C.

MISCELLANEOUS.

CLEANING, PRESSING, DYEING. WORK guaranteed. Manhattan Cleaners, 609 Jackson, Topeka.

SEND 25c FOR RECIPE TO KEEP GO- phers and outcrops from taking corn. F. J. Miller, Howells, Neb.

THE CENTRAL SUPPLY HOUSE— Dairy, poultry and bee supplies. 627 Quincy St., Topeka, Kan.

"HEAVEN AND HELL"—SWEDEN- borg's 400-page work. 15 cents, postpaid. Pastor Landenberger, Windsor Place, St. Louis, Mo.

SEND FOR CATALOG OF OUR NEW "Tango" concrete mixer for farmers and contractors. W. C. Kiernan & Co., White-water, Wis.

FOR SALE—WITHIN NEXT FEW DAYS we will sell our 14x18 Hays Presses, complete, with or without engine, at a greatly reduced price. First come first served. Tuttle Hay Press Co., Bankrupt, A. M. Kent, Trustee, Pleasanton, Kan.

THRESHING MACHINE FOR SALE OR trade. A complete threshing outfit, with cook shack and everything ready to run. Will sell at a bargain. Write at once for particulars if interested. Address Lock Box 61, Jetmore, Kan.

BEE SUPPLIES.

FOR SALE—BEE SUPPLIES. ROOT'S goods. Send for catalog. O. A. Keene, 1600 Seward Ave., Topeka, Kan.

See announcement of Free Motorcycle Subscription Contest on another page of this issue.

TREES, SEEDS AND PLANTS.

NEW POTATOES, EARLIEST, BEST. Sidney Schmidt, Chillicothe, Mo.

GOOD FETERITA SEED, \$2 BU. H. A. Ritter, Kiowa, Kan.

FETERITA—PURE RECLEANED SEED, \$2 per bushel. Chas. Geist, Aline, Okla.

GREAT WHITE PEARL AND REID'S Yellow Dent seed corn; average test 98. W. F. Davis, South St. Joseph, Mo.

EXCELLENT BOONE COUNTY WHITE seed corn, \$2.25 bushel, graded. J. B. Hunt, Oswego, Kan.

IMPROVED BIG CREEPING HARDY Bermuda. Popular prices. "Bermuda" Mitchell, Chandler, Okla.

SEED CORN—BOONE COUNTY WHITE, tipped, shelled, test 98, \$1.60 per bushel. Geo. L. Wright, Route 3, St. John, Kan.

RED KAFIR SEED, \$1.65 BUSHEL, sacked. Ferdinand Meyer, Route 3, Gar-nett, Kan.

BLACK-HULLED KAFIR, 1913 CROP, tested; \$1.50 per bu. sacked. W. D. Austin, Isabel, Kan.

PEYTON'S WHOLE-ROOT TREES AT 40 per cent discount. Catalog free. Agents wanted. Peyton Nurseries, Boonville, Mo.

RHUBARB ROOTS. GUARANTEED first class; \$4 per 100; \$35 per 1,000. Bryan Blake, El Reno, Okla.

SEED CORN—REID'S YELLOW DENT and White Pearl. Write for samples and prices. Edgewood Farm, Waterloo, Neb.

NINETY DAYS WHITE SEED EAR corn, \$2.50 per hundred, f. o. b. Gus Menetrey, Geary, Okla.

PURE IOWA GOLD MINE SEED CORN. Kiln dried. Either ear or shelled. Write for prices. Miles Albert, Leigh, Neb.

NORTHERN WISCONSIN GROWN IRISH Cobbler potatoes, \$1 per bushel, sacked. F. A. Vannedom, Marshfield, Wis.

LARGE YELLOW DENT SEED CORN. Big yielding. Tested for germination. At farmers' prices. Samples free. C. A. Taylor, Ames, Iowa.

FOR SALE—SWEET POTATOES FOR seed. Fancy White Wyandotte eggs, \$1 per setting, \$5 per 100. Choice cantaloupe seed. E. H. Pixley, Wamego, Kan.

CHOICE FIRE-DRIED GOLDEN GLOW and Silver King seed corn. Inspected and guaranteed by Wisconsin Experimental Association, Gartland Farm, River Falls, Wis.

SWEET POTATO SEED, TO CLOSE OUT, Yellow Jerseys, 75c. A few varieties accordingly. John Ginter, Route 6, North Topeka, Kan.

SEED CORN—IOWA SILVER MINE, home-grown, hand-picked, \$1.50 bushel. Reid's Yellow Dent, \$1.50 bushel. J. H. Cavanaugh, Marysville, Kan.

I GUARANTEE 95 PER CENT GERMINA- tion. Reid's Yellow Dent and Iowa Silver Mine seed corn. This corn is of a splendid type. Paul Rohwer, Waterloo, Neb.

STRAWBERRY PLANTS BY PARCELS post, 210 for \$1. Dunlap and two other choice varieties. Wholesale price list free. Highland Nurseries, Waukon, Iowa.

SEED CORN—EARLY WHITE FLINT, Reid's Yellow Dent, Early White Dent, shelled and graded, \$2.00 per bushel. Haz Reid, Jr., Coffeyville, Kan.

FETERITA—TEN POUNDS CHOICE seed, postpaid, \$1.50 pounds by freight, your expense. Boone County White seed corn 1912 crop, \$2 per bushel. B. A. Nichols, Hutchinson, Kan.

CHOICE SEEDS—MAIZE, WHITE AND Yellow Kafir, Feterita, Broomcorn seed, Millet Cane seed, Alfalfa and Blackeyed Peas. If you want good seeds, I have them. I. T. Reid, Goodwell, Okla.

SEED CORN—WHITE PEARL, ALSO Reid's Yellow Dent, crossed with Golden Beauty 1912 crop of my own raising, carefully selected and graded. Price, \$2.50 per bu. In lots of 10 bu. or more, \$2 per bu. Sacks free. A. F. Huse, Manhattan, Kan.

SEED CORN, RAISED IN BOURBON County, Kansas. Hand-picked, tipped, butted and shelled. Hildreth Yellow Dent, Reid's Yellow Dent, Boone County White, Blue and White, \$2.50 per bushel. Mead Grain Co., Fort Scott, Kan.

ALFALFA, BY MARSH. THE BUSY farmers' guide to proper soils, seedling, clipping, harvesting, curing, feeding and easy street. Pamphlet 25 cents. Also, seed that will grow, \$7 per bushel. J. A. Marsh, Kingfisher, Okla.

FOR SALE—SWEET POTATO SEED. Varieties: Yellow Jerseys \$1.25 to 5 bu., over 5 bu. \$1; Southern Queen, \$1.50; Red Jerseys, \$1.50; Browns, \$1.50; Bermudas, \$2. Plants of all kinds in season. D. Chiles, Oakland, Kan.

FOR SALE—PURE-BRED COMMERCIAL White seed corn, shelled, graded and sacked. Grown 1913, made 50 bushels per acre. \$3 per bushel. Also re-cleaned feterita seed, \$3 per bushel. Reference, County Farm Advertiser, Iola. H. Hobart, Iola, Kan.

TESTED SEED CORN FROM SOUTHERN Kansas, 1912 crop, free from weevil, shelled and thoroughly graded. Bloody Butcher, 110 days, \$6.16; Speckled Beauty or Strawberry, 110 days, \$1.68; White Pearl, 100 days, \$2; Cone's Yellow Dent, 100 days, \$2.50; second grade Cone's Yellow Dent, \$2 per bu. White or red seed kafir, 2 1/4c; red top cane seed, 3 1/4c; orange cane seed, 3c; feterita, 5c. Fancy alfalfa seed, 11c per lb., our track. Heavy jute bags, 15c; seamless bags, 25c. The L. C. Adam Mercantile Co., Cedar Vale, Kan.

THE STRAY LIST

W. S. GRANT, COUNTY CLERK, BAR- ber County. Taken up—By G. R. Hodges, Aetna, Kan., on January 31, 1914, one sow, four males, size about 8 pounds; one red and black, four black; slit in left ear. Appraised value, \$15.

TAKEN UP BY OLIVER SCAMMEY, IN Concord township, Ford County, Kansas, on January 24, 1914, one brown horse 4 or 5 years old, branded T on left shoulder, star in forehead, valued at \$40.—H. N. Kinkead, County Clerk.

TREES, SEEDS AND PLANTS.

SIBERIAN MILLET SEED, \$1.10 PER bushel, in 2 1/2-bushel bags. Henry Snow-barger, Goodland, Kan.

FOR SALE—BLACK-HULLED WHITE kafir corn, re-cleaned and tested; \$2.00 per bushel, for sale by grower. Sacks, 25c extra. H. W. Hays, Richland, Shawnee Co., Kan.

FOR SALE—HIGH GRADE YELLOW Dent seed corn \$1.25 per bushel, shelled, graded and sacked. Shipping expense prepaid when cash is with order. F. J. Miller, Howells, Neb.

CATTLE.

GUERNSEY REGISTERED BULL calves. R. C. Kruger, Burlington, Kan.

HOLSTEIN BULL, JULY CALF, FOR sale. S. B. Wheeler, Ada, Kan.

GRADE HOLSTEIN CALVES, BOTH sexes, for sale. Arnold & Brady, Manhattan, Kan.

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

200 HEAD STEERS, YEARLINGS AND two-year olds. Write John P. Sanborn, Tower, Colo.

FOR SALE—I HAVE A FEW REGIS- tered Hereford bulls for sale. W. J. Bilson, Eureka, Kan.

SEED CORN—OUR USUAL GOOD QUAL- ity. All varieties. Also all field seeds. D. O. Coe, Seedsman, Topeka, Kan.

REGISTERED JERSEYS. IF YOU WANT a good Jersey bull calf, write Sable & White Stock Farm, Seward, Kan.

GALLOWAY CATTLE—GALLOWAY registered bulls for sale. J. W. Priestley, Bolcourt, Kan.

FOR SALE—HEREFORD REGISTERED bull calves. Frank Sedlacek, Route 2, Marysville, Kan.

FOR SALE—PURE-BRED AYRSHIRE calves, both sexes. James Griffith, Spencer, Wis.

HOLSTEIN CALVES, EITHER SEX, beautifully marked, \$20.00 each, crated. Edgewood Farm, Whitewater, Wis.

ONE REGISTERED JERSEY BULL TWO years old. One yearling bull eligible to registry, \$80 and \$30. E. F. Emmons, Okeene, Okla.

HOLSTEIN REGISTERED HERD BULL for quick sale, coming 2 years. Also high-grade bull calf, nicely marked. W. A. Schreier & Sons, Argonia, Kan.

FOR SALE—TEN REGISTERED ABER- deen Angus bulls, sired by Black Knight of Highland 12th 150959. They are low-down, heavy boned, grow fast, ready for service. Also ten high grade Angus bulls. Bartlett & Coolbaugh, Stockton, Kan.

HOLSTEINS—IN THE NEXT 60 DAYS I will sell 400 high grade, De Kol bred cows and heifers, as follows: 100 bred 2-year-olds, bulk springing bag to freshen soon; 50 developed, heavy fellows ready for service. Also ten high grade Angus bulls ready for service. H. L. Dunning, Genoa Junction, Wis.

FOR SALE—TWO THOROUGHbred Jersey bull calves eligible to registration, three months old. Solid fawn color, fine individuals, good size, straight backs, good tail setting, fine heads and the very best breeding in great milk producing lines. Are in fine condition and will sell for \$50 each, registered, crated F. O. B. Topeka if taken at once. They are bargains at this price. Address W. I. Miller, 610 E. 8th St., Topeka, Kan.

FOR THE NEXT 90 DAYS WE ARE DIS- posing of all our Holstein calves, from heavy producing high grade Holstein cows and a very fine registered Holstein sire. The calves are from 4 to 6 weeks old, weaned, beautifully marked, strong and vigorous. Either sex, \$17, crated for shipment to any point. If you wish to get a start with good ones, send your order at once. Whitewater Stock Farm, Whitewater, Wis.

HOGS.

HAMPSHIRE HOGS, CUT RATE PRICES. Will Woodruff, Kinsley, Kan.

FOR SALE—DUROC JERSEY FALL pigs, either sex; nice and very well bred. Enoch Lungren, Osage City, Kan.

DUROC JERSEY MALE PIGS, CHEAP at once. Frank J. Huettnermeyer, Lohman, Mo.

TAMWORTH SWINE; HARDY BERMU- da roots, \$1 two bushels. Oldest, largest breeder in state. Howard Pendleton, Yukon, Okla.

POLAND CHINA PIGS—THE BIG EASY- keeping kind, \$8 each, \$15 a pair (not related). Eggs for hatching from pure-bred ducks, turkeys and chickens. Mrs. Maggie Rieff, St. Peter, Minn.

SITUATION WANTED.

WANTED—EMPLOYMENT ON FARM OR ranch by widow 25 years old. Can furnish good references. Would go anywhere. Mrs. Nellie Brown, Oswego, Kan.

DOGS.

COLLIES, AIRESDALES, TERRIERS— Send for list. W. R. Watson, Oakland, Iowa.

AIRDALE PUPS—MALE, \$10; FEMALE, \$5. Page House, Route 1, Wichita, Kan.

DARK CORNISH FOX TERRIER PUPS. Dr. Wedd Tibbitts & Sons, Richland, Kan.

WANTED—TO BUY.

WANTED—TWO SHETLAND PONIES. Give age, description and price. Box 15, Topeka, Kan.

RICE.

FRESH FROM MILL—100 POUNDS beautiful clean white table rice, polished or unpolished, freight prepaid, \$4.65. C. C. Cannon, 304-11 Scanlan Bldg., Houston, Tex.

When writing advertisers, please mention KANSAS FARMER.

KENTUCKY JACKS FOR SALE



We have just shipped a carload of fine Kentucky Jacks from Flemingsburg, Kentucky, to Hiawatha, Kansas. These Jacks are for sale at private treaty, must be closed out soon, and are priced right. Anyone wanting good Jacks, please call and see them and get our prices.

SANDERS & MAGGARD
HIAWATHA, KANSAS.

FOR SALE High Grade Dairy Cows And Heifers

35 Head Holstein Cows—Age 4 to 6 years, fresh now or will be by May 1st.
20 Head 2 and 3-Year-Old Holstein Heifers—All springers, some cows.
40 Head Jersey Cows—Age 4 to 8 years, fresh and springers.
20 Head Jersey Heifers—Two and three years old, fresh or springers.
If interested in good dairy stock, come and see me.

ELBERT S. RULE, Sharon, Kansas
Ninety Miles Southwest Wichita, Kan.

HEREFORD CATTLE

LANDER'S Brookside Herefords

Herd headed by Gay Lad 14th by the champion Gay Lad 6th and out of Princess 16th. Six yearling bulls and ten bull calves for sale, also seven yearling heifers, the best of breeding and choice individuals. Prices reasonable. Write or call.

WARREN LANDERS, Savannah, Missouri.

Polled and Horned Herefords

50 registered yearling bulls; 1 D. S. Polled herd bull; 20 cows, calves at side.
JOHN M. LEWIS, Larned, Kansas.

HEREFORD BULLS FOR SALE.

Choice young registered Hereford bulls, sired by Dan Shadeland 363260, out of Anxiety and Lord Wilton bred dams.
C. F. Behrent, Oronoque, Norton Co., Kan.

POLLED DURHAM CATTLE

ROAN HERO 3613 - 229963
THE INTERNATIONAL CHAMPION heads my herd of Double Standard Polled Durhams. Few choice young bulls for sale. Mo. Pac. Railway 17 miles southeast of Topeka, Kansas. Farm adjoins town. Inspection invited.

D. C. VAN NICE, Richland, Kansas

POLLED DURHAMS FOR SALE

TEN HERD BULLS sired by Roan Choice, the junior champion of 1911. Prices reasonable. Come and see my herd.
C. J. WOODS, CHILES, KAN.

Polled Durham Bulls for Sale

Including Scottish Baron. Must change herd bulls. Also three young bulls sired by him, old enough for service. Good individuals and priced right.
JOSEPH BAXTER, Clay Center, Kan.

You will find a lot of bargains on Kansas Farmer's Classified Advertising Page this week. Don't fail to carefully read that page.

HORSES AND MULES

IMPORTED MARES AND STALLIONS



Importation arrived October 1, 1913. I have personally selected the best young stallions and mares I could buy in France and Belgium, two and three years old. They all have good breeding quality, sound and good colors, and will make ton horses. Every horse absolutely guaranteed. If you are looking for a first-class stallion or a good pair of mares, come and see me. I mean business. My barns three blocks from Santa Fe depot.

W. H. RICHARDS
Emporia, Kansas



DIAMONDS IN THE ROUGH

I am offering for sale at very low prices a fine lot of young Percheron, Belgian, French Draft and Coach Stallions and mares. These horses are not fat, but in good, thrifty condition and will make good. Come and see me.

J. M. NOLAN, Paola, Kansas.



AL E. SMITH, Lawrence, Kansas.



JACKS AND JENNETS

20 Large Mammoth Black Jacks for sale, ages from 2 to 6 years; large, heavy-boned, broken to mares and prompt servers. A few good jennets for sale. Come and see me.

PHIL WALKER, Moline, Elk Co., Kansas.



JACKS AND JENNETS.—Six fine 3 and 4-year-old Jacks and 17 mammoth black jennets for sale. Will sell worth the money.

JNO. A. EDWARDS, Englewood, Kansas.



20 PERCHERONS, JACKS AND JENNETS. Imported black Percheron stallions, 5 to 7 years old, strong bred in the Brilliant strain, weights from 1,700 to a ton, well broken. Black registered mammoth Jacks and jennets, 15 to 16 hands, 1 to 5 years old; Jacks old enough, well broken. Farm 30 miles northwest of Hutchinson. Meet trains at Raymond or Chase, Santa Fe Railroad.

J. P. & M. H. MALONE, Chase, Kansas.

THREE Percheron Stallions for Sale. American bred and good individuals. Big Jacks, serviceable age, good individuals. Will sell or trade any of the above stock.

W. H. GRANER, Lancaster, Kan.

SEVEN SHIRE AND PERCHERON STALLIONS Sire and dam of Shires imported. Prices, \$250 to \$650. Farm 4 1/2 miles from Wakefield. Will meet trains if notified in time.

JAMES AULD, Wakefield, Clay Co., Kan.

ANGUS CATTLE

CHERRYVALE ANGUS FARM

For Sale—Six choice young bulls, in age from 6 to 23 months, mostly sired by Black Clay. Very best families represented in the herd. Reasonable prices. Visitors welcome.

J. W. TAYLOR, Clay Center, Kansas.

HAMPSHIRE HOGS



ECLIPSE FARM HAMPSHIRE. Bred sows, spring and summer pigs for sale. **A. M. BEAR, Medora, Kansas.**



ATTRACTIVE PRICES. Bred gilts and spring boars by Hillwood Jack by Earlanger. Fall pigs, either sex, by Medora John and Hillwood Jack. **F. C. WITTOFF, Medora, Kansas.**

Registered Hampshire Hogs

For sale, both sexes. Choice belting and type. Priced reasonable.
E. S. TALIFERO, Route 3, Russell, Kan. Shipping point, Waldo, Kan.

Don't fail to read Kansas Farmer Classified Advertising Page. It is filled with bargains every week.

BERKSHIRE HOGS

BERKSHIRE PIGS

Choice pigs, 10 to 16 weeks old, either sex. Sired by Robin Hood, Premier 2d, or Adam, a son of Rival's Lord Premier. Nothing but the very choicest specimens shipped. Price, registered, crated, F. O. B. here, one, \$20; two, \$35; three, \$50.

W. J. GRIST, Ozawie, Kan.

40 — BERKSHIRE BOARS — 40 Cholera Proof (Hyper-Immunized) Big and growthy. Ready for service. Prices, \$25 to \$50.

SUTTON FARMS, Lawrence, Kansas.

MULE FOOT HOGS

Graff's Mule Foot Hogs

For Sale. Extra herd boar. August-September boars, choice bred gilts.

ERNEST E. GRAFF, ROSENDALE, MO.

OHIO IMPROVED CHESTERS

Crystal Herd O. I. C's

Headed by Frost's Buster 29745 by Thea 30442. Some choice August boars by this great sire of prize winners. They are strictly high class and priced right. Also booking orders for February pigs by Illustration and out of Frost's Buster dams. Get in early and get a prize winner.

DAN WILCOX, Cameron, Missouri.

O. I. C. PIGS, PAIRS OR TRIOS.
H. W. Haynes, Meriden, Kan.

AUCTIONEERS.

Be an Auctioneer

Travel over the country and make big money. No other profession can be learned so quickly that will pay as big wages. Write today for big free catalog of Home Study Course, as well as the Actual Practice School, which opens Monday, April 6, 1914. **MISSOURI AUCTION SCHOOL** Largest in the World. **W. B. Carpenter, Pres., 1400-1404 Grand Ave., Kansas City, Mo.**

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L. R. BRADY Fine Stock Auctioneer. Ask those for whom I have sold.
Manhattan, Kansas.

Col. Jesse Howell Live Stock and General Auctioneer. Up-to-date methods.
Herkimer, Kan.

J. A. MORINE Live Stock and Big Farm Sales.
Lindsborg, Kansas.

STATEMENT OF THE OWNERSHIP and management of Kansas Farmer, published weekly, at Topeka, Kan. Required by the Act of August 24, 1912.

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Managing Editor—Albert T. Reid, Topeka, Kan.

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Publisher—The Kansas Farmer Company, Topeka, Kan. (A corporation.)

Names and addresses of stockholders holding 1 per cent or more of total amount of stock:

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A. T. Reid, Topeka, Kan.

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F. W. Barteldes, Lawrence, Kan.
T. M. Darlington, Kansas City, Mo.

Known bondholders, mortgagees, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities:

Goss Printing Press Co., Chicago, Ill.
(Signed) **ALBERT T. REID,**
President and General Manager.
Sworn to and subscribed before me, this 23rd day of March, 1914.
S. H. PITCHER,
Notary Public.
(Seal)
My commission expires March 17, 1915.

RED POLLED CATTLE

RED POLLED CATTLE

A few choice bulls, ready for service, priced reasonable.

I. W. POULTON,
Medora, Kan.

RED POLLED CATTLE

For Sale—A choice lot of cows, bulls and heifers, all registered, with good quality.

AULD BROS., Frankfort, Kansas.

COBURN HERD RED POLLED CATTLE AND PERCHERON HORSES

Twelve extra good young bulls. Some extra fine young stallions, among them first prize and champion of Topeka Fair. Also young cows and heifers.

GROENMILLER & SON, Pemo, Kansas.

RESE & WAGNER'S RED POLLS.

Richly bred herd headed by Waverly Monarch. Bulls of serviceable age all sold. Fresh cows and young bulls for sale in spring.

RESE & WAGNER, Bigelow, Kan.

RILEY COUNTY BREEDING FARM.

Red Polls headed by the last son of Cremo. Bulls all sold. Percherons headed by son of Casino. Visit herd.

ED NICKELSON, Leonardville, Kan.

POLAND CHINAS

Spotted Poland Chinas

Some splendid spring gilts for sale, bred for early spring litters. A few dandy boars left, also fall pigs. These are the old original big-boned spotted kind.

The Ennis Farm, Horine Station, Mo.
(30 Miles South of St. Louis.)

SEVEN IMMUNE POLAND HERD BOARS

The tops from 66 head of fall boars. Five of them by Walter's Expansive and out of Long King's Best dams. One by Long King's Best with an Expansive dam and one by O. K. Lad and out of a Gold Metal sow. These are strictly tops and should go into good herds.

H. B. WALTER, Effingham, Kansas.

GRANER'S IMMUNE FALL BOARS

Twenty extra choice big-type fall boars, tops from my entire crop, mostly sired by Moore's Halvor, my big Iowa bred boar. Others by Sampson Ex. and Melbourne Jumbo, out of big mature sows. \$25 each while they last. Send check with first letter. Fully guaranteed. Also one pure Scotch Shorthorn bull, solid red color, 12 mos. old.

H. C. GRANER & SON, Lancaster, Kansas.

Hildwein Has Big Poland China Boars

August Farrow, culled closely, good individuals sired by Wonder Ex., the Expansive and Sampson Chief cross. These boars are out of my big sows and are all good. \$20 and \$25 while they last.

WALTER HILDWEIN, Fairview, Kan.

HARTER OFFERS POLAND BOARS

No fall sale. Twenty choice spring boars, tops of 35, best of breeding, \$20 each. Also five fall boars, good ones, \$25 each. Nothing but the best shipped.

J. H. HARTE, Westmoreland, Kan.

BIG POLAND CHINA SPRING PIGS

Sired by Peter Mouw boars. Here is where you can get big-type pigs at a low price. Never before was there such a bargain offered. Write me your wants. Ben Rademacher, Box 13, Mulberry Grove, Illinois.

THE JUMBO HERD.

Immune Poland China brood sows and open gilts sired by Clay Jumbo, the half-ton hog, bred to Joe Wonder, a son of the noted boar, Big Joe, for which \$1,000 in cash was refused. Write me your wants.

JAMES W. ANDERSON, Leonardville, Kan.

TWENTY IMMUNE BRED GILTS.

Big-type Poland bred to a Big Orange Again. Extra good individuals, \$25 and \$30 each. Twenty choice fall pigs by same boar. Reasonable prices.

HUBERT J. GRIFFITHS, Clay Center, Kan.

FOLEY'S BIG POLAND GILTS

FOR SALE, bred to my great young boar, The Giant. Also one extra choice spring boar and fall boars ready to ship.

J. F. FOLEY, Oronoque, Norton Co., Kansas.

POLAND CHINA BRED GILTS

Sired by First Quality and bred to our great new boar, Longfellow Again. Fine individuals. Also fall pigs, either sex.

JAS. ARKELL, Junction City, Kansas.

Merten's Big Smooth Poland Chinas

Headed by King Hadley 3d and Kansas Wonder, mated with daughters of Old Expansive, What's Ex. and Grand Look Jr. Stock for sale.

E. E. MERTEN, Clay Center, Kansas.

Faulkner's Famous SPOTTED POLANDS. We are not the originator, but the preserver, of the

Old Original Big-Boned Spotted Poland. Write your wants. Address

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

SMITH'S BIG-TYPE POLANDS.

A choice lot of fall pigs, either sex. Strictly big-type breeding. High-class individuals, priced to sell.

AUSTIN SMITH, Dwight, Kansas.

WONDER POLAND CHINA HERD

Headed by Model Wonder, assisted by a son of Blue Valley. Mated to as big sows as can be found. We offer spring gilts by first named boar and bred to the other one at reasonable prices.

O. R. STRAUSS, Milford, Kan.

KING OF KANSAS FALL BOARS.

Immune and out of big dams. Choice individuals, \$25 to \$35 each. They are bargains.

J. L. GRIFFITHS, Riley, Kansas.

CLARK'S EXTRA BIG SMOOTH POLANDS. Choice spring boars for sale by a grandson of the noted A Wonder. Also bred gilts and fall pigs.

L. L. CLARK, Meriden, Kansas.

SHORTHORN CATTLE

LOOKABAUGH'S SHORTHORNS.

At private sale. Six or nine months' time if desired. Young heifers and bulls, \$100 and up. Two heifers and bull, not related, \$225 for the three. Others higher. High-class herd bulls close to imported Scotch dams, sired by such sires as Lavender Lord by Avondale. Nicely bred young heifers from milking strains. Young bulls, the farmer's kind. Cows with milk at foot and rebred. Great variety of prize-winning blood. If you want breeding stock, do not miss this opportunity. My foundation Shorthorns carry the blood of the best families and most noted sires of breed. Over 200 head from which to select. If you cannot come, write.

H. C. LOOKABAUGH, Watonga, Blain County, Oklahoma.



Eleven Registered Short Horn Bulls

FOR SALE—Sired by "Goods," a son of Good Choice and out of richly-bred cows bought from the best herds. These bulls are first-class and same breeding as grand champion car of fat steers at American Royal last fall that sold for \$12.85, weighing as yearlings 1,160 pounds.

K. G. GIGSTAD

Lancaster -- -- -- Kansas.

Pearl Shorthorn Herd

Good strong young bulls ranging from 4 to 11 months old. Red or roans of Scotch and Scotch-topped breeding. Herd located at Pearl, Dickinson County. Can ship over Missouri Pacific, U. P., Rock Island or Santa Fe. Address mail to Abilene, Kan.

C. W. TAYLOR

Abilene, Kansas

UPLAND SHORTHORN HERD

Headed by Urydale, a great son of Avondale. For sale, ten choice bulls in age from 6 to 15 months, out of dams close up in the breeding of Choice Goods, Gallant Knight, Lord Mayor and Imp. Day Dream's Pride.

GEO. W. BEMIS

Cawker City, Mitchell County, Kansas.

Choice Shorthorn Bulls

Seven bulls of choice breeding, well grown, in best possible condition for service. Five fit for heavy service. Three fit to use in Shorthorn herds. Two are show bulls. Prices, \$100 to \$200.

G. A. LAUDE & SONS, ROSE, KANSAS.

LOUISVILLE SHORTHORN HERD

Choice young bulls of serviceable age, reds and nice roans, sired by the son of pound bull, Gloster Conqueror 2d, a son of The Conqueror by Choice Goods. The dams are rich in the blood of Red Knight and Waterloo Regent. Attractive price for quick sale.

DR. E. L. SIMONTON, Wamego, Kan.

CHOICE SHORTHORN BULLS

One herd bull, New Goods, by Good News, by Choice Goods. Twenty-month-old bull by New Goods out of a Victoria cow, a full sister to Gallant Knight's Heir. Three younger bulls for sale, 10 and 12 months old. A few good heifers. Prices reasonable.

JOHN REGIER, Whitewater, Kansas.

Cedar Lawn SHORTHORNS

FOR SALE—Scotch and Scotch topped bulls, in age from 8 to 16 months. Good individuals and representatives of best families. Fifteen choice fall boars and gilts, big type.

S. B. AMCOATS, Clay Center, Kan.

TENNEHOLM SHORTHORNS

For Sale—Five young bulls, the oldest 14 months, the youngest 8 months old. Sired by Royal Gloster 2d and Col. Hampton 3d 3998, from our best cows. Beefy, rugged, strong-boned and well-grown; best of breeding. Some of them fit to head good herds. A few high-class heifers, Scotch and Scotch-topped, will be priced right. Price on bulls, \$100 each.

Cedar Heights Shorthorns

Offers two choice bulls, one red, one roan, 14 and 16 months old. Ten head cows from 3 to 5 years old. Prices reasonable.

HARRY T. FORBES, Route 8, Topeka, Kan.

E. S. MYERS, Chanute, Kansas.

RIVERSIDE SHORTHORNS.

Clipper Model 386450 by Orange. Model 317228, out of Crestmead Cicely 2d, at head of herd. Herd cows representing the best Scotch families, Orange Blossoms, Butterflies and others.

H. H. HOLMES, Great Bend, Kansas.

SHORTHORNS FOR SALE.

Several good coming yearling bulls and a number of heifers of various ages, from the Crestmead herd, which numbers 100 head, all Scotch of popular families.

W. A. BETTERIDGE,

Pilot Grove, Cooper County, Missouri.

FOR SALE—MARCH BULL CALF.

Nice red, growing strong bone, good deer. Also some heifers bred to a mighty thick-fleshed bull. Come and see. Price, either, \$100.

JEWELL BROS., Humboldt, Kansas.

Dual Shorthorns, Hornless. 5415% pounds butter sold 1911. No calf tasted skim milk. Infant male calves. J. H. Walker, Lathrop, Mo.

SHORTHORN CATTLE

JERSEY CATTLE.

JERSEY HERD FOR SALE QUICK

Four choice registered cows, giving milk and bred, 6 choice registered heifers, 3 of them bred, 2 young bulls nearly old enough for service, 2 herd bulls good enough to head any herd in America. This entire herd is of very rich breeding and the foundation came from noted herds. I have sold stock to the State Agricultural College. Low price will be made on this offering. Write at once.

O. E. NICHOLS, Abilene, Kan.

Bank's Farm Jerseys

Quality with milk and butter records. One of the best sons of CHAMPION FLYING FOX, imported, at head of herd. Stock for sale.

W. N. BANKS, Independence, Kan.

GREEN HILL JERSEY FARM

For Sale—Several young bulls up to 15 months old, sired by Viola's Majesty. Dams American and imported cows of choice breeding and individuality.

D. LEE SHAWHAN, Lees Summit, Mo.

JERSEY CATTLE FOR SALE.

Choice young bulls by Golden Fern's Lorne out of 45-pound dams. Also eight choice cows and heifers in milk and springers. All registered.

D. A. KRAMER, Washington, Kansas.

FOR SALE—A nice Jersey cow in milk; four year old; fine family cow. Price very reasonable. Write today. This ad will not appear again.

E. G. L. HARBOUR, Baldwin, Kan.

PURE-BRED JERSEY BULL FOR SALE. Two bulls of his get. Stoke-Pogis breeding. Can't use him in my herd any longer. Price right.

L. F. CLARKE, Russell, Kansas.

REGISTER OF MERIT JERSEYS.

Offer a fine young cow in milk and bred to Oakland's Sultan for \$150. Also a grand-daughter of Golden Fern's Lad bred to same bull, \$200. Choice heifers, \$100 up. Bulls from high-testing dams, \$50 to \$150, including son of Gamboge Knight.

R. J. LINSOOTT, Holton, Kansas.

GOLDEN RULE JERSEY HERD

Headed by Cleora's Rochette Noble, mated with cows of equal merit and breeding. Young bulls for sale.

JOHNSON & WYLLIE, Clay Center, Kan.

BENFER JERSEY CATTLE.

Bull calves all sold except some very young ones. Offering three-year-old herd bull and yearling from imported cow; also few non-related cows.

E. L. M. BENFER, Leona, Kansas.

FIELD NOTES

The advertising of the Dr. B. J. Kendall Company that is now running in Kansas Farmer should be interesting to our subscribers because of the excellent reputation of this company with their remedies. This company has hundreds of testimonials of cures that have been made upon live stock, and these certainly are a very good endorsement of their work. These testimonials came in unsolicited to the company from all over the country, and speak of wonderful cures that have been effected by them. Anyone interested should write to the B. J. Kendall Company, Box 432, Enosburg Falls, Vt., for their booklets, which they will be very glad to send if you mention Kansas Farmer.

Central Shorthorn Breeders' Sale.

The sale was well attended by breeders, but only a few farmers were present. While the sale was not extensively advertised, about one-third of the entire two days' sales came to Kansas. This being the first auction sale for the Association, no record prices were recorded. Every single purchase should prove a money maker. Several real bargains passed under the hammer. Mr. Forsythe, as manager of the sale, is to be complimented on having gotten together such a consignment of cattle. They were both from breeding and as individuals far ahead of the average combination sale offering. The top price, \$875, was paid for a roan yearling bull, Village Beau, a son of imported Villager, sold by E. M. Hall, of Carthage, Mo. The next highest was \$850 for the two-year-old bull, Ardmore's Choice, which went to the good herd of J. R. Whistler, Watonga, Okla. The bulls sold at an average of \$199; 34 females sold at an average of \$197.65. The 90 head sold for \$17,875, or an average of \$198.60. The Central Shorthorn Association now has a membership of over 200, and has planned to hold a sale next year. N. H. Gentry, of Sedalia, Mo., was elected president; H. C. Lookabaugh, Watonga, Okla., vice-president; E. M. Hall, Carthage, Mo., secretary and treasurer; W. A. Forsythe, Greenwood, Mo., sales manager.

Aberdeen Angus Breeders' Association Sale.

On April 23 at South Omaha, Neb., will take place the greatest bull sale of any breed that has yet been presented to the American farmers and cattlemen. One hundred and twenty Aberdeen Angus bulls have been catalogued for this sale. These bulls come from the large and small herds of the country and are represented by the most popular families of the breed, namely, Blackbirds, Ericas, Prides of Aberdeen,

Queen Mothers, Heatherblooms, etc. This is the greatest number of bulls that has ever been listed for an auction by any breeder, firm or combination of breeders of any breed in America. There will surely be many bargains because of the number to be sold. Every breeder, cattleman, range-man and farmer in the market for a bull or bulls should arrange to attend this auction. There will be bulls of the richest breeding of top-notch individuality fit to head the best herds in the country. There will also be bulls that will sell at more moderate prices within the means of any farmer or range-man who needs bulls. The bulls listed have been specially kept and developed for the Association's sale. They are ready to go out and do heavy service. Every cattleman, farmer, range-man and breeder should bear in mind that the American Aberdeen Angus Breeders' Association guarantees every bull through its members. The bulls will be tested for tuberculosis so they can go to any state in the Union or Canada. Anyone can attend the Aberdeen Angus bull sale at Omaha with the utmost confidence that he will get a square deal. A glance at the names of the consignors should convince anyone in need of a bull that the offering will afford the largest and best number of bulls for selection that has or will be in evidence this season. The consignors to the Omaha sale are: J. S. Athan, A. C. Binnie, O. E. Briney, C. D. and E. F. Caldwell, E. L. Cantline, E. J. Fitzpatrick, J. L. Gohlghurst, O. J. Hadley, Fred Hoffmeister, W. A. Holt, A. H. Lowry & Son, C. A. Martin, W. M. Murphy, K. E. Nelson, J. W. Norton, William Palmer, E. P. Rhoades, Carl A. Rosenfeld, William H. Smith, Oscar R. Stevenson, C. J. Tipton, and Thomas Tyner & Son. For further information or catalog, address, Charles Gray, Secretary and Sales Manager, Union Stock Yards, Chicago, Ill.

The Rock Island Plow Company this year is calling special attention to the twelve-year record of their Great Western Manure Spreader, claiming that it actually costs less for good service. They have issued a very attractive booklet on the spreader, which no doubt will be of good service to you. This booklet goes into the phases of manure spreading, and its educational value is of some importance. This company claims to have a number of excellent improvements on their manure spreader in the way of wheels under the load with roller bearings, having the rear wheels track with the front, with no neck weight, with simple direct drive, rigid oak beater rails, and many other improvements. They will be glad to send you their book free of charge if you mention Kansas Farmer. Address them, Rock Island Plow Company, 213-B Second Avenue, Rock Island, Ill.

Gronnigers Make Good Sale.

Herman Gronniger and the boys made their annual bred sow sale at the farm near Bendena, Kan., on March 24. The offering was good, as the Gronniger offerings always are, but quite a lot of the gilts were young and bred late. The sensation of the sale was the young boar, Banner Look, farrowed September 1 and weighing in ordinary flesh 267 pounds. There were several buyers and mail bids for him, and he was finally bought by E. E. Merten, Clay Center, Kan. John Coleman, Denison, Kan., topped the sow offering, buying at \$87 No. 5, a fine big fall yearling sired by Moore's Halvor, Col. C. M. Scott did the selling in a highly satisfactory manner. Following is a partial list of sales:

2—F. D. Fulkerson, Brimston, Mo.	\$55.00
3—Henry V. Browne, Antwine, Okla.	46.00
4—Walter Adams, Everest	42.50
5—John Coleman, Denison	67.00
6—Frank Housh, Hlawatha	49.00
7—H. C. Graner, Lancaster	50.00
8—O. J. Olson, Horton	66.00
9—A. P. Young, Lexington, Mo.	56.00
10—William Normlie, Purcell	46.00
11—A. P. Webber, Troy	45.00
12—Roy Carter, Wathena	46.00
13—W. G. Hague, Denton	55.00
14—E. B. Banxton, Robinson	51.00
15—A. J. Webber, Everest	45.00
16—F. J. Gelger, Everest	45.00
20—Charles Tillquist, Osborne	39.00
25—O. J. Olson	50.00
26—O. B. Clemetson, Holton	49.00
24—R. B. Davis, Hlawatha	39.00
54—E. E. Merten, Clay Center	99.00

Hildwein Offers Boars.

Walter Hildwein, the Fairview, Kan., big Poland China breeder, comes back to our advertising columns again this week. Mr. Hildwein has for sale a bunch of mighty good fall boars that he is pricing very reasonably. There are something like 20 of them, the tops from a big crop. They were all sired by Mr. Hildwein's big herd boar, Wonder Ex., a son of Sampson Chief and out of an Expansive sow. They are out of big sows. Mr. Hildwein has a fine lot of spring pigs by Wonder Ex. and Hildwein's Long King, a grandson of Long King and out of Ohava Lady, a great sow sired by Colossus. A few litters are by Ott's Big Orange. The dams of the fall boars were sired by Hadley bred sows. Mr. Hildwein has just fitted up a complete equipment for grinding feed for the pigs and says he will have a great bunch for his October 28 sale.

The Modern Farmer.

The modern farmer has discovered the fallacy of buying farm machinery and implements because they are low priced. Quality is the thing at the present time that they are considering, rather than low price. Today the consideration is service and the farmer will buy the implements that will give him the best service for the longest time. The same consideration should enter into the purchase of a range. The cheap range is an expensive enemy. There is no question but what the most economical range is the one that gives service, and costs enough to be made right. The Majestic Manufacturing Company claim such a range. They say that the little extra that you pay for a Majestic is an investment in service and in quality that will last long after the ordinary range is worn out. It is made of malleable and charcoal iron. They state that this is a combination that resists wear and rust, and is a lasting metal, the result of the Majestic Manufacturing Company's policy of putting the best into their product. This company also claims that their range saves fuel, because it is cold-riveted, making the joints tight without putty, and eliminating open joints requiring less fuel to maintain a uniform heat. The Great Majestic is made only in one quality, the best, but it comes in many styles and sizes. The Majestic Company claims great things for this stove, saying that it soon pays back by the fuel and repair saved and the perfect satisfaction it gives. This company is one of the most reliable concerns in this line of business, and you should be interested in their proposition. Those interested in buying stoves this year can find out more about the Majestic Manufacturing Company and the range they put out, from the Majestic dealer in your town, or else by writing to the Majestic Manufacturing Company, Dept. 140, St. Louis, Mo., mentioning Kansas Farmer, and they will be very glad to send you their attractive booklet.



JACKSON COUNTY BREEDERS' ASSOCIATION

MOST PROGRESSIVE BREEDERS OF JACKSON COUNTY UNDER THIS HEAD

Bruce Saunders
President



Devere Rafter
Secretary

SHORTHORNS.

Oak Grove Shorthorns headed by the great bull "White Starlight" by Searchlight. Dam by Choice Goods. Every cow in herd straight Scotch. **ROBT. SCHULZ**, Holton, Kansas.

ABERDEEN ANGUS.

"BLACK DUSTER" heads our herd, mated with as richly bred cows as can be found. Choice cows with calves at foot, and re-bred. Also young bulls. Berkshires. **George McAdam**, Holton, Kan.

POLLED DURHAMS.

"TRUE SULTAN" heads herd. Shown at 9 leading fairs last year, winning 9 firsts and 8 junior championships. We are mating him with cows of equal breeding and merit. **Ed. Steglin**, Straight Creek, Kan.

HERFORDS.

HEREFORD BULLS. Choice, richly bred individuals, ready for service. Also Duroc Jersey gilts bred for spring farrow. Percherons for inspection. **M. E. GIDEON**, Emmett, Kansas.

HOLSTEINS.

SHADY GROVE HERD. For immediate sale, four choice young bulls of excellent breeding and out of high record dams. Also three-year-old herd bull. Inspection invited. **G. F. MITCHELL**, Holton, Kan.

SEGRIST & STEPHENSON. Breeders of registered working high testing Holsteins. Choice young bulls out of record cows for sale. Farm adjoins town. **Holton, Kan.**

BUFFALO AGUINALDO DOEDE heads Shadland farm herd. Dam, Buffalo Aggie Bees, the world's second greatest junior 3-year-old cow. Young bulls for sale. **David Coleman & Sons**, Denison, Kan.

HOLSTEINS. Best of breeding and individuality. Registered and unregistered O. I. C. swine of the best strains. Also White Wyandotte chickens. Stock for sale. **J. M. Chestnut & Sons**, Denison, Kansas.

PERCHERONS.

BANNER STOCK FARM—Home of "Incluse," champion American Royal, 1911; weight 2,240. Two 8-month-old stallions, one 2-year-old filly, for sale. **BRUCE SAUNDERS**, Holton, Kansas.

PERCHERONS FOR SALE. A few nice farms for sale. Write **JAS. C. HILL**, Holton, Kansas.

JACKS AND JENNETS.

M. H. ROLLER & SON Circleville, Kan.

Fourteen big jacks and 25 jennets for sale. One imported Percheron and one high-grade Belgian stallion.



JERSEY CATTLE.

Linscott Jerseys. The oldest and strongest herd in Kansas. One hundred head, consisting of cows in milk, heifers and young bulls. Reasonable prices. Island breeding. **R. J. LINSCHOTT**, Holton, Kansas.

Fairview Farm Jerseys—Herd header, Crestala's Interested Owl 114512, sire, Interested Prince (imported); sire of 23 R. of M. cows; dam, Owl's Interested Crestala, R. of M. test 514 lbs. in Class AA. Females for sale. **R. A. Gilliland**, Mayetta, Kansas.

SUNFLOWER JERSEYS, headed by Imp. "Castor's Splendid," mated with real working cows. Choice young bulls of serviceable age for sale. **H. F. ERDLEY**, Holton, Kansas.

SPRING HILL DAIRY FARM offers bull nearly ready for service. Deep milking dams; will furnish records. Also a few choice heifers, bred. Write for price and pedigree. **J. B. Porter & Son**, Mayetta, Kan.

"Fontain's Valentine" Heads our Jerseys. Unregistered cows bred to this bull for sale. Also bull calf. **W. R. LINTON**, Denison, Kansas.

DUROC JERSEYS.

OAK GROVE FARM DUROCS. Headed by "Freddie M" 94761, grandson of the noted Colossal. Sows in herd of equal breeding and merit. Visitors welcome. **F. M. CLOWE**, Circleville, Kansas.

POLAND CHINAS.

DODSON BIG SMOOTH KIND.—Ten big fall boars, ready for light service; sired by Sunny Colossus. Fourteen gilts will be bred to Orange Chief. **WALTER DODSON**, Denison, Kan.

HIGHLAND STOCK FARM. Poland Chinas Shorthorns. 15 choice, big bone, spring and summer boars for sale, sired by "Expansive Wonder." Also fall boars. **BROWN HEDGE**, Whiting, Kansas.

MAHANS BIG POLANDS have both size and quality. Headed by a son of the great Expansive. Sows of unusual size and smoothness. 25 fall pigs, either sex, for sale. **J. D. MAHAN**, Whiting, Kansas.

COLEMAN'S BIG SMOOTH POLANDS. 150 in herd. Herd boars, O. K. Lad, Hadley C. Expansion, Price We Know, Mastodon and Mogul sows. Herd has tops from many sales. 20 bred gilts and 25 fall pigs for sale. Also Jersey cattle. **JOHN COLEMAN**, Denison, Kan.

TEN BRED GILTS and tried sows. Big kind bred to a splendid son of Blue Valley Gold Dust. Dams trace to John Blain's breeding. **IMMUNE**. **O. B. CLEMETSON**, Holton, Kansas.

P. E. McFADDEN, HOLTON, KANSAS. Live stock and general farm **AUCTIONEER**

FRANK LAMS'

Is Closing Out All His "SHOW AND BUSINESS STALLIONS" at Big REDUCED PRICES.

Lams is making a "clean up" of his horses. All must be sold at "some price." He has all his "Paris Winners" and "Largest and Best Stallions in his barns." "Prize Winners," 1800 to 2400 pounds, at \$900 and \$1,200 (few higher.) Lams owns the three largest and best two, three and four-year-old Percheron Stallions in U. S.

Lams is "cutting prices." \$200 to \$500 less price on each Stallion than formerly, to make a cleanup on all his Stallions. Paris Prize Winners at little above cost in France. Buy a ticket to "Lams' Horse Town" and take advantage of his reduced prices. Never were such choice big Stallions offered at such big bargains. Lams' old customers are his big page advertisers.

Imported and Home-Bred Horses

are "classy, Model big drafters" — of Big size—large bone, fine form — Quality—finish and flash movers — Many European "Gold Medal Winners." They are "Lams' Kind" and in the "Pink of Condition," bought at Bargain Prices and must be sold at some price. Lams knows breeders of Europe—speaks the languages—is not in the

"Stallion trust" and is selling more pounds of "Model draft horse" for the money than any competitor. Lams is cutting the middle out of high prices on his

40 PERCHERON AND BELGIAN STALLIONS

Two to six years old, weight 1,800 to 2,400 pounds, all "Branded," "Approved," "Registered and Inspected" by Governments of France and United States and certificates "stamped" O. K. All inspected by a Nebraska Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse. Lams' guarantee is backed by "One-half Million Dollars." Lams sells

IMPORTED STALLIONS AT \$900 AND \$1300 (FEW HIGHER)

"Home-breds" come cheaper. Terms cash, or 1 year's time, 8% bankable note; 1 year's time land security at 6%; \$100 less price for cash than time. Lams pays freight and buyer's fare; gives 60% breeding guarantee. Can place \$1,500 insurance. Lams backs up his ads with a \$500 guarantee that you find the horses as represented. Write for Horse Catalogue. It has a "big Bargain" on each page. References: First National and Omaha National Banks, Omaha, Neb.; Citizens State and St. Paul Banks, St. Paul Nebraska.

ST. PAUL, NEB.

125 HEAD STALLIONS and MARES PERCHERONS, BELGIANS AND SHIRES.

More actual ton stallions to be seen in Wiley's barns at Emporia than any other place in the West. If you need a stallion, come and see for yourself. I am going to make special prices for the month of January in order to make room for new consignment to arrive February 7. These stallions and mares are selected with an eye single to the wants of the most critical American buyer. I will save you from \$100 to \$200 on your horse. Write for prices and descriptions, or come and see me. Will meet all trains. Telephone 837. Barns close to A. T. & S. F. depot.

L. R. WILEY, Emporia, Kan.
Importer and Breeder



We are not making an auction sale this spring for the reason that we are selecting a show herd for the San Francisco Exposition. We now have on the Limestone Valley Farm 125 head of our several years select tops and are now offering 15 head of ready-to-use high-class jacks for sale at bargain prices in order to make room for our show herd.

L. M. Monsees & Sons
Smithton, Mo.



Jet blacks and rich dark grays. Big for their age. One weighs 2,110 lbs., one 2,160 lbs., and a yearling 1,740 lbs. Nine coming 3-year-old studs; 11 coming 2-year-old studs, and 6 coming 4-year-old studs. Registered Percherons and straight, sound. You cannot get better money makers. Foaled and grown on the farm and offered at farmers' prices. Trains direct from Kansas City and St. Joseph. **FRED CHANDLER**, Route 7, Charlton, Iowa.

IMPORTED and HOME-BRED Percheron and Belgian Stallions and Mares. Two-year-olds weighing from 1,850 to 1,950; older horses, 1,960 to 2,260. We have good herd headers at reasonable prices. Sold with certificates of soundness under Nebraska law. Guarantee and terms right. Come and see us. Seward is 26 miles west of Lincoln and 67 miles east of Grand Island. Farm adjoins city. **JOSEPH ROUSSELE & SON**, Seward, Neb.

TO GIVE AWAY ANOTHER MOTORCYCLE.

E. B. Preedy of Richland, Kan., Won the Last One by Securing Only 110 Subscriptions.

KANSAS FARMER is going to give away another motorcycle in a prize contest just starting. Any man or boy in Kansas or adjoining states, not an employee of KANSAS FARMER, may take part in this contest. Five hundred dollars in prizes will be awarded and each contestant will be paid in cash for the subscriptions he secures, besides. There are no losers in KANSAS FARMER's contests. This is the fourth motorcycle contest. In the last contest which closed February 28, Everett Preedy of Richland, Kan., won the fourth motorcycle with a total of 110 subscriptions. These contests are short and no contestant can get very many subscriptions, so the prizes are easily won. KANSAS FARMER pays in cash and prizes for the work

done, what this paper would pay others for doing the same work. You can make a good many dollars while working and win a fine valuable prize besides.

It costs you nothing to enter these contests. You do not even have to be a subscriber to KANSAS FARMER. A full announcement appeared in KANSAS FARMER last week. Send in your name and address to the Contest Manager, KANSAS FARMER, Topeka, Kan., and he will write to you fully just how to proceed.

A motorcycle adds greatly to anyone's pleasure. The cost of keeping is small and the machines will go as fast or faster than an automobile and just as far. It is better to own a first class motorcycle than a poor automobile. This motorcycle KANSAS FARMER is going to give away is the new 1914 two-speed Harley-Davidson, and it sure is a dandy.

Don't fail to read KANSAS FARMER Classified advertising page. It is filled with bargains every week.

Percheron and Belgian Stallions and Mares

on sale. My exhibit comprises the largest number of big, heavy-boned, 2,000 to 2,400-



pound stallions to be found in the United States. The Cedar Rapids Jack Farm is the Jack metropolis of the world. All nations buy jacks here. The majority of the best mules in the United States are the results of the past twenty years improvement inaugurated and carried on here. Write for catalogs. Come to me when you need stock. I will make it worth your while.



W. L. DeCLOW, Stallion and Jack Importing Farm, Cedar Rapids, Ia.

Lamer's Percheron Stallions and Mares

BUY NOW while there is the most of Variety to select from.
C. W. LAMER, SALINA, KANSAS

FIELD NOTES

Attention is called to the change in the card of John A. Reed of Lyons, Kansas, breeder of high class Durocs. The Immune summer and fall boars and gilts he is now offering were sired by B. & C's Masterpiece by B. & C's Col. They are out of Tatarax and Ohio Chief dams and are the tops of a large crop of fall pigs. They are the large, easy feeding kind, dark cherry color, best of bone, good hams and backs, good length of body and good heads. The boars of this offering are herd header prospects. They were sired by B. & C's Masterpiece and out of the best sows of the herd and are strictly high class in every

way. Mr. Reed recently added two very fine sows to his herd; one by Defender Col. and one by Superba, the noted boar that sold for \$1,500. If you want high class stock don't overlook this offering.

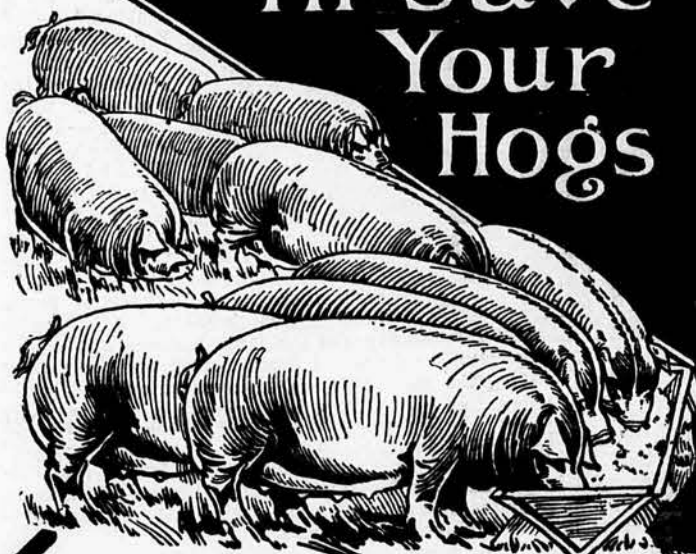
F. P. McCollough of Rossville, Kansas, who is advertising seed corn in Kansas Farmer and has had it tested by K. S. A. C., writes in that he had a test of 100 on the blotter test and 99 per cent on the sand test. He says his corn is of the finest quality and any one interested who writes to him, mention Kansas Farmer.

Don't fail to read Kansas Farmer Classified Advertising Page. It is filled with bargains every week.

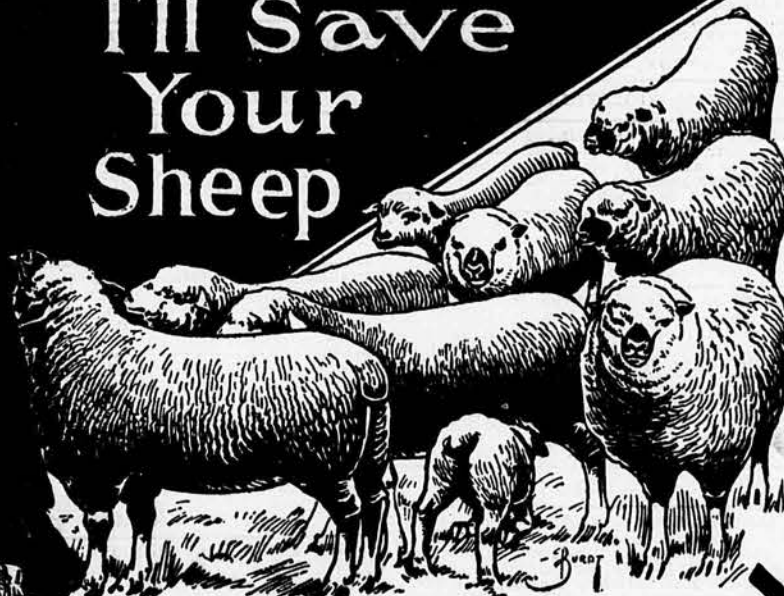
**I'll Feed
Your Stock
60 Days
Before You Pay**

**I'll Stop
Your Losses
From Worms
Or No Pay**

**I'll Save
Your
Hogs**



**I'll Save
Your
Sheep**



I'll Prove It On Your Own Stock

I don't ask you to pay me one single cent until you have fed SAL-VET for 60 days and seen with your own eyes it's wonderful merit. I don't ask you to send me a penny until I prove to you, on your own stock, the great value of SAL-VET as a worm destroyer and conditioner. I have shipped tons and tons of SAL-VET to readers of this paper who have accepted my "no money down" offer. I want an opportunity to show you who have not yet accepted it, that it pays, and pays big to feed SAL-VET regularly to all your farm stock — Hogs, Horses, Sheep or Cattle. You have nothing to risk — everything to gain.

The Great
Worm
Destroyer

SAL-VET

REG. U.S. PAT. OFF.

The Great
Live Stock
Conditioner

makes all animals thrive better, look better, destroys and expels intestinal and stomach worms which prey on the digestive tract, robbing your animals of vitality and strength and keeping them in an unthrifty, unprofitable condition. SAL-VET will put them in condition to get more good out of their feed—makes them thrive faster — stops your losses from worms, makes stock sleek in coat, vigorous in action, and far better able to resist diseases. Millions of dollars are lost every year by stock raisers who do not keep their animals worm-free, healthy, and in a condition to get all the benefits of the rations fed.

Don't Send a Cent—Just the Coupon

SIDNEY R. FEIL, Pres.
THE S. R. FEIL COMPANY
Dept. KF 44-14 Cleveland, O.

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

Name.....

P.O.....

Shipping Sta.....State.....

No. of Sheep.....Hogs.....Cattle.....Horses.....

Tell me how many head of stock you have and I'll ship you enough SAL-VET to feed them 60 days. You simply pay the freight on arrival—feed it as directed. At the end of two months report results. If SAL-VET has not done all I claim, I'll cancel the charge — you won't owe me a single penny. Send the coupon today and begin action against worm pests—the greatest enemy you have to contend with in raising stock.

(167)

SIDNEY R. FEIL, Pres.

The S. R. Feil Co., Mfg. Chemists
Dept. KF CLEVELAND, OHIO

My Best Advertisement Is A Pleased Customer

"My stock were in bad condition. I fed 'Sal Vet' for a while, and then tried another make of medicated salt. Both kinds were guaranteed to me, but the 'Sal Vet' is the only one that I am paying for. In fact, it is the only one that I consider worth going to the depot for, let alone paying for it, but the 'Sal Vet' is certainly all right. I have tried out most other remedies; that is the reason I have been so long writing—I did not want to tell you it was all right until I knew. I am confident that any man finding fault with 'Sal Vet' does not know how to feed it."—C. W. ROTHCHILD, Montrose, Kansas.

"Before feeding SAL-VET all my hogs seemed stupid and coughed at all times, but now after feeding it only a short time, the cough has stopped, and they have improved in appetite and condition fully 90 per cent."—SHELLEY BRADFORD, North Topeka, Kansas.

"I have secured better results from feeding 'Sal Vet' than from any preparation I have ever used. Have fed it to young colts and pigs, which it rid entirely of worms, and put them in A-1 condition."—C. L. BAKER, Council Grove, Kansas.

"I am enclosing payment for the 'Sal Vet' you sent me. There has been hog cholera all around me, and dead hogs constantly floating down the river, but my hogs have done finely; so have my cattle and horses."—FRED A. HORTIG, Delphos, Kansas.

"'Sal Vet' surely gets rid of the worms; I have not had any sick hogs this winter, but my neighbors within three miles of me have lost lots of them."—L. M. SHIVES, Prop. Lilac Stock Farm, Iuka, Kansas.

"Enclosed find check for last shipment of 'Sal Vet'. I loaned part of this shipment to a neighbor and neither he nor I have lost any of our hogs, while the neighbors around us have lost nearly all of theirs."—WM. PULVER, Route No. 1, Douglass, Kansas.



Look For This Label
on all SAL-VET packages. Don't be deceived by imitations. Don't buy "Sal" this or "Sal" that; get the original genuine SAL-VET.

PRICES 40 lbs., \$2.25; 100 lbs., \$5; 200 lbs., \$9; 300 lbs., \$13; 500 lbs., \$21.12. No orders filled for less than 40 lbs. on this 60 day trial offer. Never sold in bulk; only in Trade-Marked Sal-Vet packages. Shipments for 60 days' trial are based on 1 lb. of Sal-Vet for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as we can come without breaking regular sized packages.