

KANSAS FARMER

For the improvement  of the Farm and Home

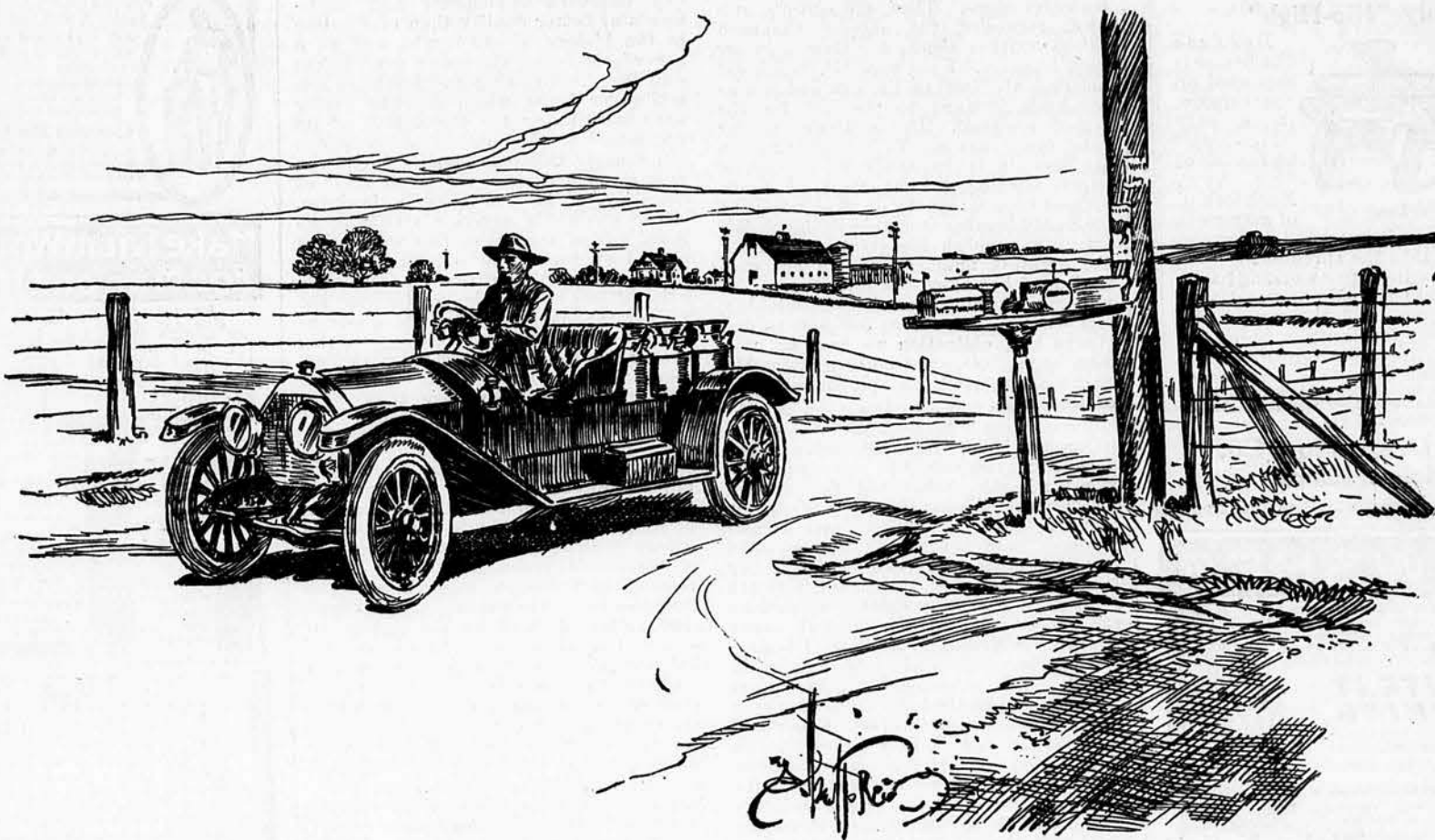
Volume 51, Number 12. TOPEKA, KANSAS, MARCH 22, 1913. Established 1863. \$1 a Year

THE man who is wrapped up in himself has thin covering. He who so concentrates his mind upon his own affairs that he has little thought for others does wrong to them and harms himself. Many a boy leaves the farm for lack of thought on his father's part and many a wife rears her family and drudges life away for board and clothes.

Man's first duty is to his family and adding acres or building bank accounts alone do not discharge this, while he who prisons his family with his fences defrauds them and stunts himself.

It does not cost much to see the beauty of this world and if you miss it you miss the whole show, and that is too big a price to pay for looking at a dollar instead.

The automobile which you can afford saves time and allows you to live as well as work. —I. D. G.

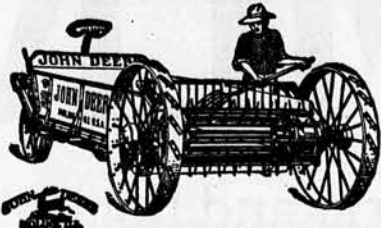


Without the automobile you spend the day for delivery; with it you make the delivery, do a day's work and have an evening with the Grange

KANSAS STATE UNIVERSITY LIBRARIES

John Deere Spreader

The Spreader with the Beater on the Axle



Take any manure spreader you have ever seen, remove all the clutches and chains, all the countershafts and stub axles, do away with all adjustments and mount the beater on the rear axle. Rebuild the spreader so that the top of the box is only as high as your hips. Make it stronger. Remove some two hundred trouble-giving parts and throw them away. You will have some sort of an idea of what the John Deere Spreader, the Spreader with the Beater on the Axle, is like.

The Beater on the Axle

The beater and all its driving parts are mounted on the rear axle. This construction is patented. You cannot get it on any other spreader made.

Power to drive the beater is taken from the rear axle through a planetary transmission (like that on automobiles). It is positive, runs in oil, and does not get out of order.

Few Working Parts

The John Deere Spreader is so simple that there are no adjustments. It has some two hundred less parts than the simplest spreader heretofore made.

There are no clutches to throw it into gear. The lever at the driver's right is moved back until the finger, or dog, engages a large stop at the rear of the machine. All the chains and adjustments have been done away with.

Only "Hip-High"



Easy to Load

Because the beater is mounted on the rear axle, it is only "hip-high" to the top of the box. Each forkful of manure is put just where it is needed. You can always see into the spreader.

Roller bearings, few working parts, the center of the load comparatively near the horses, and the weight distributed over four wheels, make the John Deere Spreader light draft.

Spreader Book Free—Tells about manure, when and how to use it, how to store it, and a description of the John Deere Spreader. Ask for this book as Package No. Y. 13

John Deere Plow Co.
Moline, Illinois

BOWSER

(Sold with or without elevator.)
Crush and grind corn (with or without chucks) and grind all kinds of small grain, and head kaffir. Have Conical Shape Grinders. Different from all others.

LIGHTEST RUNNING
(Our circular tells why.)
HANDY TO OPERATE
10 sizes: 2 to 25 h. p. Capacity 6 to 200 Bushels.

We Also Make Sweep Grinders and guaranteed for 5 years. ONLY \$35. and money back if your not satisfied. We make all sizes of mills and towers from 20 to 200 feet high. Write us to-day send us your order and save \$25 to \$30. Write to-day—Lest you forget.

THE CLIPPER WINDMILL & PUMP CO.
TOPEKA, KANSAS.

\$35 Only \$35 For an 8 foot galvanized steel windmill, and a 30 foot 4 post galvanized steel tower. The best that money can produce and guaranteed for 5 years. ONLY \$35. and money back if your not satisfied. We make all sizes of mills and towers from 20 to 200 feet high. Write us to-day send us your order and save \$25 to \$30. Write to-day—Lest you forget.

THE CLIPPER WINDMILL & PUMP CO.
TOPEKA, KANSAS.

When writing advertisers, please mention Kansas Farmer.

Over the Editor's Table

Just a Bit Personal By The Editor
For KANSAS FARMER Folks

In the course of a year KANSAS FARMER's editor receives several hundred thousand letters. Each of our 65,000 subscribers writes at least one letter—this in regard to his subscription—while many subscribers write a dozen letters a year, and almost invariably each letter has something to say regarding the paper and the editor. There are some brick-bats along with the bouquets. The brick-bats, however, are not so numerous or vigorously hurled as to drive us off the job—rather they encourage us to keep on and strive a bit harder to overcome the conditions with which fault is found. The bouquets have their value, too, but they do not swell our hat band. We print a good paper for the farmers of Kansas and we are conscious of the fact. But it helps us along the way to have words of appreciation from our many readers. The letters we get are usually commendatory—many offer valuable suggestions of which we make use, many contain suggestions that are quite out of our line. But, some letters are so distinctly different from others that they cause to run through our mind an entirely different train of thought, and these are the ones that cause us to take notice. For example, here is one:

Our subscriber, U. M. Smith, Burr Oak, Kan., orders his paper discontinued and says it is not worth taking out of the mail-box. Of course, I do not believe Mr. Smith means just what he says. Unless kindling is unusually plentiful on his farm, KANSAS FARMER is worth a dollar a year for starting the fire. But I cannot conceive how KANSAS FARMER can help being worth a dollar a year to any reading farmer. When I look over the bound volume of the 1912 issue and note the great mass of material contributed by successful farmers—who are still living on their farms and who tell how they have accumulated plenty—I cannot see how any reader can fail to get his money's worth from these experiences alone. Then, the editor's own ideas regarding the several thousand things written about, are thrown in for good measure. I am sure Mr. Smith did not stop his KANSAS FARMER and plunge his knife into us to the hilt for the reason assigned. He is displeased for some other reason. To be sure, you can see how it is impossible to prepare a paper meeting the approval of every man—to undertake to do that would be foolhardy because it cannot be done. We try to accomplish the greatest good for the greatest number and we are sure that good lies along the line of more intelligent farming and better thinking, and when we have done our best to discharge that obligation we have an easy conscience. We are wondering how Mr. Smith can reconcile his opinion with that of this man:

August Hahn, our subscriber, Dresden, Kan., renews his own subscription and also subscribed for one of his Kansas friends, Andrew Sulzman, Selden, Kan. Mr. Hahn writes: "I have read several of the so-called best agricultural papers of this country but I can honestly state that KANSAS FARMER is the most reliable as well as the most practical agricultural paper for farmers located in Kansas. I believe it would be money well spent if the state would donate a permanent subscription for such a practical agricultural paper as KANSAS FARMER to every farmer and stock raiser and poultry raiser in the state. Such subscriptions would surely help the people in general and the publisher would still be more able to interest himself in agricultural problems instead of those whole-page advertisements. I don't care to discuss the advertising matter of the agricultural press, but every intelligent farmer knows that it is he in the long run who pays for those expensive advertisements. I thank you for the interest you have always taken in the farmer's welfare."

Our subscriber must not forget that there are two classes of people who make up the United States—and for that matter, every other country. One class are those who produce the food, clothing and necessities for both classes, which first named class is made up largely of farmers, gardeners, live stock growers, poultrymen, etc. The other class is the consuming class. Were it not for this consuming class there would be no

demand for the products of the producing class. When the producers had fed themselves there would then be no market for their surplus products. The consuming class is made up of those people located in the great centers of population, which centers create a market for the farmer's products. The consuming class must have something at which to work, else that class would not be able to eat and buy clothes. They are therefore engaged in the manufacture of stoves, plows, threshing machines, automobiles, etc.—those things which are absolutely necessary and essential for the former in the production of food for the human race. The class who produce the implements and the other things which the former must have, must of necessity sell the results of their labor. This is a wonderful way the world has of balancing things—of providing a way for everybody to get along and yet take cognizance of his likes and dislikes.

In order to sell the commodities produced by that class which consumes the farmer's product, advertising at once becomes a necessity. This class can and do sell their wares more cheaply through advertising than by any other method. Advertising is, in fact, the cheap and economical way of establishing a demand for and in disposing of the products of the factory. If advertising space through such papers as KANSAS FARMER were not available, there would of necessity be a hundred traveling salesmen where there are now ten, and this multiplicity of salesmen would result in a higher cost in the sale of the factory's products than is now necessary through the medium of advertising. The competition of the keenest and most shrewd of business men, who are the largest employers of labor and who are the agencies through which the demand for the farmer's product is created, are placing in the hands of the farmer today improved implements and implements of better quality than ever before in the history of the world, and at a lower price than the same ever before sold for. Advertising has developed the mail-order house which depends wholly upon advertising for the selling of its products. If the mail-order house can sell cheaper than the manufacturer who sells through dealers, the latter must of necessity, if he continues in business, either produce a superior article or he must sell at a price in line with prices quoted by those who sell direct to the farmer. This competition made possible only through advertising, insures the farmer the right prices on the goods he buys and the effect of this competition cannot be thwarted except by the organization of "trusts" and "combines," but which institutions are these days finding hard sledding in the courts.

We assure our subscriber that without advertising it would be impossible to publish a paper like KANSAS FARMER at \$1 per year almost regardless of the extent to which subscriptions could be obtained. However, advertising is as thoroughly legitimate in its intents and purposes as is the production of wheat, corn, cattle and hogs by the farmer. Of course, I speak of clean, honest and reliable advertising of the kind printed in KANSAS FARMER columns. There is a class of advertising which is not legitimate—the kind which the farmer should not allow in his house. It is the kind which gives no value for the money it extorts, but which, on the other hand, leaves in its wake, misery, disappointment and shame. But legitimate advertising is a boon to the people of this time. It is in itself an education. It brings to the most obscure home a full knowledge of what is best in implements, clothing, seeds, etc., etc., and enables one to buy intelligently and economically. The advertisements in KANSAS FARMER are worth money to our readers if they will but get it. The value of these advertisements lies in the facts contained in the ads themselves and in the printed matter which will come free on request. Full information regarding the kind of implement to be bought will aid in wise and economical buying, and you know there is an old adage something like this: "Knowledge is power."

A. A. Botman



DIPPED IN BOILING CREOSOTE
ADDS 17 YEARS TO ITS LIFE

The Des Moines Silo

Is not painted with creosote—not dipped in the ordinary way—it is run through a vat of boiling creosote. The heat forces the creosote into every crack and into the very heart of the stave itself, covering every particle of the surface with an impervious coating of creosote. It makes painting unnecessary, makes rotting impossible, eliminates large part of the swelling and shrinkage you encountered in other silos, and our patented spring hoop lug does the rest. The Des Moines has more important special features than any other silo on the market. They are exclusive features—the creosote, the spring hoop, the triple anchor, the three inside hoops and the refrigerator doors and door frame are just a few of them. Write for the story of the Des Moines Silo before you buy. You can't afford, for your own protection, not to read it.

DES MOINES SILO & MFG. CO.,
501 New York Ave., Des Moines, Iowa.



"That roof is not going to cost as much as I thought"

Certain-teed

Quality Certified Durability Guaranteed
Roofing in Rolls and Shingles

The users of this modern, easy-to-lay Certain-teed Roofing are saving thousands of dollars—on every roll and crate of shingles is a Certain-teed label of Quality—a 15-year guarantee of Durability.

Get Our New Book "Modern Building Ideas and Plans"—It would ordinarily sell for \$1—but as it illustrates the use of our Certain-teed

Roofing on all kinds model city, factory, and farm buildings, we offer it to you at 25c. We prefer to have you go to your lumber, hardware or building material dealer, who will gladly get you a copy free. If you write us, enclose 25c to cover cost, postage and mailing.

General Roofing Mfg. Co.
E. St. Louis, Ill. York, Pa.
M. St. Louis, Ill. Minneapolis, Minn.
San Francisco Winnipeg, Canada

Make Farm Work Easy For Man and Horses.

Heider eveners distribute the load so every horse pulls an equal share. That means better work from each horse, easier work for you. They are made for 2, 3, 4, or 6 horses. The 4-horse plow evener works four horses abreast on gang, sulky and disk plows, 1 horse in furrow, 3 on unplowed ground. Heider 8-horse evener for wagon, manure spreader, grain drill, or any implement with pole.

Heider Eveners

The famous Heider four-horse Plow Eveners. Made right work right without side draft. Will last a lifetime.

Sold by dealers everywhere. If your dealer has none in stock don't accept any other. Write us for free catalog.

HEIDER MFG. CO.
140 Main St., Carroll, Iowa.

FARM FENCE

41 INCHES HIGH
100 other styles of Farm, Poultry and Lawn Fencing direct from factory at save-the-dealer's-profit-prices. Our large catalog is free.

KITSELMAN BROS., Box 61 Muncie, Ind.

FARM FENCE

Factory prices enable us to sell you the most reliable farm fence at a saving of not less than 5 to 20 Cents a Rod

We make 78 styles of fence at 11 1/2c per rod and up and 64 styles of galvanized wire fence at 10c per rod and up. Send for big four color catalog with lowest factory prices and find out about our 80 day Free Trial to Fence Buyers.

OTTAWA MFG. CO.,
603 King St., Ottawa, Kans.

Save Work, Time, Money

By using our low down steel wheel wagon

Electric Handy Wagons
saves high lifting, lighten draft, don't rut roads. Spokes don't loosen—wheels don't dry out or rot. Write for free book on Wagons and Wheels.

Electric Wheel Co., 34 Elm Street, Quincy, Ill.

SUBSCRIPTION PRICE

\$1.00 per year; \$1.50 for two years; \$2.00 for three years. Special clubbing rates furnished on application.

ADVERTISING RATES

30 cents per agate line—14 lines to the inch. No medical nor questionably worded advertising accepted. Last forms are closed Monday noon. Changes in advertising copy and stop orders must be received by Thursday noon the week preceding date of publication.



KANSAS FARMER

With which is combined FARMER'S ADVOCATE, established 1877.

Published weekly at 625 Jackson St., Topeka, Kan., by THE KANSAS FARMER COMPANY. ALBERT T. REID, President, JOHN R. MULVANE, Treasurer, S. H. FITCHER, Secretary.

T. A. BORMAN, Editor in Chief; I. D. GRAHAM, Live Stock Editor.

CHICAGO OFFICE—First National Bank Bldg., Geo. W. Herbert, Inc., Manager.
NEW YORK OFFICE—41 Park Row, Wallace C. Richardson, Inc., Manager.

Entered at the Topeka, Kansas, postoffice as second class matter.
GUARANTEED CIRCULATION OVER 60,000

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.



WHEAT BELT NEEDS LIVE STOCK.

According to Department of Agriculture figures it costs 58 cents a bushel to produce a 20-bushel yield of wheat to the acre on land worth less than \$50 per acre. This includes labor, seed, interest on investment, cost of marketing, depreciation, etc., and where the land is worth more than \$50 per acre the interest on the investment would be higher and the consequent cost per bushel higher.

This does not, however, take into consideration the value of the soil fertility consumed by the crop. This soil fertility amounts, on a 20-bushel yield, including the straw, to 44 pounds of potash at 5 cents, \$2.25; 20 pounds of phosphoric acid at 4 cents, 80 cents; and 42 pounds of nitrogen at 15 cents, \$6.30—a total of \$9.30 an acre, or 46½ cents per bushel.

Now, add the cost of production, 58 cents, and the value of the soil fertility consumed, 46½ cents, together, and the actual cost of the wheat is \$1.04½ per bushel. But, if the straw is converted into manure and returned to the land, a credit of 23½ cents per bushel is given, which leaves the wheat cost 81 cents per bushel. If the bran and shorts were fed on the land, another credit of 15 cents per bushel could be given because of the increased richness of the manure. This would leave the wheat costing 66 cents per bushel.

But where the straw is not converted into manure and the bran and shorts are not fed to live stock on the farm, the actual cost of producing a 20-bushel yield of wheat is \$1.04½, and the farmer's profit must come from selling at a higher price than this. As the average yield in the wheat belt is below 20 bushels, and as the average price for wheat is less than \$1.00, the raising of wheat alone as a single crop becomes a liability and not an asset.

This is something that we cannot get away from. As a matter of fact the reduction of soil fertility is rarely taken into account in computing the cost of wheat production, but there is no other fair way to reckon the cost of a bushel of wheat. If we do not take this into account we are traveling under false colors and flaunting present prosperity by discounting the future.

The wheat farmer who does not return anything to his farm is selling his farm by the wagon load. He is not making money because he is selling his capital, and the only reason he can stay in the business at all is because of the vast quantities of plant food which are stored in the soil. Every crop taken off the land decreases this plant food, and the bigger the crop, the greater the decrease.

There is only one solution. The wheat belt of the West must grow live stock. Live stock is necessary on every farm, but in no region of agricultural America is it so necessary as in the wheat belt of Oklahoma, Kansas, Nebraska and the Dakotas. Live stock is the only thing that will turn present losses into future gains.

The advent of the silo and the general cultivation of kafir instead of corn have made the solution of the problem practicable, profitable and easy. Two acres of kafir or of corn converted into silage, will feed eight cows as long as two acres of pasture will support one cow. Here is the economy which permits the farmer to concentrate his work on fewer acres and get bigger returns while he gives over the remainder of the farm to live stock.

Live stock gives an economy in labor, as it is producing wealth every month in the year. Live stock is not affected by climatic conditions as are wheat and other grain crops. As nearly half of the actual cost of producing a bushel of wheat comes from the reduced fertility of the soil, the raising of live stock will practically eliminate this much of the cost, besides increasing the intrinsic value of the land.

The high price of beef and dairy products which now exists and which must continue to exist for years to come is sufficient argument in favor of live stock

when compared with the uncertain yield and uncertain price of wheat.

Wheat must be raised. Bread is just as necessary as is meat, but wheat should not be raised exclusively and year after year on the same ground. The farmers of the wheat belt are possessed of some of the finest land on this earth, but they are not making a proper use of this land in any system of farming which does not include live stock as its most important factor.

With the aid of live stock and crop rotation, the wheat belt farmer can raise as much wheat as he now does and on a much smaller acreage. He can have whatever of profit this wheat will bring and the added profits of other crops and of live stock, and these will be vastly more certain. There never was a time in the history of this country when the work of the breeder of good live stock was more needed or ought to be more highly appreciated.

BEEF ON THE FARM.

The farmers of Kansas are now facing a problem such as has not been presented to them in the whole previous history of the state. The beef of the future must be produced on the farm. The methods of the past have not been such as to teach our farmers how to do this economically and profitably on high priced land. The farmer is, therefore, obliged to overcome a shortage in meat producing animals in the face of the facts that the consumption is enormously increasing each year and that he must learn of ways and means. Kansas now produces nearly one-fourth of all of the alfalfa grown in the United States, or at least she has nearly one-fourth of the acreage that is sown to this crop in the United States. This enormous supply of the most valuable and most ancient agricultural crop known to man and the sure returns which come from her eastern corn fields and her western kafir fields, give the Kansas farmer an enormous advantage over those of less favored states, and when to these two important crops we add the silo as a means of preservation, and the prices which now prevail and must continue to prevail, it would seem that the incentive to increase our flocks and herds would be well nigh resistible. But, when we add to these facts the knowledge that live stock offers not only the most profitable of opportunities in a financial way, but that it is absolutely necessary to the preservation of our farms for our own use in our declining years as well as an heritage for our children, it would seem that a moral force, as well as a financial one, would compel the increase in both numbers and quality of the live stock in Kansas.

Live stock is absolutely fundamental. It has built Kansas into what she is. It must maintain Kansas if she does not retrograde, and it will build a yet greater Kansas if it is improved and cared for by means of good blood and good feed. Every business interest in this broad state, from banker to bootblack, is interested in and dependent upon the farm, and the farmer must cover his pastures and feed lots with live stock in order that he may meet the demand that will be made upon him, no less than that he may save himself from the absolute loss of depleted fertility, decreased yields per acre, despondency and a desire to move to town. We are at the parting of the ways. With live stock we go on to greater successes and achievements in agriculture than any that has yet been attained. Without it—Armageddon.

FARM ORGANIZATION.

The organization of the farm to produce a maximum return, is the point for important consideration. It is not a question whether a dairy farm, a hog farm, a crop farm, or horse farm, pays best. Organization is a matter of so correlating the several inseparable farm industries that the land will be used for the purpose it is best adapted, keeping in mind the help available and the most profitable distribution of labor through

the year, the financial demands, and exigencies of the owner, etc.

We have known dairy farms, highly profitable in so far as the dairy itself was concerned, but the farm as a whole unprofitable because other industries—the keeping of hogs, growing the young stock, and the growing of feeds—were not properly developed and correlated with reference to the dairy. Under such conditions losses occurred because the by-products of the dairy were wasted, because either too little or too much feed was grown for the stock kept on the farm. This is a condition existing quite too generally with reference to the specialties, and not only with regard to dairying. Farm organization is the big question of the day in our agriculture.

So, in discussing dairying, we view it from the standpoint of an important cog in the execution of farm plans, which, if profitable, will produce a uniform succession of cash income and will economically maintain the soil fertility.

WHY CONGRESS SHOULD ACT.

There is no reason why congress should delay action for a new currency and banking law beyond the special session to be called this spring. Congress is in possession of complete information as to the operations of the banking systems in this and all other countries. Aside from numerous disastrous experiences, terminating in the panic of 1907, with their eloquent information, the lawmakers have before them the 23 volumes of the report of the National Monetary Commission. This report is the most exhaustive compendium of information as to American and foreign banking systems and methods ever compiled. In addition, the House subcommittee of the Banking and Currency Committee has been making special study of the question since last spring and has been hearing the views of bankers and business men for several weeks. The general question of banking and currency reform has been under constant investigation and study since 1907. Knowledge knows no party. Information is information whether Democrat or Republican uncovers it. If congress cannot act at the special session, because it requires further time to investigate, congress might as well postpone action indefinitely for the same reason.

The news press has a notice of the sale of the plant and machinery of the Great Bend alfalfa mill at auction. The mill paid the highest market price for alfalfa, but owing to the immense demand on the part of dairymen and cattle feeders the product was sold in the stack and very little was taken to the mill. Great things were looked for by investors in alfalfa mills. The mills would have been profitable, too, from the standpoint of the farmer as a market for surplus alfalfa, but that surplus did not exist. No one can make such good use of alfalfa or pay a better price for it than good live stock and farmers soon learned this.

Wealth has its advantages as well as disadvantages. The recent decision of Vincent Astor to devote some of his wealth, youth and energy to the agricultural regeneration of New York state, took the form of action today in the offer to provide farmers of Dutchess county, the seat of his ancestral estate, with White Tartar seed oats at a low price. Old farmers say that young Astor has shown good judgment in the selection of the first neighborhood crop to be improved. The Astor farm guarantees that its seed oats will improve the crop in the county.

Farmers of Polk County, Minnesota, established a popular precedent last winter when over one hundred organized the Polk County Pure Seed Association. The movement was the direct outcome of a need felt by all the farmers of going to work systematically and not only of providing themselves with pure seed of the varieties best adapted to their counties but also in keeping up and increasing the standard of their crop production.

SWAT THE "CURE-ALLS."

Patent medicine people are these days having a hard time in getting their nostrums before the people. The best of farm papers have absolutely excluded patent medicine advertising from their columns. There are, however, a few farm papers which endeavor to draw the line between so-called reliable patent medicines and those which are not reliable. No such line, however, can be drawn by the publishers. This, because the publisher is in no position to judge as to the merits of any medicine. It is not his business to know whether a medicine will do the things claimed for it and no publisher does know, so he cannot discriminate between the good and worthless.

The patent medicine manufacturers are getting their principal publicity through the newspapers—those daily and weekly papers the business of which is to carry the news. The publishers of these papers have so far not set up the same standard of reliability and decency and responsibility for advertising as have publishers of the best magazines and agricultural publications. Many of the good daily and weekly newspapers are filling their columns with a class of advertising which does the publishers no credit and against which the readers should rebel. If a farmer is particular about the cleanliness of his farm paper, why tolerate indecency in his daily or weekly? Newspapers will not adopt a standard of clean advertising until their readers insist upon it. If medical advertising is to be censored, the line must be drawn on all such advertising. It seems safe to state, in the light of the best and most recent investigation, that the claims of medical advertisers in general cannot be substantiated and that such advertising must therefore be fraudulent.

The latest statement with reference to patent medicines is that which comes from the office of Professor L. E. Sayre, Director of Drug Analyses of the Kansas State Board of Health and dean of the School of Pharmacy of Kansas University. Investigation by him has shown that patent medicines are usually some simple combination of well known drugs for which absurdly extravagant claims are made. He is quoted as saying:

"Among the scores of these nostrums exploited in Kansas, we found one that had been advertised to cure about thirty different diseases, from consumption to Bright's disease, by dropping the medicinal liquid into the eye. This liquid, when analyzed at the university drug laboratory, was found to consist of a watery solution of salt and sugar. The foxy proprietor of this preparation knew that the dear public would, by suggestion, be influenced to have the various diseases enumerated and be led to believe the brazen statements made, that this alleged remedy—salt and sugar—was the one reliable remedy for the long list of ills named."

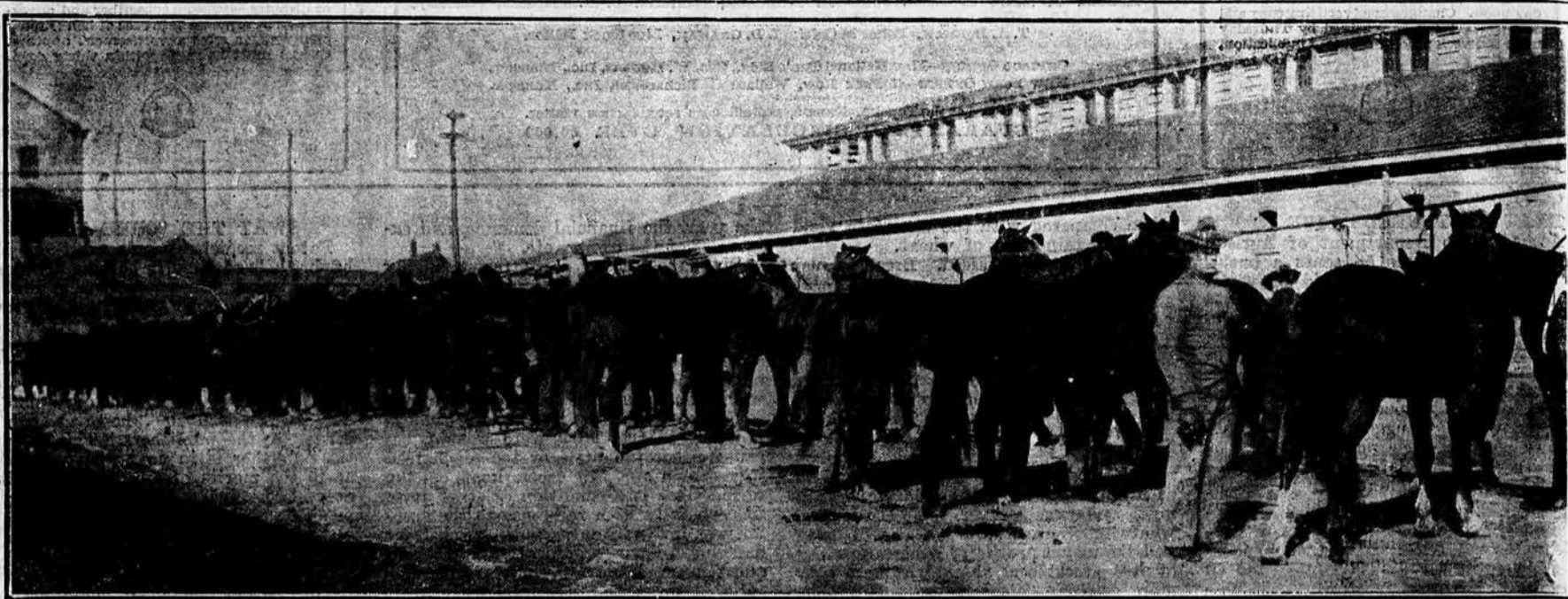
If people can be made to think they will decide better than any one can advise. The need of the day is thinking people—those who will knit their brows and think hard about the work they have in hand. Too many of us are doing things in the same old way that others before us have done. This disposition is every day blocking the wheels of our welfare and progress. The fellow who thinks—he who does a thing the way that seems best to him, whether or not it has ever been so done before—is the fellow, and he alone, who is responsible for progress and makes the difference between life in the twentieth century and that of the fifteenth century.

During the fiscal year, 1912, the Bureau of Soils, U. S. Department of Agriculture, performed 2,320 square miles of detailed soil survey work in Kansas, bringing the total detailed soil survey work done in the state to 2,303 square miles and 39,960 square miles of reconnaissance soil survey work. The work done the past year was performed in Cherokee, Greenwood, Jewell, Reno and Shawnee counties.

KANSAS STATE UNIVERSITY LIBRARIES

CORN BELT HORSE BREEDING

Address Before Kansas Improved Stock Breeders' Association



K. S. A. C. STUDENTS GROOMING HORSES AT FORT RILEY, KANSAS

By FRANK B. GRAHAM

DURING the early settlement of this country little thought was given to horse breeding. The western part of this great domain was a pasture paradise. It was not necessary to pay much attention to horses, for they were raised very cheaply. It was only necessary for ranchmen to let a band of mares run, without giving any care or attention except the branding iron. The demand was not for horses of extra quality at that time, so that practically all development in horse breeding covers only half a century. During that time the markets have fluctuated greatly. This is one reason that horse breeding is not farther advanced. The cheap method in which horses were produced afforded an opportunity to overstock the market.

This is the history of every new country during the period of its settlement. In European countries these great fluctuations in horses are never known. The prices usually remain stationary. Horses (from the farmer's standpoint) have not been considered seriously in this country until this last—and still present—land boom.

In 1873 and 1893 horse stock on the ranges was killed like jack rabbits. In 1893 it was carried to the extreme, and horse areas were nearly depopulated. In the western country grass was wanted for cattle and sheep. Little did these ranch men and others think of what they were doing. Since that time there never has been a surplus of even the inferior stuff in the western states.

Nearly every week in the year horses and mules are shipped from Kansas City to the western states. There are nearly 160,000 irrigated farms, most of which have been watered in the last 15 years. This has taken an enormous number of horses. The irrigation projects are only nicely started. These irrigated farms, as a rule, are very intensely farmed. As a result of the great scramble for land practically everything of any value is now owned, and has a consideration greater than ever was known in this country. Cheap pasture is a thing of the past, and this will have a tendency to eliminate inferior stock. The population in this country is increasing every year. The foreign immigration to this country is phenomenal. I have visited a number of foreign countries and find that great numbers of the people still intend to come to this free country of ours. This means a greater production of farm and live stock products, for these people must be fed, and as the country becomes more thickly settled it will be farmed better as a necessity.

In Belgium the average farm consists of three acres of land. This is where the heaviest draft horses in the world are used and produced. Those living in the corn belt states have been led to believe that a surplus of horses exists. If they will visit the eastern states where most of the horses have to be bought outside, and also the lumber sections in the north where no horses are raised, they will form a different idea. The mule business is affecting the

horse production to a greater extent in this country than all other causes. I have recently sent out hundreds of letters to stallion and jack owners in all different sections of the south half of the United States and find that more mares are being bred to jacks than to stallions. We find many sections in the north, east and west where mules are being bred extensively. As near as I can estimate at least one-fourth of the mares in the United States were bred to jacks last year. Mules (the product) cannot reproduce. In the south half of the United States, where mules are bred extensively, we find that the mares are gradually being eliminated. The age of these mares over this large territory will average about 10 years, and the young mares are not numerous. The question is, where will this large territory get its renewal of producing dams? Without mares, mules cannot be produced. Only a few men really realize how many mules are used. This country owns and produces more mules than the balance of the world. They are being shipped from here to nearly all nations that use mules.

I was much interested in a shipment of mules to South Africa. These mules cost \$225 per head; there was \$60 expenses and \$5 duty per head, making a total cost of \$290 laid down at Capetown, South Africa. These gentlemen are large mule dealers. They have been purchasing their mules in South America, but they state that they cannot purchase them good enough in that country and that they can lay them down in South Africa from this country for less money than they can be purchased elsewhere. This might interest the horse breeders in the northern states, as it requires mares with some size to produce the big, rugged mules suitable for this market. Never before in the history of this or any other country has the hybrid assumed such important proportions. This growth has been marvelous, and none of us knows how far-reaching it will be. If American mules can be shipped to Africa during the highest prices ever reached in this country, need the American horse breeders fear for the future in horse breeding? Mules are worth \$10 per head more now than one year ago.

A great change in foal production has also taken place during the life of men now living. This is probably the result of the method in which stallions and jacks are stood. In all other civilized countries where horses are bred extensively, a part of the service fee is paid at the time of service. In this country the "stand and suck" method invites all mares to be bred regardless of their diseased condition. If a part of the service fee was paid at the time of service, most of the diseased mares would not be bred. But we do not believe that a change can be made eliminating the "stand and suck" proposition, as it would be an incentive to the mare owners to patronize the inferior sires if the owners of better

sires would attempt to make the change.

While there are many abuses in the stand and suck proposition, yet this method does have some educational value. There are a lot of men standing stallions and jacks who do not understand their business. A low per cent of foals will cause these men to either dispose of their stock or to learn more about their business.

During the last two years the germ has been discovered that is making many mares barren. Experiments have been carried on that show beyond any question of a doubt that this germ can be carried from a diseased mare to a clean, healthy mare, from two to four days after the diseased mare has been served. This is an alarming condition and it can only be remedied by a better understanding on the part of those who maintain stallions and jacks. Mare owners should not patronize stallions or jacks unless the owner of such stock makes a careful examination of all mares and absolutely refuses to breed those that are diseased. Barren mares have caused a greater loss to agriculture today than any other cause I know of. After having an opportunity to confidentially investigate a great many service record books covering many states, I have come to the conclusion that only one mare produces a foal old enough to wean out of each three mares bred. This would not lead us to believe that horses were increasing rapidly.

Another serious defect is that the high prices are taking many valuable young mares out of the breeding ranks, leaving in their stead, to be used as brood mares, animals which are neither very valuable as producers nor liable to be regular breeders. The value of a good producing dam of any kind has never been fully realized by the American farmer.

The statistics give very little reliable information on horse production. Owing to the great changes that have taken place in this country, farmers that formerly used two horses to a small implement are now using from three to five, and heavier and better as a rule. Farm help was never scarcer or higher, and every place a horse can be utilized to save the wages of a hired hand, it is done. The automobile has taken the place of many light horses and has taken the place of a few heavy horses, but if it had not been for the automobile coming to our rescue in this broad, fertile country of ours, what would the price of horses have been? This country is just going through its proper settlement, which I believe will last for many years, barring accidents. There is no other country like this. Each year we are finding that many new lines of development are very profitable. It is the development that creates this stimulus for men and teams. The average wages for a man and a team (team weighing over a ton and a half) in the large cities is over \$6.50 per day, and so great is this demand upon our draft stock that the

quality of these horses is not as good as was found on the streets a few years ago. The farmers are finding it profitable to farm their land better. The staple crops of this country are usually high all over the world.

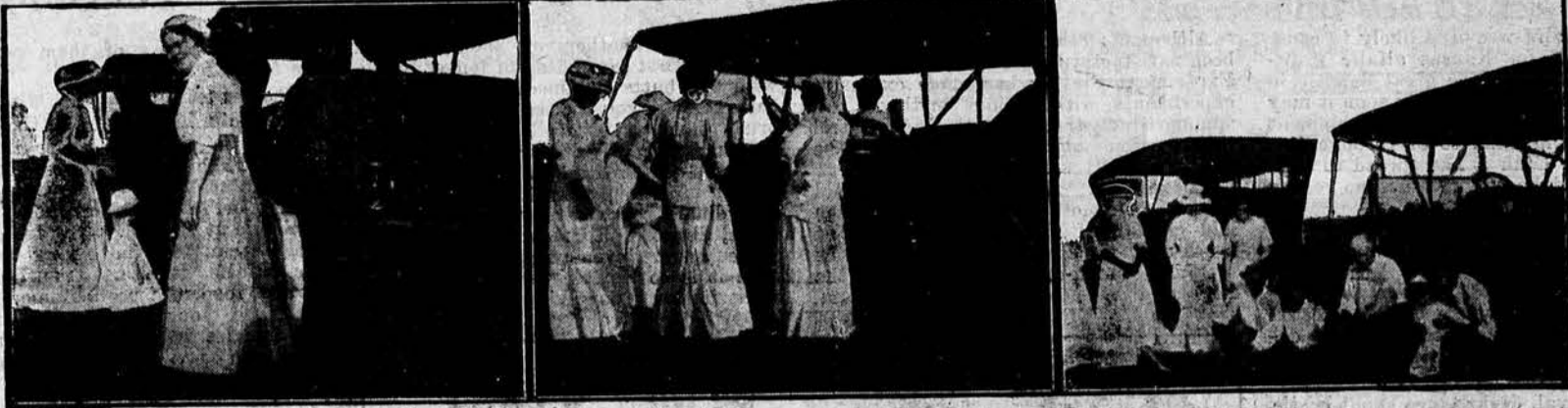
With the present prospects for future development there is not liable to be a surplus of horses, but the producers of these animals should give this question more thought. The demand is for certain market requirements. Too many farmers are raising horses of an inferior type that are not very profitable. A majority of this plain stock is a drug on the market and much of it is produced at an actual loss. This will never properly be remedied until the farmers themselves create a demand for better sires. All live stock improvement among the common classes is made through the use of better sires. A well bred sire and an outstanding individual has a great value to every producing community. If a stallion sires 50 colts per year that are worth at maturity \$100 more per head than those sired by inferior sires, what is the value to that community in one single year? I have not placed this value too high. This margin can be proven in a community where good horses are bred. It is very easy to add \$100 to the offspring of an average mare by using an extra good sire and developing the progeny.

Every stallion and jack owner should have a hitch rack a considerable distance from his breeding barn so that all the mare owners would be forced to tie their animals there and give him an opportunity to inspect these mares. At a breeding barn every farm in that community is represented. If there is a contagious disease among the horses it is very liable to find its way to this place. The hitch rack should be situated in the sun, and in case a disease was detected at this hitch rack the animal would be sent home and not allowed to mingle with the other stock and scatter infection. By having the hitch rack in the sun all infection is destroyed, as the sun is the greatest germ destroyer known.

The per cent of foals produced by the average stallion owner can be greatly increased by refusing to serve diseased mares by natural service. A new line of treatment for barren mares has been brought out during the last few years so that with the knowledge now at hand the financial results of the stallion and jack business can be greatly improved.

Stallion and jack owners are in a position to greatly increase the wealth in their communities by being well informed on breeding subjects, to encourage the use of better sires. The mare owners can encourage the use of better sires by passing a law giving a lien on the mare and colt for 18 months so that all of the service fees can be collected. In order to make it possible to maintain good stallions it must first be profitable. About one-fourth of the colts are never paid for, so that in the end the three-fourths of the mare owners who honestly pay their debts pay all the maintenance of these stallions and jacks.

THE FARMER AND HIS AUTO



EXCEPT FOR THE AUTO THESE FARMERS WOULD NOT HAVE DRIVEN SIXTY MILES ACROSS COUNTRY TO CHAUTAUQUA

SOME 12,000 KANSAS FARMER readers are automobile owners. It was at their suggestion that KANSAS FARMER was the first agricultural paper to publish regularly a department devoted to helpful hints regarding the use and care of the automobile. Our readers have written these letters which we have allowed to accumulate until we could print them as one of our feature articles. The photographs are contributed by the same writers. We are confident that auto owners will get much pleasure in knowing what their neighbors are using their machines for and how they are pleased with them.—EDITOR.

More Durable Than He Thought.

I have driven my car 2½ years and I find it much more durable than I had thought. I take good care of it and it runs as smoothly as ever. My repair expense has been \$26, and tire expense \$60. I have a good big car—40 horse-power. The machine carries five passengers, and I average 15 miles to a gallon of gasoline.—J. P., Arnold, Kan.

Has Less Trouble Than Town People.

I find that the farmer has less trouble with the automobile than town people. In 27 months I have driven my car 9,500 miles at a total expense for tires, repairs and grease, of \$190. It is a 30 horse-power five-passenger car. The automobile has been of greatest use to me in making long, hurried trips. I average 13 miles per gallon of gasoline.—H. Ellinwood, Kan.

No Hill Too Steep for Him.

Mine is a 22½ horse-power car, but I have plenty of power and speed and the hills are never too steep or the sand too deep for me to get over. I have driven 5,000 miles, and my expense account has been very reasonable. I get 20 miles out of a gallon of gasoline, and the car has been of greatest use to me in saving my work teams.—J. N. B., Belle Plaine, Kan.

Automobile Better Than Owner.

I find the automobile does its work much better than the owner for the first few months and until the owner learns the mechanism, speed and draft of the machine. I have hauled feed, wood, poultry, calves and pigs in my car. I use it for business first and pleasure second. I have driven 6,000 miles. My expense for lubricating oils has been \$20 to \$25, tire expense \$100.—G. G. B., Topeka, Kan.

Likes a New Machine.

I have owned two machines in 2½ years. The first machine I ran 3,000 miles. The last one I have run 4,000 miles. It is a five-passenger, 20 horse-power car. My repair and adjustment expense has been \$10 and my oil and grease account shows \$12 expended, with a supply on hand. I get 25 miles from a gallon of gasoline.—A. A. W., Conway Springs, Kan.

Auto Power for Farm Work.

I have owned an automobile 4½ years and have run about 12,000 miles. It seats two persons and has an extra jump seat for one. It is 10 horse-power. My repair expense has been \$50, tire expense \$20, and I have used 20 gallons of lubricating oil and five gallons of differential grease. I run from 20 to 22 miles on a gallon of gasoline. I have never used the machine for other than pleasure riding and driving to town to transact my business after I have done a day's work.

I intend to buy a saw and make the motor saw wood for winter use. Two

Experience of Kansas Farmer Readers in Automobile Ownership Shows Utility and Pleasure Value.

of my farmer neighbors who have machines make them do various kinds of work. They have a jack shaft which is run by the automobile engine which furnishes the power for operating several different kinds of machines.—R. W., Wellington, Kan.

Practical for Country Physician.

I could scarcely get along without my automobile. It is a great time saver and I have used it almost constantly in

of gasoline. The automobile has been a great time saver for and pleasure giver to me. I have run my machine 3½ years and see no reason why it is not good for many years more service.—C. S., Bern, Kan.

Longer-Lived Than Anticipated.

The automobile is a much longer-lived machine than I expected, and is not so expensive as I thought to keep up. If you keep close watch of your machine



THESE FARMERS' FAMILIES DROVE TWENTY-FIVE MILES TO SPEND SUNDAY WITH THEIR NEIGHBOR SHIELDS OF LOST SPRINGS, KANSAS

my country practice. It saves at least two-thirds of my time.

In four years I have run my two-passenger 20 horse-power car 20,000 miles. I have expended \$40 for repairs and have purchased two sets of tires. I have kept no account of the expense for lubricating oils. I get 20 to 22 miles from a gallon of gasoline.—C. C., Dover, Kan.

Good for Many More Years.

We have had very little trouble with our automobile. My repair expense has not been in excess of \$10. My oil expense has been about the same and I have bought \$100 worth of tubes and casings. Mine is a 28 horse-power five-passenger car, which I have driven 6,000 miles. This is a hilly country and I get an average of 14 miles from a gallon

and are handy with tools, you can yourself do such repairing as is needed. I do not expect to be without an automobile. My machine carries all that can hang on. I have run it 5,000 miles in 2½ years. It is 20 horse-power and I get 20 miles from a gallon of gasoline. My outlay for repairs has been very small. I have bought one full set of casings which cost me \$70.—D. E. K., Caldwell, Kan.

Power Plant for General Purposes.

I have owned two automobiles. The machine I now own is 30 horse-power, carries four passengers and has run 20,000 miles. My total expense for casings, oils—exclusive of gasoline—and grease and repairs, has been \$334. I get 12 to 15 miles from a gallon of gasoline.



TWO FARMERS' FAMILIES DRIVE SEVENTY MILES AND SPEND SUNDAY TRAMPING AMONG BARNs AND STOCK AND OVER FIELDS OF KANSAS AGRICULTURAL COLLEGE. PHOTOGRAPHED WITH ONE OF THE COLLEGE BUILDINGS AS A BACKGROUND

I have used the engine to run a corn sheller, a fanning mill, and have hauled to town all kinds of produce. I have found the machine especially valuable in hurrying to town for repairs for harvesting and threshing machinery. I do a day's work on the farm, go to town in the evening, transact my business, and have lots of fun and comfort thrown in.—C. S., Clafin, Kan.

Would Not Be Without a Car.

It will be three years next month since I bought my car. I would not think of being without it, either for general use or for pleasure. It has saved me a lot of time. I have not kept track of my expenses, but these have not been heavy. I have bought only one set of tires. My machine is a 30 horse-power five-passenger, and I have driven it 14,000 miles. I would guess that I get about 10 miles from a gallon of gasoline.—F. W. K., Detroit, Kan.

Has Driven Once Around the Earth.

I have driven 25,000 miles. My repair expense has been between \$150 and \$200 and my lubricating expense \$25 a year. My tire expense for the entire distance traveled has been about \$300. I have a 30 horse-power five-passenger car and I have used it for a great number of purposes. It has done me the greatest service in making long trips which would not have been possible with the team. My car has done me more good than any other vehicle I could have owned. If I were buying another car I would buy the same make.—A. S., Bancroft, Kan.

Less Expensive Than Team and Carriage.

I do not consider that the expense of keeping my automobile has been greater than that of keeping a good driving team, buggy and harness. It does not incur expense only when in use, and if properly handled this expense will be small. My total outlay in four years has been \$150 for repairs and one set of tires \$80, and \$15 worth of oil and grease. I get 14 miles from a gallon of gasoline. The automobile is not made for the purpose of running farm machinery and I have not so used it. I use the car for pleasure and for taking my produce to town and hauling supplies home. Mine is a five-passenger 24 horse-power car.—J. W. F., Oneida, Kan.

Enabled to Do One-Third More Business.

I have used my machine for everything for which a farmer can use a machine. I have hauled wire, cement, feed, calves and pigs—the latter, of course, crated for shipment. It has proven a great time saver and has enabled me to do a third more business. As a means for increased enjoyment for my entire family, it has been worth more to me than any money ever invested outside of that expended in our home.

I have driven 16,000 miles and have bought one new set of tires. Mine is a 30 horse-power, five-passenger machine. My lubricating expense has been \$31.80, and I get 12 to 15 miles from a gallon of gasoline.—C. W. T., Abilene, Kan.

For General Purpose Hauling and Fun.

I have driven my 34 horse-power five-passenger machine 10,000 miles in four years and three months. My repair expense has been \$30, and two new tires and the repairs on the old ones have cost me \$80. My expense for lubricating oil has been \$40. I get 15 miles from a gallon of gasoline. I have hauled poultry and poultry products to market, have brought home building materials, furniture, cement, and about everything else that could be hauled in an automobile.

(Continued on Page Eight.)

KANSAS STATE UNIVERSITY LIBRARY

WATCH FOR ALFALFA WEEVIL

Prof. George A. Dean, Entomologist, K. S. A. C., Issues Timely Warning

THE alfalfa weevil is likely to cause trouble for Kansas alfalfa growers. It has done great damage in Utah. We cannot know how soon it may find its way to Kansas by the shipment of alfalfa from Utah to or through this state. From Utah it has spread to Wyoming and Idaho and there is no reason to believe that Kansas is on the expected list. Let Kansas growers report its first appearance to the entomological department of Kansas State Agricultural College so that the department may cooperate with the owners of the infested fields in the weevils' control and destruction. Here is Prof. George A. Dean's description of the pest:

A small, oval, dark-brown snout beetle marked with black and grey hairs, giving them a mottled appearance; about three-sixteenths of an inch long, attacking alfalfa in Utah, the adults feeding on the stems, leaves and buds for several weeks. The larvae are small, footless, alfalfa-green worms, with a black head, about one-fourth of an inch in length, and feed in the stalk, in the leaf buds, and on the leaves. They have the habit of feeding and resting in a curved position.

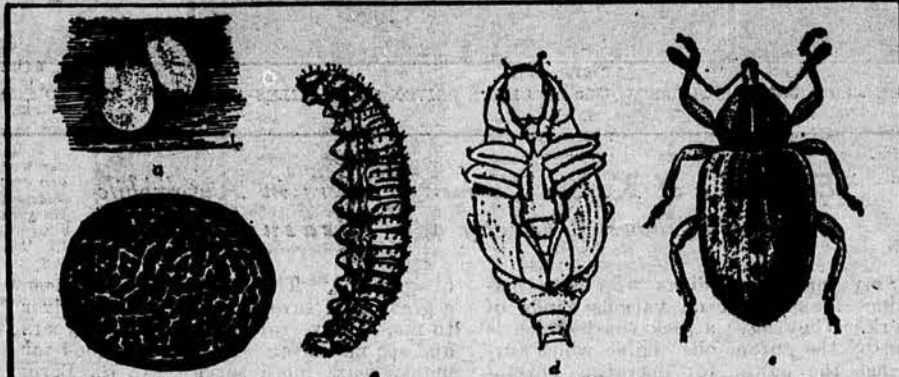
"We do not know that this serious pest has entered Kansas," says Professor Dean, entomologist Kansas Agricultural College, "but as there are millions of the beetles in the infested district of Utah, and since they have been found in considerable numbers in freight and passenger cars coming from the infested regions of Utah—cars which are constantly traversing the alfalfa fields of Kansas—it probably is only a question of a short time until the weevil will be distributed in the alfalfa fields of Kansas. It is, therefore, highly important that our alfalfa growers be on guard. Just so soon as this insect is discovered or has gained a foothold, the entomologists of the Kansas State Experiment Station should be notified in order that prompt measures for its control and destruction may be put in operation at once.

Although methods of control have not been satisfactorily determined, the Utah Experiment Station has made extensive experiments with various methods. In summarizing the methods of control that station says: "Alfalfa should be disked in early spring to stimulate it to better growth. The first growth should be cut when most of the eggs have been laid (Middle of May in Utah) and then brush-drag the field thoroughly. Fields should be brush-dragged again after the first crop has been cut. All weeds and

long. Then another row should be laid upon the first, consisting of longer brush, with the butts trimmed a little further back so that you will have in effect two brush harrows, one following the other. Another plank should then be laid on the brush-butts and bolted to the under plank. In weighting this harrow, lay an ordinary tooth harrow, with the teeth down, directly on the brush drag. This makes a very even weight, at the same time it is so flexible that the drag will work its way down into the small de-

the plants, many of them perishing in the heat of the sun.

The insect passes the winter as an adult beetle hibernating in the crowns of the alfalfa plant, in under thick grass, weeds, rubbish and leaves, in hay or straw stacks, in barns where hay is stored, or in any well sheltered places available at the time they are going into hibernation. In the spring as soon as the alfalfa is started sufficiently to furnish food, the beetles emerge and attack the young plants. About April the females begin laying their eggs in the stems or on the buds and leaves. This continues until early July. In the early spring while the plants are small, the females often push their eggs down between the leaves or into the bud, but the usual method is to insert them in punctures made in the stem. This puncturing of the stem often seriously injures young plants. In about ten days the eggs hatch and the young larvae, at first white but soon turning to an alfalfa-green, feed in the stems and the buds and on the leaves. They attack the young leaves and crown so that a badly infested field will not make a sufficient growth to be mowed. The larvae do not have true legs and when full grown are from one-fourth to nearly a half inch long. When full grown, which is from fifty to sixty days after hatching, the larvae crawl or drop to the ground and spin around themselves a cocoon composed of a net work of rather loose white threads. This cocoon usually is among the dead leaves or rubbish. The insect remains in the pupal stage from ten to fourteen days and then the beetle emerges. The adult feeds on the stems, leaves and buds until autumn or their hibernating time. Prof. Webster of the United States Bureau of Entomology, says: "The entire life of the insect, from the deposition of the eggs to the emergence of the adult, may be from forty to seventy days, while the beetle itself may live, including the winter, from ten to fourteen months."



THE ALFALFA WEEVIL: A—EGGS; B—COOCON; C—LARVA; D—PUPA; E—ADULT. ALL MUCH ENLARGED. (AFTER WEBSTER, U. S. DEPARTMENT OF AGRICULTURE)

rubbish should be cleaned from the field, yards, ditches and fence rows, so that there will be less opportunity for the weevil to find winter shelter. Alfalfa should not be allowed to grow more than seven or eight years in the infested districts."

A brush drag is recommended by Prof. Titus: "Many patterns of the brush drag are in use," he says, "but the one which seems to be the best for our work is made by laying the butts or rather short brush, five or six feet long, in a row on a plank twelve or fourteen feet

pressions as well as over the larger elevations of the field."

The brush drag knocks the larvae feeding on the stubble to the ground where it mangles many of them and suffocates others by the dust stirred up, tears up the cocoons that are on the plant and on the ground. If the brush drag is built right, there will be parts of the brush tearing through every crown of alfalfa in the field and stirring up the soil sufficiently to cause a dense fine dust in which many of the younger larvae are suffocated and which the older ones find it very hard to crawl through to reach

Haugen vs. Lever Oleo Bill

Subscriber, G. A. F., Iola, Kan., writes: "In KANSAS FARMER of January 18, I note your article on the oleo situation and that you take issue with Congressman Taggart for supporting the Lever bill. As I understand the Lever bill, it repeals all of the tax on oleo but makes it imperative upon the manufacturer and dealer to label it what it is and sell it for what it is. If this understanding is correct, I think the bill is all right and Congressman Taggart is right in supporting it."

"The man who produces beef stock should have the right to sell his products unhampered by law and taxation—and oleo is one of his products—as well as the man who produces the milk and butter stock has to sell his products unhampered by tax and discriminating law."

"Oleo is the poor man's—and sometimes the rich man's—butter. It is both nutritious and healthy and cleaner than some butter. If the consumer thinks that his table looks better with colored oleo than with uncolored, he should have the privilege of buying it without a tax."

The essential differences between the Lever and Haugen bills, are these: The Lever bill breaks down all state laws and permits the oleomargarine manufacturer to ship his product into any state regardless of the fact that 32 states of the Union have laws prohibiting the sale of colored oleomargarine. The Lever bill permits the coloring of oleomargarine any shade of yellow in imitation of butter. The Haugen bill limits oleomargarine to a shade of 55 per cent. white. The Haugen bill also proposes to prevent the oleomargarine manufacturer from mixing finished butter in oleomargarine. It does permit the mixing of as much as 5 per cent. of butter fat from milk in the oleo product. The two bills are the same in so far as matters of taxation are concerned.

The dairymen, in the Haugen bill, were willing that the so-called "poor man's butter" should not be taxed. The action of the supporters of the Haugen bill in agreeing that the tax should be reduced to a minimum or not placed thereon at all, was a stunning blow to the oleomargarine manufacturers because for years

they have been arguing that the dairymen were contributing to the high cost of living by insisting upon a tax on oleomargarine. The present law provides for a tax of 4-cent per pound on uncolored oleomargarine and 10 cents per pound on colored oleomargarine, which colored product is in imitation of butter and which tax need not be paid except that the oleo is colored in imitation of butter.

One of the principal frauds with which the dairymen have had to contend under the present law, in connection with the matter of color, is that oleo manufacturers advertise that their product contains as high as 50 per cent. and in some instances as much as 90 per cent. of creamy butter, when in reality it might not contain over five per cent., but by the use of highly colored fats not obtained from the beef animal the color of butter has been obtained. By limiting the amount of butter fat to be used, as

the Haugen bill proposes to do, this fraud would be stamped out. The two bills require oleomargarine to be put up in original packages and plainly branded. The Haugen bill requires, however, that hotels and restaurants using oleomargarine shall display a sign to that effect.

All fats have some shade of yellow. For instance, lard which appears white to the naked eye, will show yellow tint under the Lovabond tintometer test. By this test it is possible to take a piece of paper and tell how much white it contains. The dairymen, under the Haugen bill, proposes to limit oleomargarine to a shade of 55 per cent. white. This figure can best be understood when it is realized that in recent tests butter produced by Ayrshire cows on dry feed showed as high as 48 per cent. white and the Guernseys as high as 35 per cent. white. The Haugen bill, therefore, should not interfere with the pride of people

who desire to serve it on their tables, whether it be poor man or rich man. Suffice it to say that the whole idea of the dairymen, as shown by the Haugen bill, is to force the sale of oleomargarine as oleomargarine and on its merits and not permit it to usurp the natural color and appearance and taste of butter, the qualities of which belong to the cow.

If oleo manufacturers were not desirous of having their product deceitfully take the place of butter on the tables of those who are unable to by taste or otherwise detect the difference, as a matter of fact there would be no fight on between dairymen and oleo manufacturers.

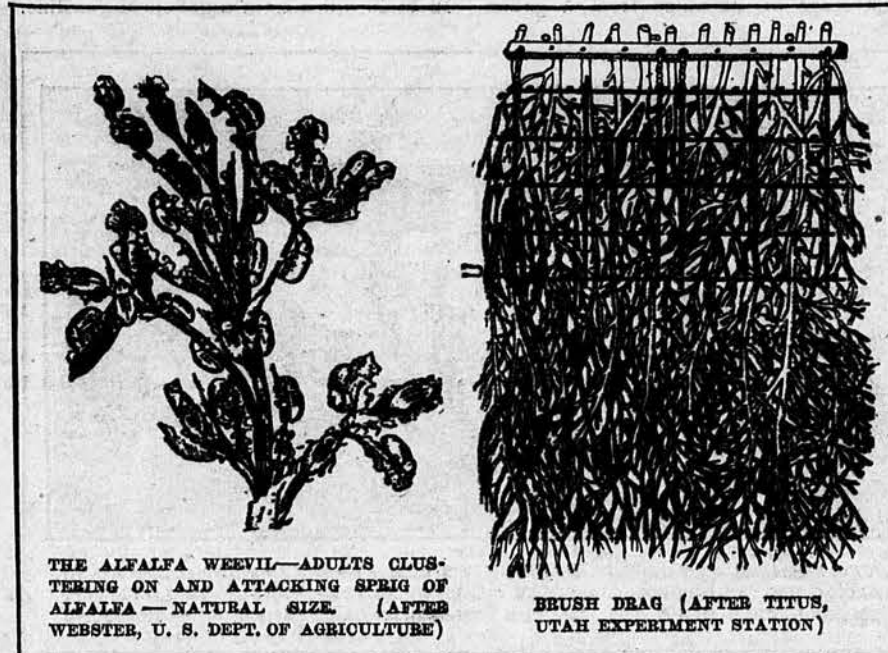
Oleo is not so largely now, as formerly, a product of the beef steer; this, because in the attempts to color and deceive the public, increasing quantities of cottonseed oil and other yellow oils have been introduced into its manufacture, therefore decreasing the amount of beef and hog fats used in the compound.

Here is the vote in the agricultural committee on the Lever bill:

For the bill: John Lamb, Virginia; A. F. Lever, South Carolina; A. O. Stanley, Kentucky; Gordon Lee, Georgia; E. S. Candler, Jr., Mississippi; J. T. Heflin, Alabama; H. M. Jacoway, Arkansas; James Young, Texas; J. T. McDermott, Illinois; Joseph Taggart, Kansas.

Against the bill: G. N. Haugen, Iowa; J. C. McLaughlin, Michigan; W. C. Hawley, Oregon; Joseph Howell, Utah; Frank Plumley, Vermont; J. S. Simmons, New York; J. A. Maguire, Nebraska; J. J. Whitacre, Ohio; C. A. Talcott, New York; T. L. Rubey, Missouri.

Our subscriber will note that Mr. Taggart of Kansas and Mr. McDermott of Illinois, each from a packing-house district, voted with the cotton-growing states and the cotton-seed oil interests and not with the beef-producing states, senators from which beef states voted against the Lever bill. The question is, why should two great agricultural states like Illinois and Kansas have oleo, packing-house congressmen from great city districts representing them on the agricultural committee in the congress of the United States?



THE ALFALFA WEEVIL—ADULTS CLUSTERING ON AND ATTACKING SPRIG OF ALFALFA—NATURAL SIZE. (AFTER WEBSTER, U. S. DEPT. OF AGRICULTURE)

BRUSH DRAG (AFTER TITUS, UTAH EXPERIMENT STATION)

Cattle For Western Kansas

As Feeders—Cows For Milk—Feed For Both

By JOHN L. MAYOS, Russell Springs, Kan.

KANSAS, as a whole, has satisfactorily disposed of the eastern idea that it is the home of the grasshopper, cyclone, hot winds, and blizzards. The problem now seems to be—what shall we do with the western one-third of our territory; can this much abused and misunderstood domain be permanently settled? The surface of this area under discussion, is all that could be desired from an agricultural standpoint. The climate is exceptionally healthful; the settlers have been, and are as a class, quite up to the average of any other portion of Kansas. But we might as well confess, once for all, that it takes something more than climate and level fields to support a family.

If you draw a line north and south through the state, cutting off all territory west of Ness County, you will have formed the eastern boundary of a strip of country that has puzzled the homesteader, caused grief for the investor, and completely discouraged many a grain farmer from the east who came

as any part of the great cattle country of Texas.

Our country has been passed by for the reason that we tried to play wheat when we should have played meat. To be fair to this country, we shall be compelled to admit that early day cattle men, before the advent of the general farming settler, did much toward injuring the reputation of this as a good cattle country. And how, do you ask? By keeping too many cattle and failing to provide feed for the time of winter storms.

Why not start over on a humane and conservative basis? Nothing was ever gained by losing in the winter, most of the flesh put on during the summer, and this is more true today than ever before—with our high-priced meat. This age demands a half-breed cattleman—one who does not expect to ride a broncho all the time, but who is content to spend part of his time behind the lister or the plow in the raising of feed.

In again transforming this country into a cattle producing section, two di-



FRED TATGE, WHITE CITY, KAN., WITH FOUR NEIGHBORS PAY THEIR RESPECTS TO KANSAS FARMER—EACH A READER AND APPRECIATES ITS EFFORTS

to build for himself and family a comfortable home on these beautiful prairies.

And why is this so? As a rule, the Kansas settler has been equal to the work before him, but in this instance he has completely failed to successfully farm a country in which the rainfall was scanty. Man's brain and ingenuity have accomplished a great many things; but he has not been able to make thirty inches of rainfall in a territory that is destined to receive but fifteen or twenty inches. We can adapt crops to a climate but we cannot make a climate conform to crops. In other words, we have been putting the cart before the horse. The time has come to unhitch and put the motive power in front. Heretofore, the weather in this section of Kansas has "fooled all of the people part of the time and part of the people all of the time," but I believe we are ready to say in unison—"enough."

It is quite possible that some of us were from Missouri and "had to be shown," but gentlemen, the show is over. The last few years' business has not been so rushing but that we have had time to invoice. Our invoice sheet shows that we have been losing ground. Liabilities are crowding upon assets at an alarming rate. Of course, this fact should not go outside of the family. Nevertheless, this is a condition, not a theory. Now, what are we going to do about it? Shall we give up and crowd back east on the already comfortably occupied farms?

These United States are growing faster than the most careful student of our times is willing to admit. Someone, somewhere, must produce butter and beef for this hungry multitude. Why not the short grass country of western Kansas as well as the Panhandle of Texas. Frequenters of the Kansas City union depot will remember a few years ago, hardly a day passed but that one or more special trains passed through with land seekers for the southwest. Our climate is no more arid, our grass is better, our country is as well watered, our market advantages are better and we can provide for winter storms as well

visions or classes of ranches will be a necessity. In the more thickly settled portion adjacent to the railroads, dairy farms of from one to two or three sections, stocked with from twenty-five to fifty cows, will be the most profitable. Back from the railroads and along the creeks and draws, ranches of from three to ten sections will no doubt work well for a number of years to come.

You will, perhaps, wonder where irrigation comes in. There are shallow water districts here and there, where irrigation on a small scale will prove profitable. But in general, irrigation for a garden only, is all that may be expected. It is folly for the government to spend large amounts of money to try irrigation by any system of ditches. We are too far away from water. Better, by far, loan this money to settlers to buy dairy cows. The government then would be sure of both interest and principal and at the same time would help develop the country.

As a resident of western Kansas, I can but wish that it were possible to make irrigation a success. But it is as impossible to irrigate without water, as it is to farm without rain, hence, I for one, do not place much dependence on this as a way out. Let us all work for and try to hasten the day when the cattle grazer from the blue stem district of our state can make his purchases of three-year-old steers among us as satisfactory to himself as by making the long trip to the Texas Panhandle.

Permit me to predict for the new western Kansas a happy and contented people with live stock as the corner stone of a permanent and enduring prosperity, and this in your time and mine.

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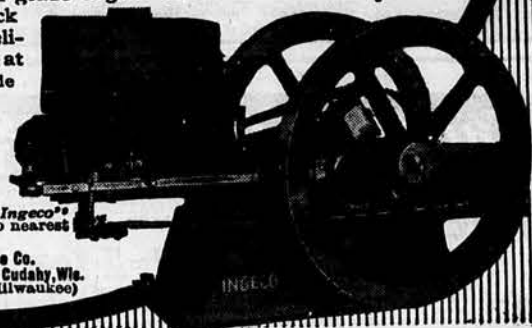
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I HAVE SPEED WHEN NECESSARY

I AM GENTLE BUT POWERFUL (17)



The Farmer and His Auto

(Continued From Page Five)

The machine was of great value to me last year in securing harvest help. I was able to drive to towns 15 to 20 miles distant and meet trains and secure help in advance of my neighbors. Before I bought an auto I had to lay off a day when I needed repairs for machinery. Now I can get the repairs in two hours and have a pleasure drive at the same time. The expenses I have enumerated above for repairs could have been avoided except for accidents. The new 1913 autos are wonders. I could take the same machine I now have and do all that I have done with it without one cent of expense for repairs—not even excepting tires. My engine has gone without adjustment and is in perfect condition for as long as I want to run it.
 —J. S., Pawnee Rock, Kan.

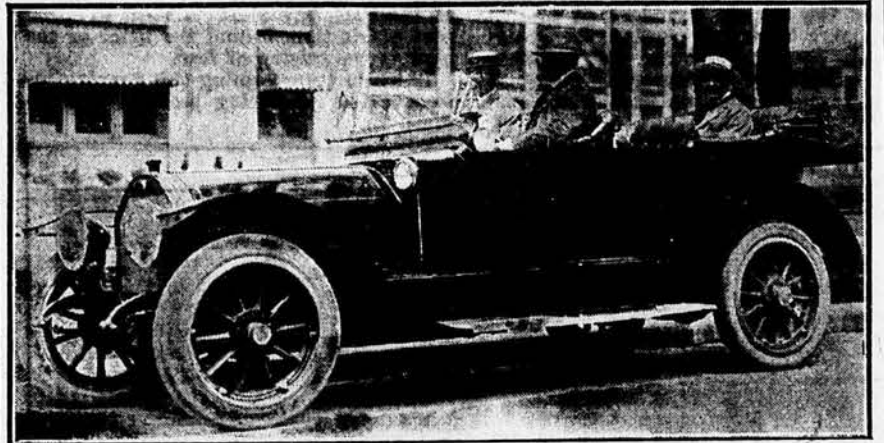
during the recent session of the legislature, all automobile owners—whether farmers or townsmen—will register their automobiles and pay a tax of \$5 per year. Other vehicles will not be taxed.

Cost Not on Account of Upkeep.

I have driven my automobile 15,000 miles in 2½ years. It is a 25 horsepower four-passenger machine. My repair expense has been \$16.50 and my oil and grease expense \$19.10. A gallon of gasoline carries me an average of 14 miles. I buy a new set of tires every year. These cost me \$110 per set.

It has been my experience that an auto is an expensive conveyance and adds materially to the cost of living. These conditions exist with me because we travel so much. The automobile takes us to theaters, shows, fairs, and numerous other entertainments, with an occasional cross-country trip. My view

Does Not Like Auto Tax Law.
 My tire expense has not been to ex-



1913 SIX, ELECTRIC LIGHTED AND STARTED. THE DRIVER IS AT THE WHEEL AND HE PERSONALLY DROVE THE CAR 20,000 MILES BEFORE DECIDING IT WAS READY FOR THE PUBLIC

ceed \$80 in five years, and my repair expense less than \$10. My lubricating oil cost has averaged about \$8 per year in the five years I have been running a car. I get 15 to 18 miles from a gallon of gasoline. The automobile is a business proposition for the farmer, but I do not think it right to tax the auto owner \$5 and let the farmer off without the same tax, to go out upon the road with a four-horse team and tear up the roads the auto owner has paid \$5 extra for. I favor the tax, but all vehicle users should be taxed equally or according to the vehicle, whether it be wagon, buggy or automobile.—A. F. G., Bancroft, Kan.

is that one cannot invest \$1,200 or \$1,500 which will cost an outgo of money equal to an auto. Tickets to all of the above places, and in addition suppers, dinners, and bushels of other sundries, bring me to the above conclusion.—L. C. C., Topeka, Kan.

EDITOR'S NOTE.—It is apparent from the above that Mr. C. and his family are getting a lot of fun out of their automobile. The figures above show that the automobile itself is not expensive, but the fact that it has enlarged the social life of the family is what creates the expense, and it is for Mr. C. to determine whether or not the fun he and his are getting out of the machine is worth the cost.

EDITOR'S NOTE.—Under the law passed

Fill The Smudge Pots

Orchards Should be Ready for Frost—One Man Can Attend to 40 to 60 Heaters

LARGE amounts of fruit are saved from frost every year by orchard heating. All modern orchardists have come to realize the necessity of being prepared for late spring frosts and have put the heating pot on the list of necessary equipment.

The danger from frost, in any locality, depends largely on the location of the orchard. The best location is on a slope or hillside. Cold air drains to the low ground, and its flow is checked much as is the flow of water. If there are trees or other obstructions on the lower side of the orchard they will prevent good air drainage and form a frost pocket which will make the danger to the fruit much greater. High ground is always less likely to be affected by spring frost.

Heat is constantly being given off from the soil. During a short period of cold weather the smoke from burning manure or any other material will form a cloud or blanket, and in this way prevents the escape of radiated heat. Orchard heating was first practiced in France. There they used manure for fuel with good results. Manure gives off large amounts of smoke when burned, and by piling it on the windward side of the vineyard or orchard and burning it, the blanket of smoke thus formed prevents the loss of

Kansas Agricultural College. One is by keeping a cloud of smoke over the orchard to prevent the radiating heat from passing off, the other is by actually raising the temperature with fires. Almost any material may be used for either purpose. Wood, coal, and oil are the most common. In practice, oil has proved most economical, except in localities where coal and wood are very cheap. The oil has the advantage of giving off much heat and smoke, thus combining the two methods of preventing frost.

Numerous small fires through the orchard are better than a few large ones, as there is less tendency to cause an upward draft. One exception to this is in the case of a freezing temperature combined with a high wind. In this event, large fires on the windward side of the orchard are best. Smoke is of little value at such times. Ordinarily there is little danger of frost forming during windy nights, and for this reason all oil pots are made with the idea of combining the heating and smoking qualities.

MANY KINDS OF POTS.

The first heating pots to be used were tin buckets with flaring sides and a few holes punched through the sides near the top. These allow a small draft and will furnish a large amount of smoke. The pots in use at the Kansas Experiment Station are provided with a storage tank and will hold enough fuel for five to

RAISING THE TEMPERATURE.
 There are two ways of preventing the temperature from falling to the danger point, according to D. E. Lewis of the

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THE PAPEC

IT THROWS AND BLOWS

eight hours' burning. The fuel used for heating is 30 gravity oil and is made from crude oil by taking some of the lighter oils from it, such as gasoline and benzine. This oil costs from three to five cents a gallon.

About 40 to 80 pots are needed on each acre, depending on the size of the pots, amount of heat needed, and size of trees. One man can tend to 40 or 60 pots of the small size or a good many more of the storage pots. The storage pots require little filling at night, and thus reduce the cost of heating to some extent, as less labor is required. All the pots have their advantages.

Frost usually forms from 3 o'clock to 6 o'clock in the morning, and if only a slight drop in temperature is expected the pots may not need to be filled more than once during the night. In case of very low temperature the heat will need to be supplied for a longer time. Then the storage pots are much more economical because one man can tend twice the number of them.

The time to start the fires is when the temperature has fallen to about 30 degrees. If it is falling fast it would be better to start at 32 or 31 degrees. Two years ago the temperature fell to 26 degrees without any appreciable damage to the fruit on high ground, but this was an exception.

To be prepared for a frost the pots should be set in the orchard, with about a gallon of oil in each, early in the spring. In case of a sudden drop in temperature this will make the lighting much faster and will require fewer men to do the work. When all danger from frost is over in the spring they may be gathered and stored until the next spring.

PROTECTION THAT PAYS.

The profit from orchard heating will depend largely on whether or not the frost is local or general. If general, the price of fruit will be affected and heating will pay, but if only local it is less sure. In the Grand Junction Valley, Colorado, where fruit growing is practiced on a large scale and almost to the exclusion of everything else, growers use every possible means of protecting their fruit. They sometimes put as many as four or five pots to each tree, if the weather is very severe. They get regular reports on the weather predictions and when a frost is expected they are ready to start the heating. In this way the fruit often is saved and brings big returns for the money spent in heating.

Several Feeding Questions Answered.

Our subscriber, H. C. Y., Phoenix, Ariz., writes: "We are milking 80 Holsteins, feeding alfalfa hay and alfalfa pasture only. Do you think it will pay us to add cottonseed meal which costs \$35 per ton delivered here, to the ration? Could we feed, in addition to the alfalfa hay and pasture, milo or barley meal which costs \$1.50 per hundred? How will the cottonseed meal compare, pound for pound, with corn, barley, or milo?"

"We feed our hogs skim milk and alfalfa hay. Would it pay to feed cottonseed meal? If so, how much per hog per day? Alfalfa hay is worth \$6 to \$7 per ton here."

If, in Kansas, we were feeding all the number one alfalfa hay a cow would eat, we would feed 7 to 10 pounds of corn, kafir, milo or barley chop per day. This will supply the protein necessary for a thousand-pound cow yielding 40 to 50 pounds of milk per day, with a balanced ration. The meal would be fed to increase the carbohydrates principally—a thing which is lacking in alfalfa hay and which is felt particularly during the colder part of the year when the animal body requires carbohydrates to assist in keeping it warm.

To feed cottonseed meal with alfalfa hay should be adding to the protein and not to the carbohydrates. A balanced ration for a 1,000 to 1,200-pound cow producing 40 to 50 pounds of milk per day is as follows: Protein required, 2½ pounds; carbohydrates, 12½ pounds; fat, ¼ pound. Such cow will eat about 19 pounds of alfalfa hay per day, which would contain 2 pounds of protein, 7 pounds carbohydrates, 25/100 pound fat. Seven and one-half pounds of corn, kafir or milo meal will contain ½ pound protein, 5 pounds carbohydrates, and ¼ pound fat. Add the several constituents found in the alfalfa hay and the meals and you have the figures above given for a balanced ration. Whether it would pay in dollars and cents to add the corn, kafir or milo meal, can easily be determined by giving the meal a trial and watching the results. Some cows might respond, others might not, depending upon the period of lactation. With barley and milo meal at the same price it will pay best to feed the milo with the alfalfa hay.

When cows are on alfalfa pasture the milk flow can be increased by the feeding of corn, kafir or milo, night and morning. As a rule, however, the in-

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We have heretofore made no sustained effort to bring our product to the attention of farm paper readers. This has been due solely to our inability to supply Heavy Car Type Fisk Tires in sufficient quantity to meet the demand in the large centres, where it was necessary to maintain stock for distributors and agencies.

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creased flow under such conditions will not pay for the cost of the grain in the ration.

Corn meal contains the following digestible nutrients per hundred pounds: Protein, 7.9 pounds; carbohydrates, 66.7 pounds; fat, 4.3 pounds. Kafir or milo: Protein, 7.8 pounds; carbohydrates, 57.1 pounds; fat, 2.7 pounds. Barley: Protein, 8.7 pounds; carbohydrates, 65.6 pounds; fat, 1.6 pound. These are meals high in carbohydrates and are from the fat-producing list of feeds. Cottonseed meal contains 37.2 pounds protein; 16.9 pounds carbohydrates, and 8.4 pounds fat. Alfalfa contains 11 pounds protein; 39.6 pounds carbohydrates; 1.2 pound of fat. It is apparent, therefore, that these two feeds are from the protein list and are builders of muscle and bone and supply the protein necessary for milk production. There are enough figures and facts in the above to supply the inquirer with the information necessary as to how he can figure the cheapest balanced ration from these feeds.

To feed cottonseed meal to hogs which

are now receiving skim milk and alfalfa hay would have the result of adding just that much skim milk and alfalfa hay to the ration and would be a wasteful method of feeding. With the skim milk and alfalfa hay, to get even the best results from these feeds requires the use of a certain amount of carbonaceous feeds or feeds rich in carbohydrates or fat-making qualities, and kafir or milo meal should be used.

All feeders must keep in mind that there are four classes of feeds: Roughages and grains rich in protein and which are the feeds producing growth in young animals and milk in cows. Then there are the carbonaceous roughages and grains which produce fat in all animals. If the base of the ration is from protein roughages, then with it carbonaceous grains must be fed; if the base of the feeds is from the carbonaceous roughages, then protein grains must be fed to produce the balanced ration.

Removing Fertility at Rapid Rate. Agriculture in the newer sections is

carried on at the expense of the fertility in the soil. A twenty-bushel crop of wheat removes from the soil in the straw and grain \$9.30 worth of plant food per acre, or \$0.46½ per bushel. In selling wheat and burning straw this is actually removed. This year's crop of wheat—150,000,000 bushels—has removed from the soil \$70,000,000 worth of plant food. In other words, the state of North Dakota is worth less as a crop factory by seventy million dollars than before the past season's crop of wheat was grown. Add to this all other grain sent out of the state and the sum will be much increased.—NORTH DAKOTA EXPERIMENT STATION.

The keeping of livestock is a necessity. Fertility will be turned back to the land. The labor needed is better distributed and the live stock business is less subject to adverse climatic conditions than grain raising. The silo will greatly increase the number of cattle that can be kept on a given area of land. The silo is in one sense a concentrated meadow.

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There is no better time than the present to investigate and decide which machine is the best for you to buy. The opinion of your neighbors is valuable, and should help you to come to the right decision. All of the machines are so simple that they may be handled by ordinary farm help. They are so efficient that there is no question of their capacity for cutting, binding, and saving all the grain in any field, whether it be heavy or light, tall or short, standing, down, or tangled. The haying machines are as efficient as the harvesting machines. When you buy an I H C machine you do away with any chance for unreasonable delay at harvest time. Should anything happen to your machine, it is possible, no matter where you may be, for you to obtain repairs in a few hours' time. Our efficient organization, which includes nearly a hundred general agencies carrying complete stocks of repairs, and over thirty thousand local dealers who carry repairs for the machines they handle, is the most practical guarantee you can have that your grain will be cut and bound at the proper time, and without delay and annoyance.

To secure the best results from these good machines, it is necessary to use a strong, smooth binder twine of reliable quality. I H C binder twine is made under seven brand names—Champion, Deering, McCormick, Milwaukee, Osborne, Plano, International, each in four grades—pure manila, manila, sisal, and standard. Each ball of twine marked with any of these names is guaranteed for length, strength and uniformity of size and quality.

Yours is the work that counts. Make sure that it is done as it should be done by seeing the I H C local dealer and buying from him the I H C harvesting and haying machines, tools, and binder twine that you will need for this harvest. He will supply you with catalogues and full information, or, write



International Harvester Company of America

(Incorporated)

Chicago

U S A



DEFORMITIES CURED



CLUB FEET of any variety, and at any reasonable age, can be made straight, natural and useful. No plaster Paris, no severe surgical operation, and the result is assured.

POTTS DISEASE when treated in time should result in no deformity; paralysis can be prevented and the growth not interfered with. Write for information and references.

SPINAL CURVATURE Recent cases usually make good recoveries and even those of long standing do well. No plaster Paris, felt or leather jackets. Write for information and reference.

HIP DISEASE in the painful stage can be relieved and the inflammation permanently arrested. Shortening, deformity and loss of motion can often be corrected. No surgical operations or confinement.

INFANTILE PARALYSIS We can refer you to many responsible people all over the country, whose children, afflicted with Infantile Paralysis have been practically restored at this Sanitarium.

DEFORMED KNEES AND JOINTS of many varieties yield to our methods of treatment, and if interested you should know about it. This is the only thoroughly equipped Sanitarium in the country devoted exclusively to the treatment of crippled and paralyzed conditions.

ILLUSTRATED BOOK FREE Write us for illustrated book which will be sent free on request to any address.

THE McLAIN ORTHOPEDIC SANITARIUM

989 Aubert Avenue

ST. LOUIS, MO.



THE FARM



Thinks Fewer Officers Desirable.
J. E. R., Banner, Kan., writes: "I like KANSAS FARMER fine and enclose renewal for my subscription. I would like to see lower taxes. I want less feeding at the public crib by doing away with a lot of useless offices. Why cannot the county commissioners do the work of the high school boards? I would like to hear, through KANSAS FARMER, what your readers think of these suggestions, and how to accomplish the results."

One Article Worth Ten Dollars.
I want to congratulate you on that splendid kafir article in KANSAS FARMER of March 1. I would have paid \$10 for that information. It was just what I have been searching for since I came to Comanche County three years ago and to think that in KANSAS FARMER it cost me less than two cents! This is only one example of the many good things we get in nearly every issue of KANSAS FARMER.—WALTER C. RAY, Wilmore, Kansas.

Convinced of Kafir Value.
T. E. L., Hoxie, Kan., writes: "I have returned from the Panhandle of Texas a firm believer in the value of kafir as a forage and grain crop for the western half of Kansas. While in the Panhandle I saw carload after carload of kafir being shipped to the coast and river sections of that state—the black land of Texas which would grow corn if they would give it a chance. Think of it! The staked plains growing more grain than it needs and feeding the work animals of the farmers on the black rich lands. If kafir will grow on the plains of Texas it will do much better in Sheridan County if we will give it a chance." The farmers of Kansas can well afford to plant kafir as a feed insurance. We have long contended this. We know we are right. More kafir and cane and live stock of some kind to eat it will make Western Kansas rich. It is adapted to this kind of farming.

Wants High Yielding Kafir.
Subscriber W. L. M., Gorham, Kan., is anxious to obtain kafir seed in the head which conforms to the high yielding type illustrated and described in KANSAS FARMER of March 1. We have received several other similar inquiries and kafir growers who have kafir seed still in the head and which heads are typical of the fields producing them, can find a market for that seed if they will use the classified advertising columns of KANSAS FARMER. Keep in mind that the classified advertising columns of this paper are the bargain counter for KANSAS FARMER readers. It costs little money to advertise anything you have to sell in those columns and it is certain that there is a buyer for everything you have to sell. The above subscriber writes: "I would be willing to give \$1 for 10 or 12 pounds of such seed in the head as you described of the type of high yielding kafir. I am desirous of starting on my farm kafir that is pure and true to this type. I am anxious to find something in the line of Kafir that does better than 18 to 20 bushels to the acre."

We trust that KANSAS FARMER readers have appreciated the importance of the Kafir data contained in our March 1 issue. The success and the profits to be realized from kafir growing depend wholly upon a full understanding of the principles involved in the articles in the issue named and in the exercise of the care necessary to obtain for planting kafir seed of the right kind. The inquiries already received pertaining to these articles indicate that many farmers have awakened to the true cause of low kafir yields and there will be a demand another year for seed of the right type. This is a hint to those who have the right type and suggests to them the possibility of selling the right kind of kafir seed at good figures.

Demonstration Farm Work.
A. T. N., Columbus, Kan., writes: "I see that southeastern Kansas is to have a farm expert. What do you know about the arrangement. What will this man do?"

Through the co-operation of the federal department of agriculture the Kansas Agricultural College has arranged for a number of district demonstration

agents. Each man will carry on demonstration work in six or eight counties constituting districts with certain uniform characteristics of soil and climatic conditions. One has been assigned to Norton, through the co-operation of the Rock Island; and another at Dodge City, through the co-operation of the Santa Fe Company. And now through the co-operation of the federal government, the college is enabled to put a man in southeastern Kansas.

H. J. Bowers, formerly of Greenwood county, and a graduate of the Agricultural College, has been selected for this work because of his training in soils. He will have six or eight demonstration farms in each of the six counties—Cherokee, Labette, Cowley, Neosho, Wilson and Bourbon, with possibly two farms in the southern part of Anderson county, one near Kincaid and one near Colony. He will also supervise in Montgomery and Allen counties.

It is not intended to have any experiments on any farm that will not be profitable to the farmer. It will simply call for a few acres of each of the farmers' regular crops to be handled according to certain plans.

Southwest Kafir Planting.
W. C. R., Wilmore, Kan., asks where he can obtain seed of pure variety, high yielding kafir. The same question has been asked by dozens of KANSAS FARMER readers since the publication of our illustrated kafir article in the March 1 issue. He wants to know also how much seed must be planted per acre to secure heaviest grain yield in his locality.

We cannot give the addresses of those who have seed of pure varieties of high yielding kafir for sale, because we do not know of such parties. Write those seedmen advertising in KANSAS FARMER columns and those individuals who are using our classified columns.

The amount of kafir seed to be planted per acre, will depend upon the fertility of the soil and the rainfall. For a grain crop, in Comanche County we would plant kafir just a little thicker than corn and we think that six pounds of good seed per acre likely to give good results. This is one of the questions every land owner must work out for himself. This planting has a tendency to coarse stalks and a large head, and if a good head of kafir can be produced where a medium sized ear of corn would be expected, the yield will be satisfactory. The more seed planted and the thicker the stand, the more moisture required, with the result that if moisture is limited the heads will necessarily be smaller, harvesting more difficult and the crop lighter. As in the case of corn, thin planting necessarily limits the yield even in the case of a favorable season, and heavier planting followed by a favorable season would result in a heavier yield than thin planting. What you have to figure on, however, is an average season with such stalks on the ground as the available moisture is likely to well supply.

Kafir is a warm weather plant and makes a slow, early growth and should not be planted until the ground becomes warm. This, however, does not mean that kafir should not be planted until all other spring planting is done. Kafir must have a show with other crops if it is to do as well as expected of it.

For hay, sown either broadcast or with a grain drill, from three to five pecks may be sown in Comanche County, depending again upon the character of the land and the season expected. On fertile land, with the rainfall in Shawnee County, it is customary to sow 1 1/2 to 2 bushels per acre. We consider this too heavy seeding for sections not so favored by rains.

Cowpea Growing.
I have been raising peas for the last three years. The first year I had but a half crop as I was not at home to care for them. The second year I plowed the land five inches deep. This was done in corn planting time about May 1. I harrowed it until it was solid and fine, then planted June 1. I went over the peas three times with the weeder and twice with a one-horse plow—the Planet Junior No. 8. The peas made 1 1/2 tons an acre.

Last year I planted 3 1/2 acres to peas.

JOHN DEERE IMPLEMENTS



John Deere Disc Harrows and Corn Planters

This spring pressure harrow pulverizes your soil thoroughly and puts it in condition to grow the biggest crop you ever raised. The extraordinary flexibility of John Deere Disc Harrows due to spring pressure, insures thorough cultivation of your entire field. It leaves small middles and cuts out dead furrows.

John Deere Corn Planters

The great accuracy of drop is what naturally interests you most. John Deere Planters give the highest accuracy of drop attainable. Repeated tests show ten to fifteen bushel per acre in favor of accurate planting. You profit by the increased yield due to perfect stand, by additional years of service and freedom from break down.



Bigger Crops from Better Seed Beds and More and Better Corn

Two books that will prove a great help to you in the preparation of your land for seed, and the planting of corn. These books contain valuable suggestions by men who are experienced on those subjects. "To get the books you want," see lower right hand corner of ad.



John Deere Wagons

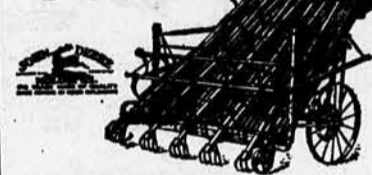
No other implement on the farm is used as much as the wagon. Nothing is more abused. Consequently the wagon should have the quality to withstand this usage.

John Deere Wagons are built of oak and hickory—the best material known for wagon making. They stand up under the most severe tests, and give the satisfaction you want.

John Deere Ironclad Wagons

A booklet that gives you valuable pointers on how to buy a wagon, and other interesting articles that you should know about. See lower right hand corner of ad. and see how "to get the books you want."

Dain Hay Tools



Use Dain Hay Tools and put up your hay quicker, better and more economically than with any other hay tools.

The Dain Hay Loader is easy to operate. Simple construction, few parts, nothing to get out of order. Material and workmanship of the known Dain standard, proven by service to be reliable and trustworthy. Ask your John Deere Dealer about the Dain line.

Dain Hay Loader and Side Delivery Rake

tell you about how to use these tools to handle your hay rapidly and economically. Should you want information about other Dain hay tools, tell us which tool you are interested in. See lower right hand corner of ad. how "to get the books you want."

Davenport Roller Bearing Steel Wagons

Reduces the draft; makes your hauling easy; the roller bearings do that. Haul larger loads, make fewer trips,



save time. Your time is worth money to you.

You do the same work with one horse less; if you now use three horses you will only need two; if you use four, three will do the work.

No repair bills to pay; no tires to reset; the Davenport Roller Bearing Steel Wagon is practically everlasting. The first cost is the only cost.

The steel spokes don't pick up and carry the mud like wooden spokes; they cut through it.

Ask to see the Davenport wagon at your John Deere Dealer's.

When The Going is Hard

Containing twenty-six articles on wagons. Tells you why the dish is put into the wooden wheels and other things you should know about. It is interesting and you'll like it. Lower right hand corner of ad. tells how "to get the books you want."



Better Farm Implements and How to Use Them illustrates and describes the most complete line of farm implements made. Tells when and how to use them under varying conditions—answers questions about farm machinery and is a practical encyclopedia for the farm. It is worth dollars to you. You can't afford to be without it. Write today for "Better Farm Implements and How to Use Them."

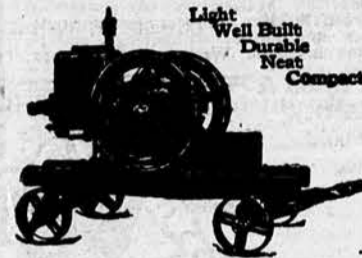
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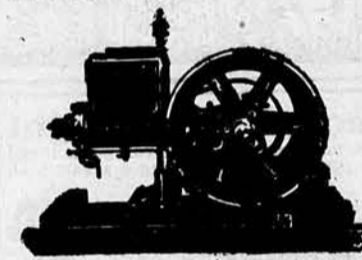
Popular Farm Power

Develop even more than rated horsepower. Easily started, smooth-running, dependable. Economical in use of fuel. Speed easily increased or decreased. Best type of magneto on the market. Portable and stationary engines.



Light Well Built Durable Neat Compact

R & V "Triumph" Engines can be furnished in sizes 1 to 12-hp., with the hopper-cooling system. This cooling system does away with tank, pump, piping and fittings, making a neat, compact engine note 1 for its good working qualities. No air-cooled engine troubles to contend with.



Letting Gasolene Do It

Tells you how to lessen your work every day of the week, and every season of the year. Get this book and see how your work can be made easier, at the same time saving you money. Lower right hand corner of ad. tells you how "to get the books you want."

"To Get the Books You Want"

Write to us at once stating which books you want, and they will be mailed free. To be sure that you get a copy of "Better Farm Implements and How to Use Them," ask us for Package No. X-13

I prepared as above, then double-rowed them with corn planter, then cultivated as above. The last year's crop was badly used up with the drouth and hot sun. I cut them with a mower and cured them the same as hay, then shocked them and let them cure one week, then stacked and fed them to the cows. The year before the crop was cured without rain. That crop was fine feed; the cow that made six to seven pounds of butter per week went to 12 pounds, but every cow will not do that. I bought a cow at a sale this fall. I fed her peas, but it does not improve her much in the production of butter. But the cow that we had the year before gives her 12 pounds now.

Four of my neighbors got five bushels each of the peas I grew last year. They planted in ground not well prepared and they planted too late. They were not worth mowing. I kept three bushels, planted 1 1/2 bushels on 3/4 acres, and got 1 1/2 tons per acre. But after we had them in the shock we had a heavy rain which damaged them quite a good deal.

If the ground is well prepared and well cultivated, peas are a paying crop, but if this is not done, you had better not plant.

Horses will eat all the stems that the cows will not eat—and will want more. I have no other kind of stock on the farm, but our chickens like them better than anything else. Yours truly.—P. KESSLER, Eldorado, Kan.

Regarding Cane Varieties.

C. H. G., Hardtner, Kan., writes: "Can you tell me how to distinguish the difference between Red Sumac cane and Red Ribbon cane after each seed is threshed? Which is considered the better for all winter feeding as roughage for cattle? Can you tell me where I can get ten bushels of kafir seed such as recommended in KANSAS FARMER March 1? How many acres will a bushel of kafir plant on good ground planted in rows, for grain? Where can I get ten

bushels of Boone County White seed corn?"

We cannot give our subscriber a description of ribbon cane seed. We are not familiar with this variety and cannot locate printed information regarding it. Sumac cane is so named because its head so closely resembles the head of the sumac plant. The head has an erect and stocky appearance and is small, compact, and wine-colored due to the color of the seeds. The seed of the Sumac cane is the smallest of any of our important varieties. Because of the smallness of the seed, it is easily known from other varieties. Sumac variety is said to be especially desirable for silage and for syrup. The above information is taken from the sorghum primer of the Extension Division of the Kansas Agricultural College, which primer, by the way, is a sorghum and kafir book which should be in the hands of every Kansas farmer.

If sumac sorghum is, as stated, desirable for silage and syrup, we would not become enthusiastic over it as a feed for winter roughage. Being desirable for syrup, it is doubtless very juicy and sweet and being so, would sour and become objectionable as a feed much more rapidly and to a much greater extent than would a variety not so sweet or juicy. For roughage to be used throughout the winter, we think Orange the better variety of the saccharine sorghums for planting. This variety is grown all over Kansas and is used for all purposes to which saccharine sorghum is suited. The Black and Red Amber are good varieties but are better adapted to central and eastern Kansas.

A bushel of kafir seed weighs 56 pounds. Six to eight pounds to the acre, we think, would be good planting for Barber County for a seed crop, the smaller amount being used on uplands and the larger amount on bottom and more fertile lands.

Write KANSAS FARMER advertisers for

the kind of kafir and seed corn wanted. We do not know the price at which it can be had.

Dairy Effect on Kansas Communities.

In May, 1896, I established my first skimming station. There was at the town the railroad depot and the store. The merchant was from Illinois and had lived on a farm with his parents. They milked a number of cows and the advantage of the certain and regular cash income was thoroughly impressed on his mind. On this account he had been very prominent in the movement for the skimming station.

In his conversation with me he said some of the farmers had owed him for three years and that he was about at the end of his resources. When the station started he would make the closest prices possible, as he expected to get his pay promptly. At the end of the first year his statement was as follows: He had had a very good year's business, all accounts with those selling milk had been settled promptly. One case was mentioned in particular as a prominent one. This man had paid his ordinary expenses, paid all taxes—and delinquent taxes were about to take his farm—also paid some on his old account with the merchant, which had been running for three years. It was also stated that some farmers were compelled to take a part of their money to finish paying their harvest expenses, and every year since I presume some people have gone through the same experience.

Some few days ago I was in one of our cream stations, in a county west of here. A young man came in with cream, and as we became interested in talking over the dairy proposition I asked him how long he had lived there. His answer was, "I was born here. My father has been here 35 years. Had it not been for the milk cows we would have been hunting another location many years ago." Seventeen years ago at this

same location I was told that farmers in certain localities were in good condition financially, because they had held on to the old cows, while in another locality they had concluded that wheat was the only thing and sold the cows, and at that time after several failures of the wheat crops were in hard circumstances.

At another point the president of a bank came to me and said: "I remember you when you were up here talking dairying in 1898. We have been milking cows all the time." This banker lives on his farm. The cashier of another bank said, "We were one of your largest patrons at the skimming station, and we made a success of dairying."—W. G. MERRITT, Great Bend, Kan.

Kansas Girls Go After Domestic Science.

One-fourth of all the girls who are learning to cook, sew and keep house in the agricultural colleges of the United States, are enrolled in the Kansas school at Manhattan. This latest proof of the pre-eminence of the Kansas Agricultural College over the 66 other schools of this kind in the country comes from the last government report issued a short time ago. There are 3216 girls and women studying domestic science and art in all the agricultural colleges in the United States. One-fourth of them or 819, are taking work at Manhattan. Of this number 537 are taking the regular four years course in home economics, 172 girls and women who have little time to go to school are taking the housekeeper's course of six months; 80 sub-freshmen are enrolled in the regular economics course, and 30 general science students are taking home economics as electives.

If five good cows are kept and the money received from the butterfat put into the bank, at the end of fifty years this will amount to one hundred thousand dollars, an amount that it is possible for a man of twenty-one to accumulate by the time he is seventy.

KANSAS STATE UNIVERSITY LIBRARIES

**Sheep Scab Picks
the Breeder's Pocket**

Scabby sheep pay little profit. Dollars that should fatten your bank roll are cut in half by the low price of ragged "clip" and ill-developed carcasses. Nothing but unthrifty is possible with scabby sheep. Bear this in mind and forestall disaster by using

**Dr. Hess Dip
and Disinfectant**

This meets the Government requirement as an official dip for sheep scab. Very easy to use. Provide a suitable "dipping tank" and fill with a solution one part dip to 72 of water. Then thoroughly souse all sheep, taking pains to wet the skin well. Repeat after 10 days and your sheep will at once show marked improvement, with a consequent rise in values.

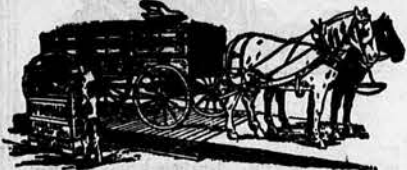
Dr. Hess Dip is a germicide, disinfectant and deodorizer. It destroys all germs and parasite life. Prevents live stock diseases and purifies outbuildings, sewers, drains and sinks. Write for free dip book.

Dr. HESS &
CLARK,
Ashland,
Ohio.



Know You're Right

Weigh your grain, stock and coal yourself and know positively you're getting a square deal.



The McDonald Fitness Scale weighs accurately every day in the year. Protected bearings cannot freeze. No pit required—everything above ground. Steel frame—steel joists—10 year guarantee. U. S. Standard. Used for weighing U. S. Mails. Flying Dutchman Dealers sell them. **FREE BOOKLET.** Write today. **MOLINE PLOW CO.** Dept. 4 MOLINE, ILL.

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in ONE acre of corn in an
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as in THREE acres
in a crib.**

Read "Silo Profits", a book written by owners of Indiana Silos. It tells how they are getting 100% value out of field, dairy and fattening herds. An Indiana Silo will put weight on your feeders and make your milch cows pay dividends every day.

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**Get the Hinge Door
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Your choice of two famous silos. Learn about the Hinge doors—easy to open and close. Protects silage from freezing in winter and drying out in summer. Simple, rigid and safe ladder—7 inches foothold. Scores of big points for you.

Write Now for Book 21. **THE CONTINENTAL CREAMERY CO.,** Topeka, Kan. State Agents. Gen'l. offices Woods Bros. Silo & Mfg. Co., Lincoln, Nebr.

HARNESS DIRECT TO THE FARMER 1 1/2-inch russet lea. halters, solid brass tubular riveted, five or six ring, \$1 each, \$11 per dozen. Write for harness catalog. **INSKEEP & SCHAUBEL,** Manhattan, Kan.

Farmers Sons Wanted with knowledge of farm stock and farm education to work in an office; \$80 a month with advancement, steady employment, must be honest and reliable. Branch offices of the association are being established in each state. Apply at once, giving full particulars. **The Veterinary Science Association,** Dept. 22, London, Canada.

LET FELWORT BECOME THE CRONY of gentlemen who like to move in clean society, but cannot forsake the untidy tobacco habit. Write for particulars to **The Pyrenees Import,** Highland Falls, N. Y.

LIVE STOCK



The germs of hog cholera do not seem to spread through the air by means of wind so much or so readily as they do by being carried on the feet of men and animals or through the transportation of sick or diseased hogs themselves. This does not mean that it is not dangerous to haul cholera hogs along the highway. This might be done without spreading the disease, but it is a dangerous thing to do. Every farmer should see that the law requiring dead cholera hogs to be burned or buried not less than three feet deep is rigidly enforced.

Streams of water will carry hog cholera perhaps more rapidly and in more dangerous quantities than can be done in any other way except by actual contagion. Sick hogs should never have any access to running water and certainly no dead hogs should ever be thrown in a stream. Here is one place where team work among neighbors can accomplish results which could not be accomplished without it. If all the farmers in a given neighborhood will use every precaution against cholera, it can soon be eradicated with the serum treatment. It is a part of one's duty to his neighbors to protect them against danger, and this means that neither the cholera hogs themselves nor any other animal which has access to their pens should be allowed to go upon the farm of a neighbor. It is difficult to control crows, English sparrows, pigeons and sometimes poultry, but it is not difficult to control the members of one's own family and his dog if he has one.

Nature provides a degree of immunity for young animals, and young pigs are always nearly perfectly immune from cholera up to weaning time. After that it is a part of the owner's duty to himself to take care of them. Sows which have received the double treatment are supposed to confer some added immunity to their pigs, but the amount is not known and is apparently not great. Whether it is possible to breed immune hogs from the long use of the double treatment is a question which has not yet been solved, though there are many experimentors working along this line. It is probably true that immune hogs can be bred by always selecting those which seem to be naturally immune and perhaps the double treatment would help in this connection. An animal which is immune during one attack of cholera might not prove to be immune during another. A good deal would depend upon the condition of the animal and its susceptibility.

The Anti-Horse Thief Association has ordered out its members in many different localities to destroy chinch bugs during the winter weather. By taking in a whole neighborhood, township or county in a campaign of this kind, very effective results are produced and immediately. This is just the spirit which is needed among farmers in all emergencies especially in those of contagious diseases. If the farmers of the neighborhood or county would show the same spirit of co-operation in the hog cholera as they have done in the case of the chinch bug campaign, great and immediate results would follow.

Land is getting higher in price in Kansas with each succeeding year until it would seem that it had reached the top. At any rate it has become a problem to pay the interest on the investment and make a good profit off of high priced land. There is only one solution—live stock will do it but it must be good live stock, well bred and well cared for.

Some kind of a shop is necessary on the farm even if it is not supplied with anything more than some rivets and some baling wire. There are hundreds of little repairs that can be made in a very few minutes with a proper equipment which would save time and might even prevent serious accident. Oiling the harness at frequent intervals will not only preserve the usefulness of the harness, but will prevent its cracking and becoming dangerous to you. Many serious runaways have been caused by cracked harness.

Rumors of corn stalk diseases are still drifting in from our territory and it

would seem that the average farmer should have enough experience to realize the danger arising from this source. Stalks which have stood out in the weather until this late in the season have about as much nutritive value as pine shavings, so that cattle really get nothing from being turned into the field except the exercise. The silo solves more real farm problems in economy and in preventing disease than any other one thing that has ever been discovered.

From all over the west come statements of the abundance of feed, especially roughage, and several recent letters have stated that roughage would have to be burned this spring in order to make way for the season's crop. It seems the irony of fate that middle and western Kansas should have been so abundantly supplied with stock feed this year and had so few cattle or other classes of stock to consume it. As the ravages of hog cholera have taught the farmers much that they did not know before, so the experiences of this winter will teach them to be ready with enough live stock to consume their roughage.

Alex Philip of Hays, Kansas, who owns a little patch of about 1100 acres on which he feeds a few cattle each year, numbering some thousands of head, has a headful of ideas. He raises market cattle only, but in doing this he buys the best bulls he can obtain. He has recently purchased a pure bred registered, white faced bull for which he gave \$400. This bull is to be used with grade cows but is the only kind that Mr. Philip will permit on his place. Such a bull would make even the owners of some pure bred herds sit up and take notice.

Dehorning Troubles.

I have a cow that was dehorned the first of October and a clear discharge still runs from the wound. What is the cause and what treatment would you advise? Would you advise the use of the milk?—C. H. GRIFFIN, Clifton, Kan. Reply by Dr. George F. Babb: The part should be thoroughly cleansed with some good antiseptic solution, such as diluted carbolic acid, dip or such material, using a syringe that will inject the liquid deep within the tissues and thus bring about a healing of the wound.

This should be done at once before the flies become numerous and cause trouble either by annoyance of the animal or by leaving their eggs within the sore. The condition existing will not affect the milk as it comes from the udder.

Immune Hogs Sell Better.

Have you noticed the sale reports this winter? Of course you have, but did you notice that every man who advertised his hogs as "immune from cholera" got higher prices for them than did those who sold without such a guarantee? A general average of \$50.00 or better for the whole sale is a very common figure for immune hogs, while very much higher averages are reached under favorable conditions. On the other hand those who do not guarantee their hogs as immune are compelled to take a much smaller price. It may be that we do not know all about this serum proposition yet, but we do know some things, and the most prominent of these things is that immune hogs sell for more money than those which are not immune and that there is a reason for this.

Whether you have adopted the double or the single treatment you have received a benefit and a protection and are in shape to sell to a better advantage. The single treatment is protective while it lasts and may be made so indefinitely by repeated administrations. Those who are afraid of the double treatment can still secure immunity and be able to guarantee their hogs for a limited time by the use of serum only. Both the double and the single treatments have strong advocates and both seem to be able to bring absolute and convincing proofs to back the contention that their hogs are protected against cholera. When you read of a sale in which the average runs from \$60 to \$75 per head on the entire offering without there having been any sensational individual sales and then learn that the animals sold have been guaranteed as immune from cholera, it is easy to put two and two together.

SAVE-THE-HORSE



THE TIME IS NOW

All the winter long, the troubled owner of a lame horse reads our advertisements. Then, day after day slips away, while he talks, laments, listens, takes advice and hesitating—**FAILS TO ACT**—till the Springtime is on him and his horse is not yet able to work. Meantime the thrifty, prosperous, resolute man, reads, considers the evidence carefully—**Decides Promptly**—and his horse is working in, say, ten days to two weeks. That's exactly what happens every winter.

We Originated the treatment of horses by mail—Under Signed Contract to Return Money if Remedy Fails—and every minute of every day for seventeen years our advice and treatments have been on the way wherever mails go and horses are. Our charges are moderate. Spring work is near; Write.

Our Latest Save-The-Horse BOOK is a Mind Boggler—Tells How to Test for Spavin—What to Do for a Lame Horse—Covers 58 Forms of Lameness—Illustrated. But write describing your case and we will send our—**BOOK**—Sample Contract and Advice—**ALL FREE**—to (Horse Owners and Managers—Only.)

TROY CHEMICAL CO 65 Commerce Ave., Binghamton, N. Y. Druggists everywhere sell Save-the-Horse WITH CONTRACT or sent by us Express Prepaid.

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THE SMOOTHEST TOBACCO

Don't go another day without this splendid tobacco. You want the best. Get it.

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Full 2-ounce 10¢ Tins

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Fed from Champion Silos**

This remarkable record made by C. L. Hurd, Wainwright, Okla., shows the possibilities of ensilage feeding. It proves that the Champion Silo is best in material, construction, improvements and a real profit maker worth investigating.

**Get Complete Facts of This and
Other Wonderful Champion
Silo Profits Free-Write.**

These stories bound in portfolios are free with catalog to silo prospectus. They are interesting and instructive. They show how others do it, how you should do it, why it is safest and best to get a Champion Silo with solid steel interlocking door frame with malleable lugs, combination latch and ladder, steel anchors, etc. Get full particulars free today. Learn how to make silo profits like this. Address **WESTERN SILO CO.,** 135 11th Street, Des Moines, Iowa

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The famous **WITTE** Gasoline Engine, built for 43 years by Ed. Witte, master engine builder, now sold direct to you. The standard engine of America, with every improvement up-to-date—detached cylinders, vertical valves, etc.—the entire engine backed up by a Real 5-Year Guarantee. Just think! It takes only 2¢ to get the money-saving, factory prices on 54 styles and sizes. Save money! Write at once for **FREE TRIAL OFFER** and catalog. State style and size wanted. Address **WITTE IRON WORKS CO.,** 1007 Oakland Avenue, Kansas City, Mo.

**Hopper & Son, Manhattan, Kansas
Builders of
Concrete Silos**

Write for list of silos we have built. Ask our customers about them. When writing advertisers, please mention KANSAS FARMER.

Help for Kansas Orchardists.

That the farmers and fruit growers of Kansas are eager to improve and care for their orchards by the best and most scientific methods is shown in the fact that George O. Greene, horticulturist and demonstrator of the extension division of the Kansas Agricultural College, is booked for almost every day until June. Mr. Greene shows how to mix spraying material, how to handle the spraying machinery, and lectures on the general care of orchards. Since March 15 he has had an assistant in the work. This help is almost free, each orchardist sharing in the demonstrators' traveling expenses. Comparatively few spraying outfits were used in the state four years ago, while now there are hundreds of them, and many more will be purchased this season. Superintendent Johnson of the demonstration department is arranging dates for Mr. Greene and his assistant.

Beginning to Notice Us Now.

Farm papers are finally taking some notice of the great revival of interest in Hereford cattle, and occasionally we find some comment that shows that this re-awakening interest is not altogether unnoticed. They are somewhat slow to be sure, but they are gradually coming to acknowledge it. Here is a recent comment from KANSAS FARMER:

This statement from the Hereford Breeders' Journal is followed by an item quoted from page 16 of KANSAS FARMER issue of February 15.

The Journal is "way off." KANSAS FARMER is not slow in recognizing the progress made by the Herefords; it does not make occasional comments, but frequent ones, and it has always been the leader.

The gospel of good blood, which has been preached by KANSAS FARMER for 50 years, is what has made this revival of interest in Herefords possible. It has made the Hereford Breeders' Association and the Hereford Journal possible and has been one of the factors in centralizing the Hereford industry in the territory tributary to Kansas City. It is still on the job.

Buying Dairy Cows.

The demand for dairy-bred cows is greater in Kansas than ever before. We are receiving inquiries from prospective buyers of such stock almost every day.

This indicates an awakening among our farmers along dairy lines that will revolutionize the dairy business in Kansas and bring prosperity to many farmers of the state. However, it is wise to use caution in buying dairy cattle, especially those brought in from other states. The demand is so great today that anything with the color markings of a Holstein, Jersey or Guernsey cow is bringing big prizes regardless of quality. Hence, dealers in dairy stock have their eyes on our markets, and there is a great danger of this state becoming the dumping ground for the cull and diseased stock from other states.

Not only is there danger of getting low producing cows, but also buying cows infected with tuberculosis and contagious abortion. The tubercular test, if properly used, will keep out tuberculous animals, but contagious abortion is much more difficult to detect, and when once introduced into a herd may cause more loss than tuberculosis. At present, Kansas dairy stock is comparatively free from this disease and we should make every effort to keep it out. In buying cows it is always safer to buy animals that are almost ready to freshen or that have just dropped calves. Dry cows bought in the stock yards at Chicago or any other city should always be looked upon with suspicion. Buy only from reputable dealers who select their cattle in the best dairy districts, and who are willing to guarantee their stock free from disease, but pass up the unknown speculator who comes in with a lot of cheap stuff.

In buying pure-bred bulls of the dairy breeds insist on getting those from high producing ancestry. A great many poorly-bred bulls are being sold for use in the dairy herds of the state. Remember that the bull is more than half of the grade herd, and that the better bred this animal is, the sooner the herd can be brought up to a profitable production.—A. S. NEALE, Kansas Agricultural College.

Unnecessary Feeding Expense.

My experiences as a Kansas dairyman are mostly in the future tense. Last year I milked two cows. We obtained the cream by setting in pans and kept no account of the feed consumed.

This year I have five cows, four now in milk. I am using a cream separator and shipping the cream. My cows are being fed about six quarts of kafir chop and bran with a pint of cottonseed meal twice a day, and kafir and corn fodder for roughage.

**No-Rim-Cut Tires
10% Oversize**

**Nearly Half the New Cars
Use Goodyears**

Nearly half the cars which are built this year will be equipped with Goodyear tires.

At the New York Show, nearly half the show cars had Goodyear equipment.

Think of that—almost as many Goodyears as all other tires together.

And far more cars are now running on Goodyears than on any other tire in the world.

What Led to This Condition?

It is well to ask what led to this condition.

There must lie, somewhere, some immense economy. For men in these days keep good track of tire mileage.

And the result is this:

In the past year alone, more Goodyear tires have been sold than in the previous 12 years put together.

Two Savings

Two features in No-Rim-Cut tires mean an enormous saving.

One is the device which makes rim-cutting impossible. Without that device—with the old-type tire—23% of all tires become rim-cut.

The other is the fact that these patent tires are 10% oversize.

That 10% oversize, under average

conditions, adds 25% to the tire mileage.

Non-Skid Treads

Then we invented a Non-Skid tread which excels every other non-skid.

It's a double-thick tread, made of very tough rubber, filled with deep-cut blocks. It grasps the road-surface with a bull-dog grip.

This thick, tough tread is immensely enduring. And the blocks spread out so the strains are distributed just as with smooth-tread tires.

This long-lived Non-Skid became at once the favorite Winter Tire.

Any Man Can See

Any man at one glance can see these advantages.

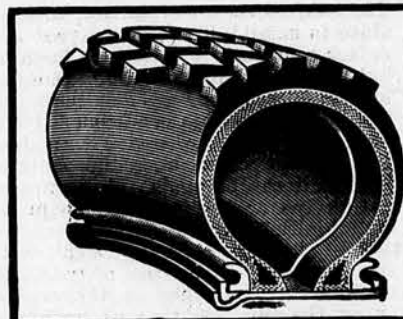
You can see why these tires can't rim-cut. You can see the oversize. And you know without telling that these things save money.

Then this tire, remember, is the final result of 14 years spent in tire building. For 14 years the ablest of experts have here worked to solve your tire problems.

About 2,000,000 Goodyear tires have now been tested out. As a result, these tires far outsell any other tire in the world.

You who pay tire bills should find out the reason. Make a test of No-Rim-Cut tires

Write for the Goodyear Tire Book—14th-year edition. It tells all known ways to economize on tires.



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With or Without Non-Skid Treads

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Branches in 103 Principal Cities More Service Stations Than Any Other Tire
We Make All Kinds of Rubber Tires, Tire Accessories and Repair Outfits
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They are "scrub" cows, four of them having a trace of Jersey blood. Next year I will have about a dozen cows and heifers in the herd.

I expect to buy a pure-bred Guernsey bull and begin grading up a herd of large producing cows. I have selected the Guernsey breed because of its size and ability to produce butter fat economically.

I expect to keep pigs with my cows, and, aided by the tester, scale and daily record, to eliminate the "boarders" and keep only a profitable herd.

It is my purpose to gradually make dairying the chief farm operation. I have a quarter section, half of which is in cultivation; I am building a 130-ton silo and expect to make the farm carry at least 30 head of cattle.

Milking is worth while in that it brings the pay days close together and with great regularity. In crop farming the pay days are too far apart and expenses have a way of steadily keeping on. I milked cows for five years before coming to Kansas, but the production of cream for sale is a new thing to me.

I expect to keep hogs enough to use all the skim milk and to market all or nearly all farm products in a condensed form.—L. L. WADE, Ashland, Kan.

Our subscriber above is to be congratulated upon the plan he has laid for future guidance. The plan is everything that could be desired. It indicates a well balanced farm operation with all industries of the farm so correlated as

to make the farm produce an income close to its maximum. One of the weakest points in farm operations everywhere is that of the farm work being unbalanced. Farmers either run strong to dairying, losing sight of the income from young stock, hogs, and horses, and crops, or run so strong to hogs or to crops that other industries are overlooked and neglected. The farm should be organized on such plan as will yield an income from every piece of work done.

Our subscriber is feeding a mixture of kafir chop, bran and cottonseed. He can feed just as well and at less cost by omitting the bran. He is, in fact, only throwing away money by purchasing bran at present prices. The only object in feeding bran is to supply his cows with the protein necessary and which is lacking in the roughage and in kafir chop. A hundred pounds of wheat bran contains 12½ pounds of digestible protein. A hundred pounds of cottonseed meal contains 37 2-10 pounds of protein. A pound of digestible protein can be obtained in cottonseed meal when it is selling for \$30 per ton, at a cost of four cents per pound, while a pound of digestible protein in bran selling at \$18.50 per ton, costs 14 8-10 cents per pound. In other words, a pound of digestible protein in cottonseed meal costs 10 cents less than it does in bran.

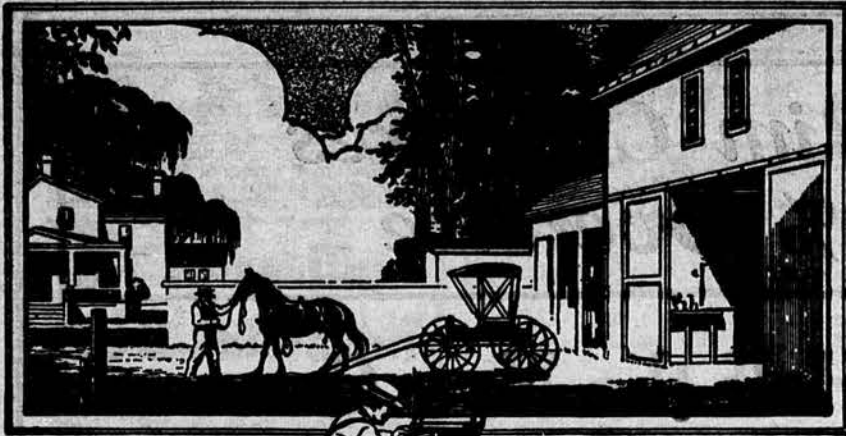
There is absolutely no use in our subscriber using bran in his ration. He is feeding enough kafir chop to supply the bulk. The amount of cottonseed meal

may be increased by him sufficiently to supply the protein which the bran is furnishing and at the saving above stated. Cottonseed meal to the amount of four pounds daily can safely be fed. When buying concentrates it is money in the pocket of the feeder to buy those concentrates richest in protein. It is for the protein only that the farmer is justified in buying concentrates. It is a fact, too, that protein in cottonseed and linseed meal and the gluten feeds costs less per pound of digestible protein than it can be had for in other concentrated forms. If our subscriber could grind his kafir in the heads, obtaining a product the equivalent of corn and cob meal, he would also acquire a more economical use of the kafir in this ration.

Carl Gustaf Patrik De Laval, known throughout the world as the inventor of the cream separator, died on February 3, in Stockholm, Sweden, his native city, at the age of 67 years. His name will go down in history as one of the greatest inventors of his time and everyone who has any acquaintance with the progress of the dairy industry for the last 25 years will appreciate the benefits by him conferred upon that industry.

Barnyard manure can be used to reduce the effects of drouth. When soil has been manured it holds more moisture and when the soil is rich in humus and plant food the crop can get along with less moisture.

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DAIRY



Much interesting and valuable material for dairy farmers was omitted from KANSAS FARMER issue of last week. This, on account of lack of space. One article of importance pertaining to dairying and which could not find room in last week's paper, was that commenting upon the methods of those farmers whose dairy practice was reported on page five of that issue. If readers desire to get the full value of such comment, they should by all means, preserve the March 15 issue and have page five for reference when our comments appear. There is much of interest and of value and our comment, we are convinced, will save many thousands of dollars on our readers' next winter's feeding methods, if our suggestions are followed. We have remarked time and again that in our dairy practice our methods of feeding are poorer than the cows we feed. This does not infer that upon thousands of farms an insufficient quantity of good feed is given, but that much of this feed is wasted because the feeds are not properly combined to give a productive or economical ration. It is on this point, in particular, that our comment will dwell.

There is probably no one product of the farm which reaches the market in such a variety of conditions, as country made butter. It is a fact that fully 90 per cent. of those of Kansas farmers who milk cows are disposing of their dairy products in some form other than butter. However, the total volume of butter made by the remaining 10 per cent aggregates in value to a tremendous sum, which sum, however, could be increased 25 to 40 per cent by the exercise of greater care and more knowledge in the making of this butter. Kansas is a butter producing state and not a consuming state. By this, we mean that in all probability as much as 90 per cent of the total butter product of the state is consumed outside the state. The sale of creamery butter within the state is small. The greater part of the butter consumed in Kansas is farm made butter. Generally speaking, home-made butter is produced in small quantities and so long as this condition exists the increased market price would not justify the expense of making this butter as well as it can be made. It is impossible during the summer months to properly make butter on the farm without the use of ice or unusually cold well or spring water. The secret of good butter manufacture, whether in the creamery or on the farm, is that of maintaining proper temperatures in cream ripening, for churning and for working the butter. The farmer's wife who makes a business of producing butter and marketing in the cities, can afford to give attention to better butter-making methods. The farmer who is not making a specialty of farm produced butter can better afford to sell his cream. The only farmer, in fact, who can afford to make butter is he who will provide the facilities for making a good product and who is close enough to the city market to permit him to deliver that butter direct to the customer.

The persistent milker—the cow which keeps continually at it—is the cow which almost without exception will produce the largest quantity of butter fat per year and so be the most profitable. It is not unusual to find cows, particularly those not of special dairy breeding, which give a good flow of milk two or three months after freshening, then the flow decreases rapidly and the cow milks possibly only five or six months of the year. This is a condition characteristic of cows not of dairy breeding. As a rule, the dairy bred cow will milk steadily through the year, depending, of course, upon the condition of feed and care. The cow first named is almost without exception created on the plan of milking only during a short season regardless of the feed and care. It is the persistent milker that makes the money. The only way to compare the production of the two kinds of cows, is to know with a reasonable degree of accuracy the amount of milk produced during the milking period. This can be known only by keeping some sort of a record. It is not absolutely essential that this be a daily record. However, it cannot well be other than a monthly rec-

ord. That is, the weighing of four or six milkings of the same days each month and the averaging of the month's milk on this basis, and at the close of the milking period a total of the monthly results. Testing of samples of the cows' milk should be done with sufficient frequency to determine the percentage of butter fat contained therein. The cream station operator or the creamery will be glad to do this testing. There is absolutely no way of knowing the relative merits of the several cows in the herd except a plan along this line be followed. Progress and increased profit in dairying cannot be had without the adoption of some such scheme as this. The results will determine the cows to be kept in the herd and milked and will also determine the probable value of the heifer calves which are to enlarge the herd or take the place of unprofitable milkers.

The test of milk or the per cent of butter fat contained therein is by no means a safe criterion as to the value of the cow in butter fat production. Not long since we heard a young man relate his experience with the scale and tester. He had a herd of six cows. One cow was his mother's cow and has been the family cow for years and enjoyed the reputation of being a large and profitable producer. The first thing the tester revealed was that the favorite cow gave milk testing seven per cent butter fat. The good old mother assured her son that she knew the value of cows and that it was unnecessary to fool his time away with the tester and the scales. However, the young man continued to test and weigh the milk and at the close of the year when the figures were gotten together the favorite cow was found to be the poorest producer in the herd. The five other cows averaged 4.58 per cent. of butter fat but gave enough more milk to more than offset the difference in test as compared with the favorite cow. The moral is that a large quantity of butter fat is contained in a relatively large quantity of milk and that an exceptionally high testing cow is likely to be a light milker. However, the differences cannot be detected by the eye or by guessing. It requires the scales and tester to determine whether a cow producing 35 pounds of milk of four per cent milk is yielding more butter fat than the cow giving 20 pounds of five per cent. milk. The difference between the two on a day's product is approximately one-half pound of butter fat, and whether or not this difference exists day after day through the year can be determined only by the use of those practical implements above named. The human eye and judgment in some respects are fairly accurate, but the eye or judgment has not yet been created which can pass with even a reasonable degree of accuracy on the comparative merits of dairy cows by appearances.

At Elmendorf Dairy Farm in Kentucky, on which 400 pure bred large producing Jerseys are milked, the rule is to feed one pound of the mixture of grain and concentrates for each three pounds of milk produced by the cow. The mixture in this particular instance is corn meal, bran, and cottonseed meal, and this information so far is worth little for the reason that the proportions of the mixture are not known, neither is the roughage known except that we know personally that Elmendorf is a large feeder of corn silage. The point we desire to make is that on this great farm the necessity of feeding the cow according to her individual needs and in accordance with her ability to produce, is thoroughly recognized. There is a great difference in the ability of cows with respect to the use which they make of their feed. The dairy farmer is not even started on the path to profitable dairying until he recognizes this difference and feeds his cows individually. We have had our own personal experience in this matter, too. We have increased the feed on certain cows to find that the milk flow was not increased, or if it was increased not to such an extent as would pay for the increased quantity of feed. Examination of previous records with the record while the change in quantity of feeds was being made, revealed the fact that in the case of certain individuals

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we were already overfeeding and that instead of increasing the feed it was possible to decrease it and still maintain the former flow, a point which is worthy of consideration, for to be able to obtain the same flow on less feed is an economy which the dairyman can not overlook. It makes a difference in the year's profit on a herd of 20 or 25 cows, to be able to save even a cent per day per cow during the feeding period. This is another instance in which the value of the scales and test is proven. The eye cannot determine in a 3-gallon milk pail two-thirds full, whether the cow has on a certain day by certain feeding methods yielded one quart more or less of milk. Individual feeding is the method pursued on every farm on which cows are milked with a full realization of the resulting profit. On such farms the use of the scale and test is as essential a part of the machinery necessary for successful and profitable dairy practice, as is the full silo or the full grain bin or even the right sort of cow.

When we set out to write these notes, we did not have in mind having so much to say about the test and scales, but the fact is that profitable dairying is absolutely out of the question unless those things be known which the test and the scales only will reveal. These implements, together with a record of the performance of the individual cows, are absolutely inseparable from profitable dairying both in so far as the practice on the farm is concerned, and in so far as the dairy writer and teacher is concerned. There would be little for the writer or teacher of dairying to say—in fact we would have learned little about the dairy cow and her methods—except for the use of the scales and test. When Dr. Babcock invented the Babcock test, he at that minute accomplished more for profitable dairying than had been accomplished in the centuries past. The profession of dairying would be impossible without the Babcock test or something equally efficient in its place and which equally efficient thing has not to this date been discovered or invented. We know that it involves the expenditure of some time and labor to use the Babcock test but the results are worth the cost. If there were any other even approximately reliable method for determining the relative merits of individual cows, you can feel assured that such method would be known and advocated. In every article and paragraph written regarding the difference in individual cows and how those differences are to be detected, the scales and test are known. There are thousands upon thousands of competent, honest, and practical dairy writers and speakers who would recognize the value of any other reliable method of determining relative cow merit if they knew that method. The fact is that the scales and test provides the only method and that is the reason they are so much written and talked about.

In growing the heifer calf for future usefulness in the dairy, it is essential that the calf be so fed and handled as to prevent the development of fat-forming tendencies. On the other hand, the feeding and care should be such as to produce a good muscle development, large bone structure, and at the same time the calf kept in a thrifty condition. These facts are responsible for the statement that the cow as a milk producer can be ruined while she is still a calf. Those feeds which are good for the cow giving milk are the feeds which will develop the proper body structure for the calf. Those are feeds which are conducive to the development of large paunch capacity and necessarily are coarse feeds, such as alfalfa hay, clover hay, etc. The kind of winter feeding will build up a strong digestion and capability of handling large quantities of feed. The fat heifer calf should be avoided.

The fertilizing value of common grains as compared with the fertilizing value of the products of the dairy farm, figured at prices of commercial fertilizer, shows less decrease in fertility by dairy farming. One ton of butter contains 50 cents worth of fertilizer constituents. One ton of milk contains \$2.09 worth of fertilizer constituents. One ton of wheat contains \$7.75 worth of fertilizer constituents. One ton of oats contains \$7.26 worth of fertilizer constituents. One ton of corn contains \$6.75 worth of fertilizer constituents. One ton of clover hay contains \$9.07 worth of fertilizer constituents. One ton of alfalfa contains \$9.50 worth of fertilizer constituents.

If there were not so many whips there would not be so many unruly horses—or boys.

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THIS OFFER IS NO CATCH. It is a solid proposition to send, on trial, fully guaranteed, a new, well made, easy running separator for \$15.95. Skims hot or cold milk; making heavy or light cream. Designed especially for small dairies, hotels and private families. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Gears thoroughly protected. Western orders filled from Western points. Whether your dairy is large or small, write us and obtain our handsome free catalog. Address: Box 1081

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A Swift Current, Saskatchewan farmer writes:—"I came here on my homestead, March, 1906, with about \$1000 worth of horses and machinery, and just \$35 in cash. Today I have 900 acres of wheat, 300 acres of oats, and 50 acres of flax." Not bad for six years, but only an instance of what may be done in Western Canada, in Manitoba, Saskatchewan or Alberta.

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Moreover, the best is of more importance in the case of the Cream Separator than in anything else, since it means a saving or a waste twice a day every day in the year for many years. It is true that DE LAVAL Separators cost a little more in first price than some inferior separators, but that counts for nothing against the fact that they save their cost every year over any other separator, while they last an average twenty years as compared with an average two years in the case of other separators.

And if first cost is a serious consideration a DE LAVAL machine may be bought on such liberal terms that it will actually save and pay for itself. These are all-important facts which every buyer of a Cream Separator should understand and which every local DE LAVAL agent is glad to explain and demonstrate to the satisfaction of the intending buyer. If you don't know the nearest DE LAVAL agent simply address the nearest of our main offices as below.

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Is extra heavy weight, sag-proof weave, close, even spacing of the picket wires, self-adjusting to uneven ground; easy to erect on wood or iron posts.

CYCLONE VICTOR FARM GATES—HEAVILY GALVANIZED; the strongest gate made; has tubular steel frame free from holes; heavy wire fabric, rust-proof, automatic lock absolutely stock proof; raise device holds gate firm in any position at front or hinge end.

The enormous output of our factory, the biggest of its kind in the world, makes Cyclone the lowest priced high-grade fence you can buy.

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You will find many uses for a

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The Coat that keeps out ALL the rain

Roomy, comfortable, well made, and of such high quality that it gives longer service than ordinary slickers.

\$3.00 Everywhere—Pommel Slickers \$3.50

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THE "BALL-BAND" mark on boots and arctics is the sign of rubber footwear made by men who work conscientiously to give full value. The price paid for them is an investment in warm, dry, well-fitting footwear. Look for the Red Ball when you buy. 45,000 dealers sell "Ball-Band"

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"BALL BAND"

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"The House that Pays Millions for Quality"



SEED CORN 146 BU. ACRE

DIAMOND JOE'S BIG WHITE—A strictly new variety. None like it. It is the Earliest and Best Big White Corn in the World—Because it was bred for most Big Bushels, not fancy show points; because grown from pure inherited stock; every stalk bearing one or more good ears, because scientifically handled, thoroughly dried and properly cured and had the most rigid inspection. Also all other leading standard varieties at FARMER PRICES. OUR BIG ILLUSTRATED FARM AND GARDEN SEED CATALOG mailed FREE. A postal card will bring it to you. Write for it today. Address, RATEKIN'S SEED HOUSE, Shenandoah, Iowa. Box 7

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The Telescope of Speech

The astronomer, by the power of his telescope, becomes a reporter of the movements of a hundred worlds greater than ours, and the student of celestial activities millions of miles away.

He points his instrument at any spot in the heavens, and his sight goes rushing through space to discover and inspect a star hitherto unknown.

Up to the power of his lenses, his vision sweeps the universe.

As the telescope may be focused upon any star, so the telephone may be focused upon

any person within the range of its carrying power.

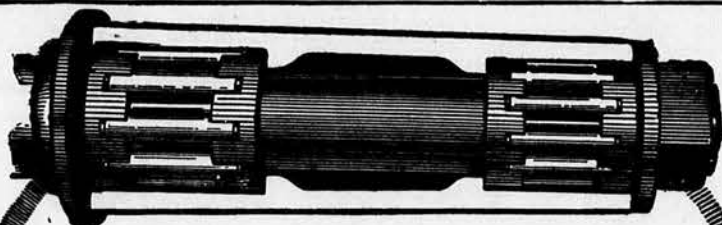
Your voice may be directed anywhere in the Bell System, and it will be carried across country at lightning speed, to be recognized and answered.

The telescope is for a very limited class, the astronomers. The telephone is for everyone.

At the telescope you may see, but cannot be seen. At the telephone you may speak and be spoken to, you may hear and be heard. By means of the Bell System this responsive service is extended to the whole nation.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
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One Policy One System Universal Service



A New Invention That Will Save Millions to Farmers

How much would it save if every farm wagon in the United States could do one-third to one-half more work? How much would you save if your wagon did that? The latest improvement in farm wagons—the greatest in 50 years—is the improved and perfected Peter Schuttler Roller Bearing.

Peter Schuttler Roller Bearing Wagons

Do One-Third More Work and Do it Easier

because they run lighter—go more miles—and require less power to pull the load. Schuttler Roller Bearings save time—money—horses—harness—feed—repair bills—axle greasing—trouble, and wear on the wagon. Official tests by U. S. Government Road Experts show remarkable results. The Schuttler Roller Bearing Wagon soon pays for itself by economy of operation.

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that describes the Schuttler Roller Bearing Construction and gives record of official tests by United States Government.

Peter Schuttler Co.
2512 W. 22nd St. Chicago

The World's Greatest Wagon Factory
Established 1848

MENTION KANSAS FARMER WHEN YOU WRITE.

GENERAL FARM ITEMS

Smith or Jones?

Farmer Smith's wife is a kitchen machine. When Farmer Jones' wife is ready to make butter she operates her churn with a gasoline engine. Her washing machine also is hitched to the engine. She has water piped through the house, the pressure being furnished by a tank in the windmill. She has a kitchen cabinet, and other modern, handy devices and is noted for her good cooking. She has a sink in her kitchen attached to the drain. This sink is built high enough to make bending unnecessary. Her wood box is always filled with dry wood from the woodshed.

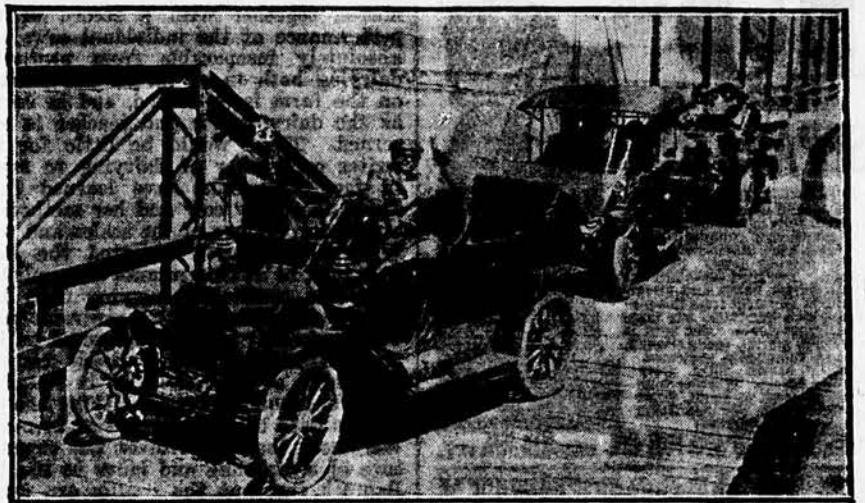
Farmer Smith's wife churns in the good old-fashioned, back-breaking way. She carries water from the well near the barn. She walks many miles a day between her stove and the pantry. She chops her own wood and wonders why she is always tired.

Farmer Jones and his wife often go to town or to the country church and are pleasant people.

Farmer Smith always has a frown and never takes his women folks to town.

We think the subscriber is wrong. There is no necessity for permitting the heifer to fool away one year of her usefulness as a milker. Whether the heifer should calve at 20 or 24 months of age depends upon the growth the owner is able to give her. If the owner can give her only the growth of two years by three years' feeding and care-taking, the situation is somewhat different. Under such circumstances, however, the owner is fooling away his own time as well as that of the heifer. So feed and care for the heifer that she will grow rapidly. Breed her at 10 to 12 months old. After breeding continue to feed well and keep her growing, not only until she freshens, but after freshening until she gets her growth. We believe in getting the heifer into the milk business early in life. This is the result of our own experience and also the result of the experience of a large number of good breeders whose herds we have visited and with whom we have talked.

We would make the heifer's first milking period long, too. We would milk her so long as she gave milk. By doing



CENTRAL KANSAS FARMERS ON NEIGHBORHOOD RUN STOP ON MISSOURI RIVER BRIDGE FOR A PHOTOGRAPH

He and his wife are old and broken long before their day, and are left alone on the farm while the children go to the city.

Farmer Jones and his family live in the country and are happy.

What is your name, neighbor; Smith or Jones?—W. A. S., in Industrialist, K. S. A. C.

Notes on the Potato Patch.

There are about ten thousand hills on an acre of potatoes planted in rows 3 1/2 feet apart and 14 inches apart in the row.

One 8-ounce potato in each hill will produce a yield of about 88 bushels per acre.

Many times, one hill will produce six 8-ounce potatoes; which is at the rate of 520 bushels per acre.

The low yields secured, on the average, must be due to the failure of a large number of hills to produce.

Some of the things that cause the failure of hills are poor soil, improper preparation, poor seed, irregular planting, poor cultivation, bugs, diseases and poor weather. Many of these conditions are controllable; all of them may be influenced by proper methods of culture.

A hill of potatoes stripped by bugs, or on which the leaves are injured by blight, cannot give a satisfactory yield.

Paris green or some other poison should be used to destroy the bugs before they have had a chance to seriously injure the vines. A few days' delay means the loss of a great many hills.

The most successful growers spray from two to six times each year, with Bordeaux Mixture, to prevent injury to the leaves from blight. Paris green may be mixed with the Bordeaux, thus spraying for bugs and blight at the same time.—A. D. WILSON, Minnesota.

Breeding Age for Heifer.

R. N. D., Osage City, writes: "I notice you recommend that Holstein heifers be bred to calve at 18 to 20 months. I have been recommending that our people do not have heifers come fresh much under three years. My reasons were that it took too much of the heifer's growth for the foetus and tended to make the heifer under-sized. Also, if the heifer is bred so young she would not be as heavy a milker as if she attained her normal growth before calving. Am I right or wrong?"

this the milking qualities are developed by the continual and persistent call upon nature for more milk. If the heifer is milked only nine months of her first milking period she will be inclined to go dry at the end of that time ever afterward. Giving milk for long periods is an artificial creation. To maintain this quality the milker must do his share.

A well-fed heifer will be able to nourish properly the unborn calf and continue to grow. The well-fed heifer will grow and give milk at the same time.

Hints on Growing Oats.

The farmer's institute department of Illinois finds that the oat yield for that state has been gradually decreasing and to get that crop on the up-grade makes these recommendations:

The preparation of the seed-bed, the quality, the amount, and the even distribution of the seed are other important factors that have large influence on results. It is believed that the practice of "mudding in" the oats crop is bad, and that for the benefit of the land as well as for increased yields and the destruction of the corn-root aphid, better preparation of the seed-bed should be practiced.

The use of ungraded seed is bad practice as most varieties of oats have within them an inferior strain; they at least have many small grains of weak vitality and type; the use of the fanning mill blows these out and the screens separate the small kernels from the large, plump ones and these only should be retained for seed.

When oats are seeded broadcast there are usually many small areas in the fields where the plants are much too thick and others where they are much too thin, and in each case the yield is reduced. With intelligent use of the drill, the grain is measured out uniformly and placed in the ground at regular depth giving an even stand and a chance for uniform growth. Some growers report a larger yield from one bushel per acre of selected, graded, and drilled seed, than from a much larger quantity of the same seed sown broadcast. In all comparisons reported, the better seed bed, graded seed and the use of the drill has outyielded other methods by several bushels.

February, 1913, Weather.

February, 1913, was the fifth coldest February on record, but was a favorable month none the less on account of the heavy precipitation, most of which fell as snow.

The month was also characterized by the lack of pronounced temperature changes and cold waves. The amount of sunshine enjoyed was slightly less than normal.

In 26 years' time there have been but six Februaries during which more precipitation has fallen in Kansas, and only one in the past 15 years in which the snowfall materially exceeded that of this month.

This snowfall was of much benefit as the state had received only a little more than half the normal precipitation during each of the three preceding months and the ground was unusually dry at the end of January. The snow drifted less than it usually does in Kansas and, as it fell on unfrozen ground, the soil was well soaked when it melted.

The average temperature of the state was 26 degrees, which is 4 degrees below normal and makes this month 3 degrees colder than January of this year and 5 degrees colder than February a year ago. The highest temperature recorded in the state was 78 degrees on the 17th, at Pleasanton, and the lowest 17 degrees below zero on the 24th at Clay Center.

The average precipitation was 1.71 inches, which is 0.57 of an inch above normal and nearly four times the amount that fell last January. The excess above the normal precipitation ranged from one to 2 inches in the southeastern portion of the state and generally from half an inch to an inch in the northeastern portion, but in the northwestern quarter of the state there was a slight deficiency in most counties. In the southwestern counties the average precipitation was about normal.

Feeding Calves on Whey.

H. C. Y., Phoenix, Ariz., writes that his creamery is being converted into a cheese factory and therefore will not be able to obtain skim milk for calves but will have the whey from the cheese, and desires to know how to feed whey.

We do not know how valuable calves are in Arizona, but assume that they have a value equal if not greater than the Kansas value. If this is so, he should so feed and handle his calves as to keep them thrifty and growing. To do this, he must give them a good start and that start can best be made on whole milk. We would feed whole milk for at least ten days. At the end of this time begin tapering off on to whey, adding a pint of clean, sweet whey per day, to the calf's milk until the whey has displaced the milk. In the meantime the calf should be eating a little bright hay or fodder. It should also be eating kafir, milo or corn chop. Teach the calf to eat chop just as soon as possible, but let him eat it; do not make him drink it. Kafir and milo chop are particularly adapted for feeding calves drinking their whey or skim milk. Continue feeding the whey until the calf is old enough to get along without it which will be at the end of three months. If there is no other use for the whey, keep on feeding it.

In the feeding of whey, however, be particular to feed it in as nearly the same condition as possible all the time. Do not feed warm whey one day and cold whey the next; do not feed it sour one day and sweet the next. Also feed only from clean pails. Scours in calves are in more instances due to dirty pails and dirty surroundings than to anything else. If you are feeding a half dozen or more calves, it will pay to construct stanchions in which they will take their feed. With the stanchions, an ordinary gallon crock is a good utensil in which to feed the whey. We would not feed more than a gallon of whey at a feed at any time. This is the maximum feed for a calf at three months old. Until the calf is a week old we would feed him three times daily and not in excess of a half gallon at a time. When feeding whey or skim milk, the tendency is to overfeed on these products rather than underfeed. Be sure, too, that the calves have plenty of fresh water. The whey may be fed raw just as successfully as pasteurized. If we began feeding raw, we would so continue. If we began feeding pasteurized, we would continue pasteurizing. The tank at the creamery in which this whey is stored, should be kept clean and sweet. If it is held on the farm in barrels or cans these should be kept clean. If the receptacles are dirty trouble will surely result.

Whey, at best, is a poor feed for calves. For pigs, it has about half the value of skim milk. Unless we could afford to spare enough whole milk to give the calf a good start, we would buy some of the calf meals advertised in KANSAS FARMER and use these with the whey, or

What an Engine Did

By R. E. Olds, Designer

My fame as a car builder, after 26 years, is based in large part on my engine.

To me it's an old, old story. Perhaps it is new to you.

A Lifetime

I was one of the world's first builders of gas engines. Long before the days of automobiles, the Olds Gas Engines were known half the world over. And they are today.

It has taken a lifetime to develop an engine like the one in Reo the Fifth. And even my rivals concede it to be one of the great engines of the world.

My catalog states all the details about it. I won't bother with them here. But the fame of this engine is based on four things:

- Its unusual power—
- Its enduring silence—
- Its remarkable endurance—
- Its ease of adjustment.

Radical Tests

We avoid trouble for you by putting each engine to five radical tests in our factory.

Each is run for 10 hours with outside power, then another 10 hours with its own power. Then we take it apart and inspect it.

Then it is made to run a blower, and tested at various speeds. Then it runs an absorption dynamometer, as a measure of its power. Then, in the finished car, we give it the hardest sort of road test.

These tests require 48 hours. But thousands of these engines, run for years and years, are still in prime condition.

We use on this engine, to save ignition troubles, a \$75 magneto. And we doubly heat our carburetor, to deal with any gasoline.

So Everywhere

In every part of this car we use the same precautions.

The steel is twice analyzed.

The gears are tested to stand

75,000 pounds per tooth. The springs for 100,000 vibrations.

We use 190 drop forgings.

We use 15 roller bearings.

The tires are 34x4.

Each body gets 17 coats.

When you get a car built like Reo the Fifth there is very small cost of upkeep.

Unique Control

We use in this car the only center control which is simple and out of the way.

All the gear shifting is done by moving a small rod only three inches in each of four directions.

There are no levers, side on center, so the front is clear. Both brakes are operated by foot pedals.

And in this car you find the left side drive, as in the finest cars this year.

Write for our catalog and we'll direct you to the nearest showroom.

**R. M. Owen & Co., General Sales Agents for Reo Motor Car Co., Lansing, Mich.
Canadian Factory, St. Catharines, Ont.**



Reo the Fifth
The 1913 Series
\$1,095

30-35
Horsepower
Wheel Base—
112 inches
Tires—
34 x 4 inches
Center Control
15 Roller
Bearings
Demountable
Rims
Three electric
lights
190 Drop
Forgings
Made with
5 and 2
Passenger
Bodies

Top and windshield not included in price. We equip this car with mohair top, side curtains and slip cover, windshield, gas tank for headlights, speedometer, self-starter, extra rim and brackets—all for \$100 extra (Est price \$170).
Gray & Davis Electric Lighting and Starting System at an extra price, if wanted.

possibly better still, try a part of the calves on the calf meal without the whey and another part on calf meal with the whey. Few people can successfully rear calves on whey. It is certain that it should be fed fresh as possible and under the strictest rules as to quantity, regularity, and cleanliness.

The Pure Iron Corrugated Culvert.

In the talk of a highway engineer before a farmer's institute recently, the speaker placed special emphasis on the establishing of a permanent grade for the road before permanent culverts were placed, because if a permanent grade were not established it would later be necessary to destroy the culvert in order that the proper grade be established and this would result in serious loss of money. In view of this admonition it occurred to us that there was a place for the corrugated pure iron culvert, which the past legislature felt disposed to put out of business until after it had given the matter full consideration.

Be it understood that the pure iron culvert is durable and is the only general utility culvert on the market. It is light, weighing much less than any other type of culvert. It is strong, because it is corrugated, the corrugations adding 29 times in strength to the plain sheet. In an approved test made at the University of Illinois a 36-inch corrugated culvert stood a strain of more than 11 tons to the square foot. In service it would be

impossible to subject the culvert to such a strain. It is easy to handle and the ditch requires very little preparation prior to installing the culvert. There is no necessity of ever closing a road for more than 30 minutes while installing a corrugated culvert. If installed with wingwalls the corrugated culvert will never wash out because the dirt packs itself around the corrugations. Even if it should wash out, it can be easily replaced, which is not true of any other type of culvert.

In the course of a year it often happens that a grade will change, and a culvert that is needed in one place now will not be needed a year from now. A corrugated culvert can always be taken up and moved. This cannot be done with other culverts.

It would seem then that the only problem in the corrugated culvert question is the durability. The use of a genuine pure iron will insure the permanency of the culvert. The only thing to be sure of is that you get pure iron. The manufacturer who uses genuine pure iron is willing to furnish a surety bond guaranteeing the purity of the material he uses and this bond should be furnished. It can be had if insisted upon.

Azoturia.

Know what azoturia is? Well, it is the "Monday morning sickness" of horses. A sort of paralysis or lumbago which follows a period of rest in horses

that have been accustomed to heavy work and full feed. Here's how to handle it:

If it is necessary for a horse to stand idle for a number of days during cold weather, cut down his feed, especially if he is in good bodily condition. Give a bran mash the evening before starting to work. Give the horse some daily exercise while idle, and see that the bowels are moving freely and regularly. When starting out from the stable, start slowly. Active, vigorous horses will want to step along freely after a rest of a few days, and it is in just such cases as this that we meet azoturia, if proper precautions have not been taken to prevent it.

Good farming is the best insurance against crop failure. Farming is a business. It requires a better business head to farm as well as we know than to practice in any other profession.

Fifty good hens, well fed and cared for, and all the egg money placed at interest, will at the end of fifty years be a sum sufficient so that the interest on it will yield a living for a family.

Politics and Business.

"I am willing," said the candidate, after he had hit the table a blow with his fist, "to trust the people."

"Oh!" cried a little man in the audience. "I wish you'd open a grocery."—Chicago Record-Herald.

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He Feels Better With a Hair Cut
 just the same as you do. How would you like to still wear your winter coat when spring work begins! If you want your horses to keep well last longer and give you better service in every way take off the heavy coat that holds the wet sweat and dirt. Don't buy any thing but

The Stewart BALL BEARING Clipping Machine
 the only machine that will clip horses, cows and mules without any change whatever. Has all the hard out steel gears, enclosed and from dust and dirt and running in oil. Has 6 feet of new style, light, easy running flexible shaft and the Stewart single tension clipping head, highest grade. Clips easier and faster than any other and lasts longer. Every machine fully guaranteed. Get one from your dealer or send \$2 to us and we will ship C. O. D. \$1.75 for balance.

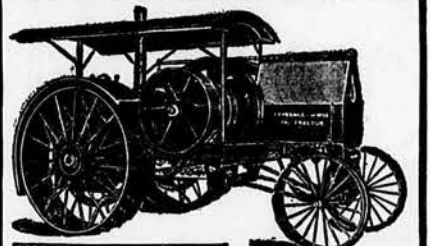
GET ALL HIS WOOL

You lose \$1 on every six sheep by shearing the old way. You know how many you've got. Figure out how much more money for you if you get more and a longer, better quality of wool, that will bring a higher price. Use a Stewart No. 9 Ball Bearing Shearing Machine

It's the most perfect hand operated shearing machine ever devised. Has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Comes complete, including 4 combs and 4 cutters of the celebrated Stewart quality at.....

Set one from your dealer or send \$2.00 and we will ship C. O. D. for balance. **CHICAGO FLEXIBLE SHAFT CO. 296 Ontario St. CHICAGO** PRICE \$11.50

Fairbanks-Morse Oil Tractors



Kerosene, Gasoline, Distillate 15-25 H. P.

The power of 15 horses concentrated in a single machine. Easily handled—everything that requires the operator's attention in easy reach. Single Lever Control. This patented feature simplifies handling and makes stripping gears absolutely impossible. Economical. Develops more than rated power on Kerosene, Gasoline or Distillate. Engine is our well-known horizontal type, used by farmers everywhere. Simple. Dependable. You can handle it from the start. Details of construction and actual service records gladly forwarded on request. State size of your farm and general character of soil. Ask for Catalog No. FM 898 Also build 30-60 H. P.

Fairbanks, Morse & Co. Omaha Kansas City St. Louis

Good Money for Your Spare Time

Make Use of Your Spare Time

In a business where you are your own boss. You can make good money at your leisure by a small effort in your own community in a good paying business.

AGENTS WANTED

Every man needs life insurance. Every man needs life insurance explained to him. Every man wants sound insurance. Every company needs reliable men to explain their insurance. You can easily learn it—we teach you. No cost to you to find out how your spare time can be turned into money. Write or call.

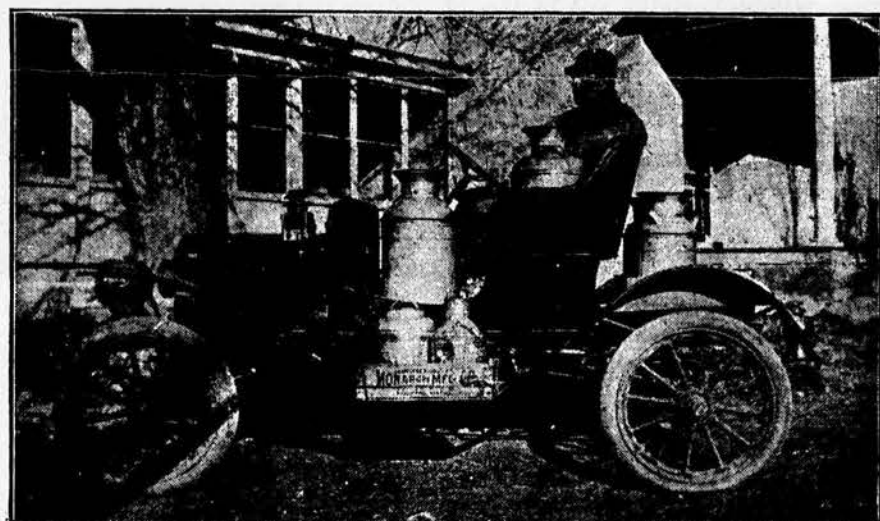
S. E. BARBER, Mgr., Topeka, Kan.

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

The Automobile in The Dairy

CONSIDERABLE space is devoted to the modern dairy cow and modern dairy methods in general, in this issue. The automobile is one of the modern appliances which fits into the modern conduct of the dairy business, as is shown by the accompanying picture. For many years farmers excused themselves justly from engaging in dairying

that many farmers begrudge the time necessary to haul the cream two or three times a week even, but this auto owner has found how he can cut that time into ten parts and use only one part in cream delivery. The auto has become his market wagon. It not only carries the cream, but the eggs, poultry, kerosene and machine oil can, and it hauls back



ON THIS DAIRY FARM THE AUTOMOBILE IS THE ALERT, NEVER-TIRING, CHORE BOY.

because they could not afford the time from the farm to haul the whole milk. The hand cream separator removed a part of the trouble by making two or three deliveries of cream a week possible. So rapid has become the pace these days

the groceries, the machinery repairs—takes the family to town, to church and to school. The man who can afford to own an automobile will find a lot of uses for it which he had not dreamed of and will get enough pleasure in addition to make its keep worth while.

Raising Hogs Without Cholera

Having read the article by H. L. Faulkner in KANSAS FARMER issue of January 25, I desire to state my experience and ask a few questions.

As to the general care of hogs and their successful raising, I heartily concur with Mr. Faulkner, and also in his statement that the industry is fraught with some danger of losses, and in his words, "Well, it is no easy job."

I notice that the writer states that he is a believer in the serum treatment, and that although he never knew cholera to break out in well kept herds, that just as a precautionary measure, when cholera gets in his neighborhood, he advocates repeated administration of protective serum.

Mr. Faulkner is a breeder and raiser of pure-bred hogs, the value of each of which is much greater than those in a stock herd. Of his herd he writes, "They are vaccinated every 70 to 90 days when cholera is raging close by."

I am a raiser of stock hogs which I sell upon the market for a profit, as do the great majority of raisers of hogs. Is not this repeated vaccination rather expensive for the stock herd? Say 20 to 30 cents as pigs, 30 cents more at 100 pounds weight, 45 to 50 cents each at 150 pounds, and so on up; and what about the gilts we want to breed and not ship as market hogs? Would not these repeated treatments with serum alone, say every 90 days, soon make each gilt rather costly if not pure-bred?

I have found some advantages in the simultaneous treatment:

First—Permanent immunity with minimum cost. One treatment with but slight per cent of loss before animals have eaten several dollars' worth of corn and fodder.

Second—A herd I do not have to worry about for fear the serum will run out and leave me open to infection and further losses.

Third—It does away with repeated handling, which can but disturb the gains in weight for which we are feeding.

As I understand the simultaneous treatment, the object in injecting the virulent blood at the time of serum treatment is to establish permanent immunity, and because the infection so produced can be controlled by a definite amount of serum.

Natural exposures vary greatly with different herds and different individuals in a herd, because of varying virulence of the virus and the natural resistance or susceptibility of individuals. That's the why of the failures in treating sick and exposed herds; not serum enough

can be given to offset the infection in each animal. The dosage in sick herds is just a guess until the amount required makes the cost prohibitive.

If advocates of the serum-alone treatment will consider the matter thoroughly I think they will realize that no disease can be eradicated with an agent that will give but temporary results, and though they may get satisfactory results, with constant repetition of the treatment, can the breeder and feeder of stock hogs stand an equal expense with the breeder of pure-bred hogs and make money? I think not. Also, why the expense of these several treatments with serum alone when it can be eradicated at one operation and one expense?

Commercial producers are not all barbarians, and some of the best improvements in the manufacture of serum come through this source.

The simultaneous treatment is advocated and practiced in many states by the state veterinarians and institutions and has as strong endorsements and as great a following as the serum-alone treatment. I am a believer in the simultaneous method, and a user of the same, and I feel that I can guarantee my hogs as immune. Personally I would rather take the virus upon my place and administer a definite fixed amount which I know I can control, than to wait for the natural exposure which I cannot avoid, or even guess as to its appearance. I do not dread the cholera now, as I have it under control. Your serum-alone men do not, else they would not do this repeated treatment and never rest.

For 50 years cholera has raged, and as you say will continue to rage, reaping its losses even in the face of serum treatment. You have in mind the saying, "If you can't defeat the devil, join him," but I say, if you can not eradicate him, join him. Control your losses by administering the simultaneous treatment.

—BEN BOTHWELL, Breckenridge, Mo.

New Rural Mail Boxes.

A committee of postal officials designated by Postmaster General Hitchcock is at work upon a plan for the adoption by the post-office department of a uniform design of rural mail box for the use of patrons of rural delivery and star routes, especial consideration being given to the needs of the service in connection with the parcel post.

A great many different styles of boxes are now being used by the rural patrons, and few of them will accommodate the larger size packages.

\$25 to \$40 SAVED



Here's the machine that fits in with my idea of what a separator ought to be—the right price and the right quality. The Beatrice stands alone on the separator market as the one high-grade separator at a fair-play price. Instead of paying \$100 to \$110, I paid \$75 for 1000 pounds capacity. I have yet to find a more efficient and durable machine.

BEATRICE Cream Separator

It's no trouble at all to keep it as clean as a new pin and perfectly sanitary. The patented device will clean the machine and make it spotless in less than 2 minutes.

The close skimming it does is surprising. My skimmed milk doesn't show a particle of cream. The occasions I have had to put my hand in my pocket for repairs have been exceptionally few and far between.

—Farmer Onswon.
 600 lbs. Capacity \$55
 800 lbs. Capacity \$65
 1000 lbs. Capacity \$75

If you don't know the Beatrice, it will pay you to get acquainted. If your dealer can't introduce you, just write

THE CONTINENTAL CREAMERY CO., Topeka, Kan. Oklahoma City, Okla.



Make Extra Dollars

Cut out the cost of some hired help by using a

Rumely Automatic Baler

It is the fastest and best baler, the only real automatic one on the market. Run it with a

Rumely-Olds Engine 6 h.p. or 8 h.p.

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WILLIAM S. SIEGEL, 64 E. Van Buren St., Chicago, Illinois.

HORTICULTURE



Prevent Potato Diseases.

Farmers should do two things in connection with raising potatoes this year. They should plan to plant potatoes on land which has grown none for five or six years. Then they should plant absolutely clean seed on this land. This is essential because last year a number of potato diseases, which live in the soil and on the tubers, were very commonly found almost throughout the state. This means that there is a large amount of potato-sick soil and a large number of diseased tubers. To plant these tubers on infected soil would almost surely result in poor crops and unhealthy tubers this year.

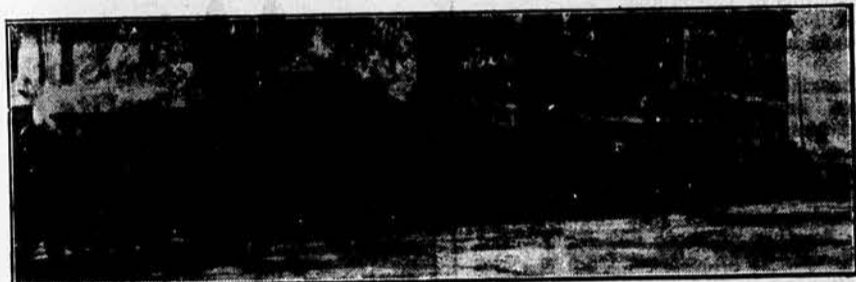
After having selected a piece of land, known not to have raised diseased potatoes, the seed tubers should be carefully selected and treated. Brown rot can be excluded in only one way: By rejecting infected tubers. Scab and rhizoctonia germs can be killed by the ordinary formaldehyde treatment. The cost of the treatment is very low, and there is no question about the increased returns. A careful look through some Minnesota potato fields would convince anyone that it pays to select seed so as to exclude brown rot, and it must be re-

Orchard Heater Widely Used.

The manufacturing of smudge pots is now an important industry—this because of the increased interest in protecting orchards and berry patches from frost. In Kansas, at Topeka, one of the best smudge pots made is being manufactured. Mr. Holt, the manufacturer and head of the Roswell Manufacturing Company, is an experienced orchardist of the Grand Junction, Colo., district. In the case of strawberries he says 40 of his heaters will protect an acre from frost and will, if necessary, raise the temperature 12 degrees. The heater of course is equally well adapted to fruit orchards or to garden truck patches. His orchard heater is a gas producer and gas burner, and consumes nearly all the carbon of the oil, converting it into heat instead of allowing it to pass off in a dense smoke, as is the case with most smudge pots.

There has been an idea prevalent that the more dense the smoke the better the protection to the fruit, but experience has taught the fruit grower that too much soot and smoke is injurious to the delicate blossoms and small fruit.

The heater holds 5½ gallons of oil and ordinarily will last a whole season; but in case of continual freezing, it will burn



FARMERS' AUTOMOBILES ON STREETS OF EL DORADO, KANSAS, DURING KAFIR KARNIVAL LAST FALL

membered that selection, in the case of brown rot, is the only means of control, and, further, that it must be combined with proper handling of the soil.

Dynamiting for an Orchard.

That a good deal of interest is manifested in the use of dynamite on the farm is indicated by the fact that one of the big powder companies has placed an expert in Topeka whose business it is to handle the dynamite in any farm operation and by the further fact that one land owner has lately dynamited 20 acres preparatory to planting an orchard.

Rev. W. I. Cole of North Topeka, when asked about his plans for this orchard, wrote as follows: "My experience with dynamite is so limited that it is hardly worth mentioning, yet I can say that, as far as I have gone, I am thoroughly satisfied with the experiment. What the results of this dynamiting will be on the trees for the next four or five years remains to be seen. In my judgment the effect during the first two years will be decidedly beneficial, but whether the hole blasted in the subsoil will form a jug through the walls of which the roots cannot penetrate, and then, when the roots fill the jug, the jug will in turn cramp the roots and dwarf the tree, is the unknown quantity in the case that deters me from proceeding further.

"If anyone who reads these lines has trees planted with the aid of dynamite four or five years ago, he would do me and probably many other KANSAS FARMER readers a favor if he would send to this paper a statement of his success or failure and give the exact condition of the trees today.

"If it could be conclusively shown that the explosion of the dynamite does not cement the walls of the hole in the clay or hardpan subsoil and hinder the tree roots and thus make a flower pot tree, dwarfed in three or four years, I would pronounce dynamiting the greatest blessing to the orchardist. I have been unable to get facts covering this point, and must go slow until I can develop them.

"By the way, I must say that it was through a personal conversation with Mr. I. D. Graham of KANSAS FARMER that I was led to try dynamiting for my tree planting."

where smaller heaters would have to be refilled.

Mr. Holt says that in this section we should look out for the frosts about May 1, but usually it is the frosts of May 8 to 10 that do the damage to our fruit prospects.

Lime Sulphur Wash.

A concentrated lime-sulphur wash for use as a dormant spray may be made by diluting one gallon of concentrated lime-sulphur with ten gallons of water. The concentrated lime-sulphur is put on the market by many insecticide firms, or may be made at home in accordance with the following formula: Sulphur, 80 pounds; best stone lime, 40 pounds; water, 50 gallons.

Austrian Pine Good Windbreak.

The Austrian Pine, often spoken of as the Black Pine, is commonly planted throughout the United States east of the Rocky Mountains for ornamental and windbreak purposes. Under favorable conditions it will attain a height of 60 or 70 feet, with a diameter of fully two feet at the stump. It is pleasing in appearance, grows erect with a straight heavy trunk and regular whorls of heavy limbs. The leaves are from 5 to 7 inches long, very dark green, and retain their greenness throughout the year.

In keeping with the general appearance of the tree the foliage is dense and heavy, which makes it one of the very best of the pines for windbreak purposes. It is readily propagated from seed, but the seedlings are tender and susceptible to several fungous diseases common in nurseries. The seedlings transplant with much difficulty and there is usually a heavy loss in the first transplanting, but only a small per cent of loss in the subsequent plantings. Only trees that have been transplanted once or twice should be bought for permanent plantings, and these should be from 15 to 20 inches in height.

The Austrian Pine is generally propagated by all nurserymen handling coniferous stock and can be obtained in any desired numbers. The tree requires special care in the seedling stage. It is impracticable for any except skilled nurserymen to attempt to grow it.

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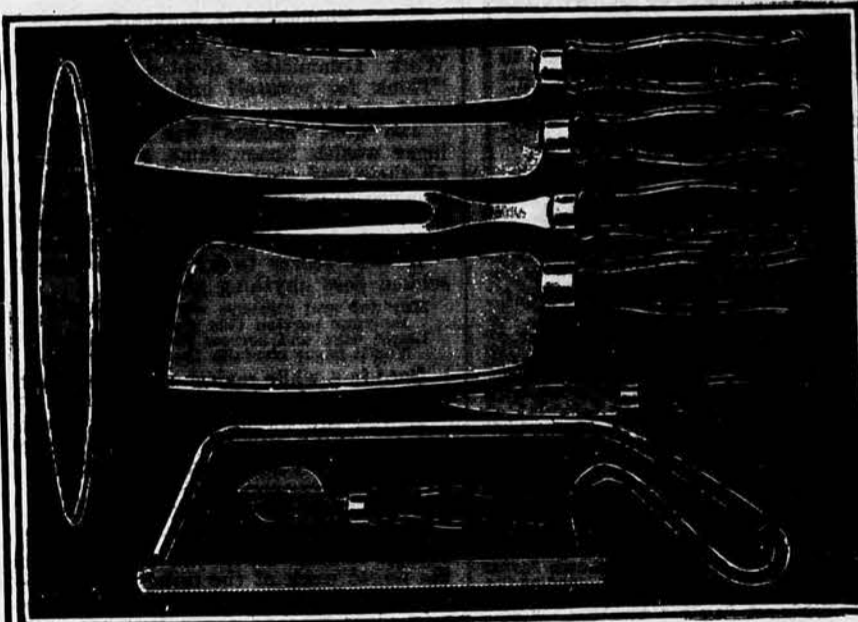
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WHAT THE PARCEL POST WILL DO FOR YOU

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



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

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

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

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The GRANGE

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 Sec'y.....C. M. Freeman, Tippecanoe City, O.

The Kansas Grangers use KANSAS FARMER as their official organ. They have been accustomed to take about two columns of space. But Kansas has a new state lecturer, L. S. Fry of Manhattan. He enters the February FARMER with a page of interesting Grange news. Another mark of progress—he issues a literary program for the month of March. Kansas Granges are reported coming to life all over the state.—Pacific Grange Bulletin.

State Secretary A. E. Wedd has a way of securing the co-operation of the other state officers which pleases.

To the State Lecturer.

Is it too bold a thing to ask that you come to our aid through the columns of KANSAS FARMER? If you have never been a subordinate lecturer you know our trials and our temptation, sometimes, to quit the hills we have and fly to others we know not of. If only some taller brother would take us by the hand and lead us and through us lead our charges! "Tis a consummation devoutly to be wished."

To see the timid lose their fear,
 The bold retire unto the rear,
 And sweet success with all her charms,
 Lay all her trophies in our arms.
 A SUB-LECTURER.

Grange Member Answers Affirmatively. Are women ready for the franchise? I take it that this questions means, Is she prepared to use the franchise wisely?

Woman has always risen to meet any need or duty, and she will rise to this. Heretofore, while her hands were tied, as it were, she has wisely refrained from giving herself too much concern over matters in which she could have no voice. But now that the bars are down and she may enter into her own, she will spare no pains to make herself a true helpmeet to man in this new and wider field of state and national housecleaning and housekeeping.—MEMBER OF EQUITY GRANGE.

Thoughts for Grangers.

Motto of Equity Grange Woman's Work Committee adopted by vote: "Think for yourself and work for the good of all."

The word "success" has many meanings: wealth, honor, fame, glory, love—all these and many more stand for success according to our angle of vision, but, after all, to have made this world a little better than we found it—that is success. He who scorns to do the little things seldom does anything great.

May joy and pleasure without measure
 Be your portion this glad year!
 Leave care and sorrow for tomorrow,
 You'll never o'er take them, never fear.
 Once in a while review and renew your obligations taken in the Grange. If you are an 80-acre farmer, don't try to spread yourself over a quarter section. Get your measure.—A. B. H.

Grange "Key" to Be Issued.

The recent decision of the National Grange to issue an official cipher key to the secret work of the order will be appreciated by thousands of Grange masters. The demand for a key has been growing year by year, and at this year's meeting of the National Grange the Priests of Demeter in their assembly voted upon the matter and decided to issue the key. It is probable that some minor changes from the former secret work will be made.

Several thousand copies will be printed and distributed to the state masters in sufficient quantities to supply the subordinate masters of the different states. The master is held responsible for his copy and must pass it to his successor, proper receipts being issued therefor and filed in the records of the Grange. Each copy always remains the property of the National Grange and is subject to recall at any time.

The issuing of this key will be a great help to the Grange masters and will bring about more efficient ritual work.

A Good Program.

I heartily endorse what Lecturer A. B. Hester says in the March 1 issue. I am Lecturer of Arkansas City Grange No. 1432, and am sending in our program for March 15:

How to prepare and set out, care and cultivation, varieties best adapted to our locality, of the farm orchard. Discussion led by three men.

Song.
 Recitation.
 Preparing the soil for the corn, kafir and cane crops.

Cultivation and care of same.
 Do you consider it worth while to test your seed in this locality? Discussion led by three men.

How the Patrons' Insurance Company saves money for the Kansas farmers, by our insurance solicitor.

Our Grange has established a bulletin board, as one means of co-operation in buying and selling.

We use Institute programs, have open lecture hour, invite Institute members and all others interested once a month. The other meeting is for subjects of interest to the Granger only.—GRACE P. ABRAMS.

Notes by the State Secretary.

National Master Wilson recommends that each Grange hold memorial exercises to attest the love and esteem in which "Father Kelly" was held, and, in a slight degree at least, show our appreciation of the labor and sacrifice of this, the founder of our order.

Mr. Kelley, who died January 23, 1913, was the last of the seven founders of the Patrons of Husbandry.

The National Grange recommends a course in home economics for the coming year.

I heartily approve the plan of each Grange having a correspondent. We would soon need a whole newspaper instead of one page.

Fred M. Landis, deputy for McPherson County, reports a new Grange with 57 charter members just organized by him. Another of those 600 for Kansas.

Following is an extract from a letter just received from a new Grange: "We think the Grange a mighty good order." And methinks the answer would be, That man knows what he is talking about.

In a recent letter from the Agricultural Department at Washington acknowledging the Kansas Journal for 1912, the librarian requests the following numbers to be placed on file in the library. The missing numbers are: Journal of Proceedings, first to twenty-seventh inclusive; twenty-ninth to thirty-second inclusive; thirty-fifth to fortieth inclusive. Any information as to where these numbers can be obtained will be appreciated by the State Secretary.—A. E. WEDD.

Suggestions.

Have the grace to keep your face always toward the light.

Have patience with the shortcomings of others remembering your own.

Have faith in yourself and humanity.

Have the same high standards for your sons and daughters.

Have a definite plan and work toward it.

Have an eye for good and you will find it.

SUGGESTIVE PROGRAM FOR THE GRANGE WOMAN'S WORK COMMITTEE.

Opening Song—America.

Roll Call: Mottos for Grange Woman's Work Committee. Decide by vote and adopt a motto for 1913.

Recitation.

Name Township officers and chief duties of each.

How are the Township officers paid?

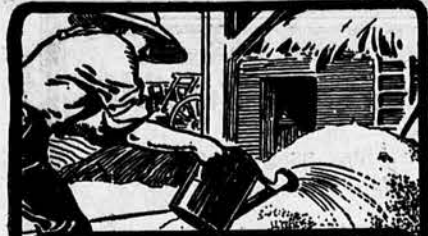
Question: Resolved That women should be willing to do jury duty.

Judges appointed by chairman.

Dear Sisters:

Sometimes I feel as though I am pounding on a log with the back of the ax for I cannot see the chips fly. I wish that you (the Grange Woman's Work Committee Chairman) would let me know something of what you are doing and what you think of the line of work I have proposed. You can easily see that my idea is toward efficient, willing citizenship for women. We must pull together and help one another if we are to leave even a trail which will show which way we were headed. Write to me or to KANSAS FARMER and be assured that any suggestions or criticisms will be received in a sisterly spirit.—ADELIA B. HESTER.

Mabel Carney, in her work on Country Life and the Country School, says



ITS MANY USES

about the farm and home should be learned by every man in farming for profit. We have published a valuable pamphlet fully illustrated, telling how the Department of Agriculture has demonstrated the usefulness of

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Strictly pure bred, grown on our own farms from extra choice seed. Quality, good as the best. We won first in Capper Corn Contest for best single ear in state and first for best 20 ears at Missouri State Corn Show, 1912. Guaranteed to please you. Send for samples and prices.
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Are great soil builders. Cow Peas are rich in protein and the hay equals alfalfa in feeding value. Renew the fertility of your land and harvest a crop the same season. Prices and 1913 Seed Book free.
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THE "Acme" cuts through to the under soil, thoroughly compacting it and leaving no lumps or voids between the furrows. The top soil is mulched. These conditions attract and conserve all the moisture, insuring a successful crop.

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Kalamazoo Stove Co., Mfrs., Kalamazoo, Mich. We have two other catalogs, one describing Heating and Cooking Stoves, the other describing Gas Ranges. Which one do you wish? Trade Mark Registered.

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This Wonderful New Peach Pays Before Others Bear!

Mottos Elberta will prove the biggest profit maker you have ever grown. Three year trees in T. O. Price's Kansas orchard bore over four bushels last year. Sold for double the price of common Elberta. Every tree loaded with huge, delicious golden, yellow peaches, overlaid with red. We want you to test it at our risk. Send for the best offer ever made to fruit-growers.

OUR GUARANTEE All risk of trees proving untrue to name. Listen! Here is a guarantee that really protects you. Nothing like it ever offered to fruit-growers. We agree that for every Pedigreed tree that proves untrue to name, we will refund in cash, five dollars for every dollar you have paid for that variety. Tell us how you can start your orchard right—how to make every tree a profit maker. Fully explains a wonderful common-sense system which makes every "Will Revolutionize Fruit-Growing." Send for your copy today before you forget it. **J. MONCRIEF, President, WINFIELD NURSERY CO., 238 Central Ave., WINFIELD, KANS.**

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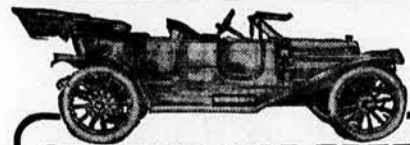
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The Kansas Agricultural College offers by correspondence a course in **POULTRY MANAGEMENT, AUTOMOBILES, CONCRETE WORK,** and 103 other subjects. Send for Bulletin.

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H. L. KENT, Sec'y Cor. Study Dept.,
Box A, Manhattan.
(See adv. next week.)

SWEET CLOVER SEED.
Will sell White or Yellow at \$5.50 per measured bushel.
B. B. BARTON, Butler, Ky.

this of the work and influence of the Grange: "But more important by far than the history and plan of the Grange organization is its work and influence for the social and educational advancement of farm life. The Grange as an organization is capable of speaking authoritatively for farm interests. This it has done for the last twenty-five years, touching upon questions of both national and international significance. The national Department of Agriculture, state agricultural institutes, pure food laws, the rural delivery of mail, the Interstate Commerce Commission, the denatured alcohol bill, and the postal savings bank are some of the measures that trace their origin and development to Grange influence. Thus the Grange exerts legislative influence."

Kenyon L. Butterfield in his Chapters in Rural Progress says, "To enumerate the achievements of the Grange would be to recall the progress of agriculture during the last third of a century."

Farmers of Kansas, why not come in and help in this work? If your joining the Grange meant nothing more than adding numbers to the order it would give more weight to our influence, but we believe you can do the Grange good in other ways and perhaps the Grange can do you good. Try it anyway. The State Grange Lecturer or any other state officer is ready to come and organize a new grange in your neighborhood at any time.

Wherever possible a Grange should hold a fair. I doubt if there is anything that can be undertaken by a Grange that is of more value, when considered from every viewpoint, than a Grange fair. And now is the time to begin to lay plans and get ready for your Grange fair. If you already have a fair established, now is the time to plan for the exhibits, and it is none too early. Decide what you will raise for exhibition purposes and then secure the best seed and give it the best treatment with the idea of winning and with the knowledge that when you win you have not only gotten the little honor which comes to you on winning a prize, but you have raised a better crop than you would otherwise have done.

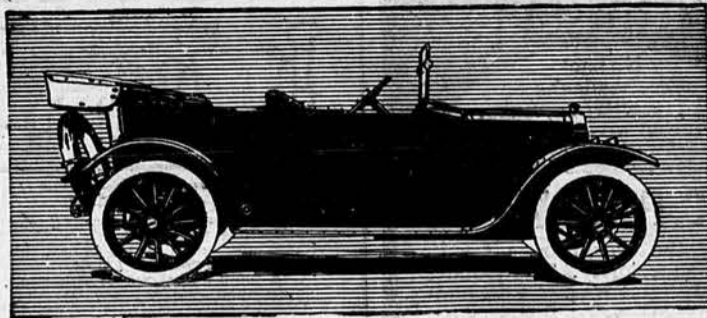
Make a colt show at the Grange fair. There is perhaps no class of farm live stock that needs more attention and improvement than the farm horse. Get your neighbors together on this proposition and hold a colt show. There is nothing that will add so much interest to a Grange fair as will this, and there is nothing that will bring so much value, in both a financial and an educational way, as a show of young horses. Make one class for the mare and colt and the other classes may be arranged to suit, according to sex. Prepare for it, feed and care for your colts right, and you will be glad of your efforts and proud of your neighborhood and Grange.

One of the biggest wastes that occurs on the western farm comes through the destruction of the straw from our wheat fields. A machine has been invented for spreading the straw back onto the wheat land to prevent the soil from blowing and to serve to catch the moisture and hold the snow. A better plan, however, is to feed the good quality of straw as a part of the ration for cattle and horses and use the balance for bedding. A large amount of straw that is unfit for feeding purposes should be spread in the barnyard, especially if it is inclined to be muddy. In this way the animals are kept cleaner and an accumulation of manure is made during the winter which can be hauled out to the great advantage of the land.—I. D. G.

KANSAS FARMER, Topeka, Kan.

Gentlemen:—In the last issue of KANSAS FARMER we read that some of the farmers were having trouble getting cow peas. The first of April we will have 2,000 bushels of nice Whippoorwill Peas and will make the farmers a price in 5 and 10-bushel lots or more of \$2.75 per bushel, freight prepaid. We also have a car of nice native seed corn which is shelled and cleaned and put up in even-weight 2-bushel sacks with sample ear in top of each sack. We will make a price of \$1.45 per bushel, freight prepaid, on whatever amount anyone wants, and we have the following varieties: Boone County White, Reid's Yellow Dent, Hildreth's Yellow Dent, and Ninety-Day Yellow. Anyone wanting cow peas or seed corn write us.—BROOKS WHOLESALE Co., Ft. Scott, Kan.—(Adv.)

Watch for lice in growing turks. Along the little hollows where wing quills grow, and along the back. A very little grease should be used, or any good insect powder. The mother should be kept free from them, too.



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Few men can afford a motor car as a mere luxury. But many cars are built for looks alone. Little thought of actual requirements of cars for use on country roads is put into their making. For seventy years we have studied the problems of machinery for the country highways. In the Case Thirty we build a motor car that is all that can be asked—in looks, as well as quality. We put into this car hundreds of dollars that do not show on the surface. We put them there for a reason. They give this car out-lasting qualities which few other cars possess. It conquers mud and rocky roads where other cars might flounder. It

stands the wear and tear of hard, continued usage. Its superlative quality in its second and third and fourth years becomes more conspicuous than in its first.

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broken pledge to three generations of your family! Consider these vital hidden values when you gaze admiringly on the Case Thirty. Judge it, by face values, in comparison with other cars. Note that no other car has more pleasing lines, more refinement. But recall that in the Case Thirty you are buying more than really shows.

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Boone County White and Reid's Yellow Dent. Well matured and well selected. Shelled and graded, \$2.25; in ear, crated, \$2.75. H. O. TUDOR, HOLTON, KAN.

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every kind of highest grade fruit tree, berry or shrub, and gives new and important information about planting, grafting, etc. Supply limited. Write today. M. Y. HOPE NURSERIES, (Founded by A. C. Grissa.) 408 Missouri Street, Lawrence, Kansas.

HOME CIRCLE



Kitty Knew. Seven sheep were standing By the pasture wall; "Tell me," said the teacher, To her scholars small, "One poor sheep was frightened, Jumped and ran away; One from seven—how many? Woolly sheep would stay?" Up went Kitty's fingers; A farmer's daughter she, Not so bright at figures As she ought to be. "Please, ma'am?" Well, then, Kitty, Tell us if you know, "Please, if one jumped over, All the rest would go." —The Christian Guardian.

To cultivate kindness is a valuable part of the business of life.—Johnson.

An old stocking leg drawn over a broom will save it and prevent the splints from breaking off.

Orange peel dried and grated makes a very fine mellow powder that is delicious flavoring for cakes and puddings.

A soft cloth wrapped around the head of the sewing machine when not in use, even when covered with its box, will be found a great protection from fine dust.

To remove scorch marks from fire-proof dishes soak them in strong borax water until the ugly brown marks upon them can be rubbed off with a cloth.

Rice boiled in milk instead of water has much richer flavor. It must be watched closely while being cooked, as it will burn quickly.

A cook recommends the following: When making jam or marmalade, first butter the bottom of the kettle with good butter and the contents will neither stick nor burn. It will also prevent them from boiling over.

It is said that if the spot to be cleaned with gasoline is first rubbed with French chalk the gasoline will not leave a stain. When dry the chalk can be easily brushed off and the usual ring will be absent.

A pleasing substitute for cake which may be prepared on short notice is made by spreading quince jelly and tiny bits of oranges between lady fingers. Another good filling for lady fingers is made of chopped dates, figs and English walnut meats moistened with whipped cream and spread between them.

When making feather pillows first make a case of unbleached muslin of the proper size and put the feathers in this, then slip this in your case made of ticking. Protected in this way the feathers seldom need renovating, but the ticking may be laundered or renewed when necessary.

Presence Not Voluntary. Traveling Lecturer for Society (to the remaining listener)—I should like to thank you, sir, for so attentively hearing me to the end of a rather too long speech. Local Member of Society—Not at all, sir. I'm the second speaker.—Punch.

Americans. David Grayson, writing in the American Magazine, says that no country, after all, produces any better crop than its inhabitants. "I like to think of these brave, temperate, industrious, God-friendly American people," he observes, and adds that his faith in his country is strengthened because "so many of them are still to be found upon the farms and in the towns of this land."

Use Crochet Hook. When there is much mending of stockings to be done, try repairing those great holes in the man's socks, or the knees of children's hose, by aid of that most helpful little implement, the crochet hook, and see how much more quickly the work is done. You will also have a patch which will outwear the stocking.—Needlecraft.

Potatoes Stuffed with Bacon. With this dish you need no other meat for luncheon or supper. Wash thoroughly medium sized potatoes, and cut from one end a thin slice so they will stand. From the top cut a thicker slice to be kept for a cover. With an apple

corer push down through the middle, not quite to the bottom, and remove the core. Fill the cavity with thinly-sliced bacon, cut in small pieces. Put on the covers and bake, like ordinary potatoes, in a hot oven. The bacon gives a most appetizing flavor to the potatoes.

Rice Snowballs. Soak one pint of rice over night in cold water or for a shorter time in hot water. Drain and wash through two or three other waters. Put into a two-quart stewpan with a teaspoon of salt and one quart of water. Let it boil gently for an hour or until the water is absorbed. Dip tea cups into cold water, fill with the rice and press it down so that when turned out on the four dishes it will appear like so many snowballs. Eat with sugar and milk.

Ants That Sew. A party of German naturalists recently returned from Ceylon have reported the existence of a species of ant that has been observed in the act of sewing two leaves together for the purpose of forming a nest. This report confirms the observations of the English naturalist, Ridley, made in 1890. They saw a row of insects pulling the edges of leaves together, then others trimming and fitting the edges, and finally the completion of the work by still other ants, which fastened the edges with a silky thread yielded by larvae of the same species the workers carried in their mandibles. It is said that the sewing ants pass the thread-giving larvae like shuttles through holes in the edges of the leaves.—New York Press.

Pioneer Trees Yield Again. An orchard of 50-year-old apple trees that have not borne fruit in the last 12 years has been revived and brought into full bearing by careful spraying and pruning by the officials of the western Washington experiment station.

The station includes a part of one of the early farms of the Puyallup Valley and these trees were set out at a time when the population of whites in the valley was very small. Early last spring the experiment directors started on the orchard with the intention of reviving it. Their hopes have been more than fulfilled.

The farm officials are citing their experience as a strong object lesson to the other farmers of the valley. It is the hope and expectation of the experimental men to educate the Puyallup Valley fruit growers to such a point that by exercising a systematic care of their trees they may produce even and uniform crops of standard fruit. Some of the fruit grown in the valley is excellent in size, flavor and color, but falls down in its average.



No. 4595—Boys' Russian Suit. The blouse of this suit has a sailor collar fastened by a nobby sailor's knot, the shield is removable, and the sleeves are finished in the regulation style at the hand. The trousers are cut without a fly and are finished with leg bands or elastic. Linen, chambray, serge or chevot can be used to make this suit. The pattern, No. 4595, is cut in sizes 2, 4 and 6 years. Medium size requires 3 1/2 yards of 27-inch material. Price of pattern, 15 cents.

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Shields You from failures in Baking

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TREES GET OUR FREE GREAT BOOK

If you are thinking of planting trees or shrubbery this spring, be sure to send for this book.

We have been right here 35 years supplying the farmers of the middle west with the best trees that skill and experience can produce. Recently we published a little book on "Transplanting and Managing Trees, Shrubs and Vines," giving much valuable information and instructions as to the proper methods of planting and caring for trees, also formulas for spraying and the proper time to spray. This book will be mailed to you absolutely free if you will send us the names of five reliable farm owners who are interested in fruit. Salesmen Wanted. F. H. STANNARD & CO., Proprietors, Ottawa Star Nurseries, Ottawa, Kan.

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Lace Curtains Dry Cleaned.

Many housewives own curtains of Arabian lace. They realize that a great amount of their beauty is lost after washing. The lovely ecru tint has disappeared, and to recolor them is not always satisfactory.

These curtains can be dry cleaned in the following manner, says the New York Sun:

Spread a sheet or two upon the floor and lay the curtains carefully on them. Mix two parts of bolted corn meal with one of salt.

With a clean brush rub this mixture thoroughly through the curtains. Hang out of doors for a couple of hours and the curtains will be sweet and clean.

In this simple way they may be frequently cleaned. If the dust is not allowed to settle in them for any length of time they will wear much longer.

This bit of information should be well received by the housekeeper, for it saves a wonderful amount of time and labor.

Working Girls and the Drain for Dress.

Recently in a western city a social survey committee made an extended and exhaustive inquiry into the economic condition of working girls, with results that were none the less agreeable because they were not surprising. The investigation would probably never have been undertaken had it not been for the existence of a widespread conviction that the working girls were on an unsound economic footing. There was reasonable evidence in the fact that girls on very small incomes were dressing at a cost that could be justified only by incomes much larger. At all events, it was found that most of the girls employed in laundries, factories and stores in the city referred to were in debt. Of 509 cases investigated, 478 finished the year with deficits running all the way from \$11 to \$145. Those of this number who came nearest the point of making ends meet were laundresses not living at home; those who fell the farthest away from balancing their expenditures with their earnings were shop girls living at home.

According to the committee's statement, it costs the laundry girl about \$158 a year to clothe herself. The factory girl spends from \$126.46 to \$140.33 annually on dress. The department store girl dresses at an annual expense of from \$139.63 to \$161.66. Here again is there the coincidence that if she live at home she spends the larger sum, if away from home the smaller. In other words, where she has to pay more for her living, she pays less for her clothing. Aside from attendant circumstances, it appears that the average monthly expenditure for clothes among these girls is \$12. Compared with their earning capacity, this is an extravagant figure. It is far beyond the clothing expenditure of the average working man. Some will say, of course, that the remedy lies in raising the wage for girls; but while it is eminently right that women as well as men shall be justly compensated, the fact remains that among working girls, as shown by this and other inquiries, the rate of living more than keeps pace with the wage.—The Christian Science Monitor.

Don'ts.

Don't throw away the small ends of candles. They are excellent to add to boiled starch; or shaved, they will wax a floor.

Don't throw away the water in which



No. 6057—Girls' Suit. In this design we have a pretty coat suit for the small girl. The coat is made in box fashion and the skirt is cut in three gores. The suit is quite easy to make and may be fashioned of serge, tweed, homespun or cheviot. The pattern, No. 6057, is cut in sizes 6 to 12 years. Medium size requires 3 3/4 yards of 36-inch material and 3/4 yard of black velvet for the collar. Price of pattern, 10 cents.

unsalted rice has been boiled. It makes the best starch for lingerie waists.

Don't throw away the paraffin from jelly and marmalades. Wash each piece and save it. Boil the accumulation and there will be clean paraffin for next jelly time.

Don't throw away lemon and orange peels. Dry and powder for flavoring, or cut into shreds and boil in a white syrup for a sweetmeat.

Don't throw away the water in which potatoes, peas, beans, and so forth have been boiled. The water contains the valuable vegetable salts.

Don't throw away broken or dry pieces of bread. The larger pieces can be made into toast for poached eggs, or toast points for creamed meats and fish. Smaller pieces may be buttered, cut into cubes and browned in the open as croutons to serve with soups. They may be made into a bread or chocolate pudding or used for excellent poultry stuffing. If too dry for this, roll them and set away in a glass jar for cutlets and croquettes.

Don't throw away the few spoonfuls of various vegetables. There are few vegetables that do not mix well. They may be blended into an appetizing salad.

Don't throw away cold, baked potatoes. Peel and slice them and make into a German potato salad.



No. 6082—Ladies' Maternity Waist. This model gives a clever idea for a maternity waist that may be worn with separate maternity skirts or that may form part of a complete costume when joined to a skirt of the same material. The waist closes at the front and may be made with or without body lining and plastron. The pattern, No. 6082, is cut in sizes 34 to 42 inches bust measure. Size 36 requires two yards of 36-inch material and 1 1/4 yards of 22-inch all-over lace. Price of pattern, 10 cents.



No. 6078—Ladies' Dress. A pretty gown made in the latest fashion effect with more than one clever style touch is here presented. The dress closes at the front and the beautiful skirt is cut in three gores. The standing collar is made of contrasting material and the insert at the bottom of the skirt corresponds. Satin is nice for this purpose, while any of the popular fabrics may be used for the skirt. The pattern, No. 6078, is cut in sizes 34 to 42 inches bust measure. Size 36 requires 4 1/4 yards of 36-inch material and 3/4 of a yard of 24-inch contrasting goods. Price of pattern, 10 cents.

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Look Better—Fit Better—Wear Better

"Tess and Ted" school shoes have become famous for their style, finish and long wearing qualities. Four pairs will outwear five pairs of ordinary shoes made for children's wear.

Many shoemakers yield to the temptation to use substitutes for leather in children's shoes, because of the high price of leather, but we have built up our enormous business by making honest leather shoes.

Cut up a pair of "Tess and Ted" or any other "Star Brand" shoes and you will find that they have sole-leather heels, soles and counters. No substitutes for leather are ever used. See No. 3130—a new model for boys.

Pure Shoe Legislation is pending in Congress and many states to protect you against fraud. We heartily endorse it. The rights of 100 million consumers are greater than those of a few hundred manufacturers.

"Tess and Ted" school shoes are made in a hundred different styles for boys and girls of all ages. They are designed to properly fit the foot of growing children.

"Tess and Ted" school shoes and over 700 other styles of "Star Brand" shoes are for sale by 20,000 good merchants. Don't just go into any store and ask for them, but hunt up the "Star Brand" dealer, or write to us for name of nearest merchant who sells them.

The name on the sole and the "Star" on the heel insures honest values.

"Star Brand Shoes Are Better."

Boy's No. 3130



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MANUFACTURERS Branch of International Shoe Co. ST. LOUIS

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Southwest Kansas

There's not much vacant land left in Kansas. The five southwestern counties have remained unsettled and undeveloped because of inadequate transportation. The Santa Fe is building new lines to serve this territory, and thousands of farms next season will be put to creating wealth. This is your opportunity to get a good Kansas farm cheap. The terms are advantageous, the results certain.

If you had taken a Kansas farm ten years ago and developed it with intelligence and vigor, you, too, would now be lending money to Wall Street, as other Kansas farmers are doing. You, too, would have a piano in your parlor and an automobile in your barn.

The next best thing is not to lose this opportunity of securing a quarter section of this splendid wheat land.

Besides wheat, oats and barley, you can get good profits out of speltz, milo-maize and kaffir-corn fed to your own stock. Hogs thrive on milo and kaffir, and disease is unknown. Western Kansas farmers find peanuts a splendid hog feed, easily grown and easily fed. Broom corn brings fancy prices, and potatoes, garden truck, fruit and alfalfa will all do well for you.

There are some flowing artesian wells in this territory, and everywhere that wells have been put down water comes to within thirty to sixty feet of the surface. Irrigation by pumping will doubtless be commonly practiced, and the tremendously increased yields will pay big dividends on the small investment required for gasoline or oil driven pumps.

The climate is pleasant and healthful. Your boys and girls will find good schools. Churches, social clubs and farmers' institutes are being organized. Rural telephones and free delivery are coming in. In every way development is rapid, and only a few years will give you every advantage that older communities have.

You can secure a quarter section (160 acres) for only \$200 down. The price is \$10 to \$15 an acre. The terms are astonishingly liberal. Only one-eighth down and one-eighth each year after the second year, with interest at only 6 per cent. You see you have two full seasons before a second payment on the principal is required.

For further information write for illustrated descriptive folder containing map and full details.

Santa Fe Land Improvement Co.
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For mailing 3 dozen eggs. Made strong. Each egg has cotton lined compartment. Be first to keep your grocer supplied with fresh eggs. Price, 90c; 3 for \$2.50, postpaid. Order today. Going like hot cakes.

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700 West Eleventh St., Kansas City, Mo.

55 BREEDS Pure-Bred Chickens, Ducks, Geese, Turkeys, also Incubators, Supplies, and Coffee Dishes. Send 4c for large Poultry book Incubator Catalog and Price List. H. H. MINIKER, Box 57 Mankato, Minn.

White Plymouth Rocks

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

THOMAS OWEN, Topeka, Kansas.

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POULTRY



Now that winter is over, don't forget that your poultry house needs a general cleaning and disinfecting. A white wash of lime and water, in which some crude carbolic acid has been placed, is the best thing to spray the house with, while kerosene oil and carbolic acid is best for the nest boxes and roosts.

Mr. Tiff Moore, Osage City, Kan., has bred Brown Leghorns for 32 years, longer, probably, than any other breeder in the state. The writer has known Mr. Moore and his birds for twenty-five years. He practices the double mating system, breeding one pen for pullets and another for cockerels and has got things down to a scientific basis.

If you are not feeding wheat to your laying hens, you are making a mistake. It costs more than the cracked corn, but you don't need to feed so much of it, and it has properties not found in other grains. One feeding a day of wheat, with oats and cracked corn makes a scratch ration that is hard to beat.

An enthusiastic Brown Leghorn breeder sends in this doggerel:
"My hens don't lay," is the common cry,
They are not the kind, is the reason why;
They sprung from the common mongrel race,
'Tis folly to think they can ever keep pace

With the Brown Leghorns.
Please seat yourself at once, my friend,
And to me a liberal order send,
It sure will pay, for everlasting hens to lay
Are the Brown Leghorns.

Until the bugs and insects come the hens must be supplied with some animal food, or there will be a scarcity of eggs. In some communities cut green bone can be bought at the butchers for about two cents per pound. A feed of this twice a week will help the egg output considerable. Where there are several hundred hens in a flock it will pay to buy a green bone cutter, which can be bought for from six to twelve dollars.

While it is neither possible nor necessary for every poultryman to have an expert knowledge of the chemistry of the foods that are to be fed to his fowls, yet some of the general principles involved are so fundamental that no one can really afford to be in ignorance of them. We should then be more able to feed more intelligently and get such results as we desire, and at the minimum cost. For instance, if we want our fowls to put on flesh rapidly, we should give the food that contains most of the fat-forming elements. A chemical analysis shows that corn has a third more of these elements than oats; and from this it will be seen that corn is a better food for fattening fowls than oats. But if you want to keep the hens in the best all-around condition, oats are better than corn, as they contain a larger percentage of protein, or muscle-producing elements than corn. Wheat-bran and skim milk are rich in the elements that form a large part of the white of the eggs, which fact has its bearing upon the desirability of using these to assist in egg production.

It is wonderful to think of the great number of accessories that are now considered necessary in well-regulated poultry yards. Among the things on exhibition at the recent Poultry Show in New York were, incubators and brooders with capacities ranging from 25 eggs to 12,000 eggs; water fountains, self-feeding hoppers, egg canners and trays, egg boxes, bone cutters, trap nests, self-recording nests, air-lock fountains, portable poultry houses, hen coops, exhibition coops, sanitary hovers, wire nest boxes, poultry feeders, disinfectants, poultry remedies, roup cures, safety lamps, rat destroyers, clover cutters, medicated nest eggs, perch supporters and perches, root cutters, caponizing instruments, sprayers, leg bands, punches, poultry markers, revolving egg cabinets, food and water holders, pedigree egg trays, moisture gauges, brooder stoves, egg testers, thermometers, automatic feeders, automatic exercisers and, as the sale bills say, other articles too numerous to mention. Pretty soon, all a poultryman will have to do will be to sit at his desk and press a button and lo, all the chickens will be fed; press another

button, and they will be watered; press still another, and the poultry house will be cleaned; still press a button and the eggs will come rolling into the office on egg carriers from the nest boxes; press another—but we had better stop, or there will be no end to this pressing business.

The celebrated poultry artist, Mr. F. L. Sewell, recently paid a visit to Mountain Grove, Mo., where the National Egg-Laying Contest had been carried on. He pays a grand tribute to Mr. Quisenberry for the efficient manner in which he conducted the experiment. He says:

Under Mr. Quisenberry's capable direction, the 200-egg-per-year hen has been far outstripped in this contest by representatives of Standard-bred Plymouth Rocks, R. I. Reds, Wyandottes, Leghorns, Anconas, Orpingtons and Langshans. Considerable over a score of the hens went beyond the 200 mark. Eighteen went to 218 and upwards, 16 went to 223 and better, and 8 were above the 230 mark.

The third prize hen, a Barred Plymouth Rock, made a record of 245 eggs; the second prize, an R. C. R. I. Red, reached 255, and the greatest layer in the contest, a White Plymouth Rock, gave a splendid yield of 281 large, well-formed, marketable eggs during the 365 days.

What is not generally known was that a National Advisory Board assisted Mr. Quisenberry. This board consisted of five professors of poultry in different state universities and two managers of poultry plants.

Each member of this advisory board first sent to Mr. Quisenberry the formula for what he believed to be the best egg laying ration. Mr. Quisenberry from these composed a well-balanced formula and submitted this composite formula to each member of the board for his approval or suggestions. A few suggestions as to local prices were made, as the intention was to make the feed economical as well as effective. The results obtained from feeding a ration mixed according to the formula, has certainly proved its value and it should be given a thorough trial on egg farms, where the different ingredients can be obtained. The ration is as follows: Cracked corn, 200 pounds; red wheat (whole), 200 pounds; heavy oats (whole), 100 pounds. These grains were thoroughly mixed and used for scratching feed, being fed indoors in deep litter of short-cut straw, three times a day—at early morning, at noon and early enough in the evening to allow the birds time to scratch and find it before they went to roost.

The dry mash was proportioned as follows: Wheat bran, 100 pounds; middlings, 200 pounds; cornmeal (coarse), 200 pounds; ground oats, 200 pounds; beef scrap, 150 pounds; alfalfa meal, 75 pounds; gluten meal, 50 pounds; O. P. oil meal, 25 pounds; fine table salt, 8 pounds; powdered charcoal, 25 pounds. This mash was kept in hoppers in the houses where the fowls could help themselves to it at any time. At noon the fowls had a little of this mash, wet and placed in troughs, and they ate it with great relish. No effort was made to change the ration and make it richer in order to force better production toward the end of the season.

We have already published these formulas in KANSAS FARMER, but inasmuch as they must have been extra good to make the remarkable record of 134 eggs each on an average from 655 birds, and this, notwithstanding the fact that some of the hens did not start to lay for three or four months after their arrival, and that quite a number were old hens, some in their third and fourth years. Hence we think these formulas are worthy of being repeated and retained and followed.

If turkeys show signs of cold, or "swell-head," dip head in solution of permanganate of potash and warm water—enough potash to turn the water a purplish red. A little placed in their drinking water, at all times, is a splendid preventive of all germ diseases and a good liver regulator.

It is much more comfortable to get the corn stalks out of the silo than out of a snowdrift.

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We have just published a wonderful new book entitled "Clover, the Great Cash Money Crop." This book is truly a most remarkable source of information on the subject of clover raising. For the first time the opinions and experiences of the world's greatest clover authorities and practical growers have been gathered together in printed form. Every question you can think of is fully answered. It tells you how to get a sure "catch" first planting; how to keep clover in the rotations about clover as a soil enricher; how to handle the crop for hay and seed production; how to grow clover that makes richer feed—that produces more beef and more milk—that puts immediate cash money in your pocket. It explains the cause of clover failures; how to avoid winter killing; how to prevent ground heaving; how to guard against the loss from heat and drought; it tells all about the causes of "clover sickness" and how to deal with it. These and hundreds of other questions are answered, covering sixteen clover varieties, including Red, Mammoth, Crimson, Alaska, Sweet, White, Yellow, Japan, Berseem, Burr, Serradilla, etc.
This book is a gold mine of information to the farmer who is looking for bigger and better results. Ordinarily this book is sold for 35 cents per copy, but for a short time we will mail a free copy, postage prepaid, to the readers of this paper, or until a certain number have been distributed. If you will write at once you will be sure of getting a copy by return mail.
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Turkey Culture.

Mrs. Clyde H. Myers, Fredonia, Kan., has issued a booklet on the general care and culture of turkeys, gleaned from her practical experience with these birds. We know many of our readers will be glad to profit from her experience. Mrs. Myers now breeds the Bourbon Red Turkeys, having found them of a less roving disposition than some other varieties that she bred. They are large in size, rugged and hardy by nature, very domestic in habits, and exceedingly beautiful in plumage, and are an ideal turkey. Mrs. Myers says: "It is ever a wonder to me that turkeys are not more generally raised on the farms. They require no outlay for equipment, nor feed; not necessary feed, at least. I know some people do cram their turkeys on grain, but it is not necessary, neither is it good for the turkeys. They are natural foragers, and will pick up almost their entire living in insects, grass and scattered grain that would otherwise go to waste.

Ten years ago, turkeys brought from 8 to 10 cents per pound on the market. Today they bring from 15 to 18 cents, in even our remotest markets, and if close to a large town, from 18 to 22 cents. Yet their cost of production has not increased. Who can say the same of cattle, hogs, horses, or any other live stock kept on the farm?

Turkeys are not hard to raise, if managed rightly. If you keep your broods of young around your chicken runs, and coddle them, and cram them several times daily upon all kinds of feed, they will be hard to raise. Truth is, you will raise none. But if you care for them as their nature requires—give them free range from the first, allow them to pick up their own living, keep the young free from lice, they will grow and thrive for you as does no other fowl, and will yield you a handsome income that is sure and certain each year. I know whereof I speak. For twenty years, turkeys have not failed a single season to yield a neat sum, when raised even purely for the market. And since keeping pure bred birds and selling for breeding purposes only, should I tell you the net sum of my yearly income, you would hardly believe it.

Turkeys simply cannot be raised on the kinds of feed and under the same conditions as chickens. If you are trying to do so, don't, don't! The broods of young must be allowed free range where they can pick up the variety and kind of food that is best suited to their needs. I have successfully raised broods of young turkeys with a chicken hen mother—have known very successful turkey raisers who reared all their large flocks in this way. But the chicken mother should be put off in a coop in an orchard or field, and kept confined there until she will of herself stay there. The little turks will soon of themselves learn to range off and lead the chicken mother with them. But it is utter folly to try to raise young turkeys close about the yards and runways of chickens. They may thrive for a while; but sooner or later they will droop, and hump up, and die.

They are great eaters; and if allowed a heavy grain diet, unbalanced by the variety they naturally pick up on free range of fields, they overeat, which brings on that fatal "liver trouble" so well known to old turkey raisers.

Turkey eggs require 28 days for hatching. Do not try to hatch them in incubators. Gentle hens can make a much better job of it.

One tom to seven to ten hens is the proper proportion to mate them.

Early eggs invariably produce a larger per cent of toms, later ones, more hens. This is worth remembering, if you are buying eggs to secure a start in stock. You then, usually, want most hens.

Oats is the best grain that can be fed to breeding stock. At any time, and especially during the laying season, this grain may be given them without stint or limit.

Do not feel that you must feed young turks regularly after, say, three weeks old. In ranging the fields with the mother they will pick up all the food they need and of the kind they need—the kind that suits their nature, very much better than all the corn bread, Dutch cheese, etc., that you can give them. They will grow so much faster and be so much healthier by letting them balance their own ration.

Briefly, my method of caring for the young: 1 powder sitting hens several times during incubation, that the young turks may start out life unhampered by lice. I do not disturb or feed the poults for 36 hours after all are hatched. I have ready, off in a shady orchard or nearby

field, an inclosure about 10 by 12 feet, made of foot boards; in this is a coop, warm and dry. When poults are from 36 to 48 hours old, I remove hen and young to this enclosure, giving them water and a light feed of very hard boiled eggs, into which has been mixed a little coarse sand. I also feed onion tops, or lettuce, chopped fine, for variety.

Feed the egg and green stuff, alternated with an occasional feed of very stale light bread, moistened, for the first week, about four times daily. Give only what they will clean up readily. Better keep them a little hungry. When from eight to ten days old turn mother and young out on free range, feeding but twice a day. If with a turkey mother, you need not be afraid of a little dew or a shower. Many, many times I have gone out after hard rains, expecting to find my young turkeys wet and bedraggled. But instead would find them dry as could be. Many people advise keeping the brood penned of mornings until the dew is gone. But I do not do so. The mother is restless and fidgety to get out, and tramples her young. And the poults worry and call to get out. The grass may be exceedingly wet with dew or rain, but turkey instinct understands it; they pick their way along so carefully that they seldom show any ill effects from it.

Keep the young away from the chicken runs and feed. After my poults are three weeks old, they are fed just occasionally, a little stale bread, just often enough to keep them gentle. If I see one looking dumpy I immediately look for lice. Not on the head. Turkeys are seldom bothered with the head louse, as are chickens—but the gray turkey louse, found along wing quills and fluff and back.

Saves Her Little Chicks.

Dear Sir: For the benefit of your readers you may print the following: "I have been in the poultry business for years and have lost thousands of incubator chicks from bowel trouble or White Diarrhoea. Three years ago I sent 50c (M. O.) to the Walker Remedy Co., E 4, Lamoni, Iowa, for a package of their Walko Remedy, and since using it have had splendid success. Raised over 90 per cent and lost only a few from bowel trouble. Never had such a thrifty flock of the little downy fellows. If more poultry raisers knew of this remedy there would not be so much loss from that dread disease, White Diarrhoea.—MRS. J. L. SHOEMAKER, Lucerne, Kan.—(Adv.)

About Mulefoot Hogs.

I see in KANSAS FARMER where Mr. Myers is buying Mulefoot hogs because they are less liable to cholera. I see a good many who advertise their Mulefoot hogs as immune from cholera.

A man not far from me bought Mulefoots through such an advertisement last spring and raised 30 or 40 head of pigs. When the cholera struck our neighborhood last fall he said that the neighbors could put one of their dead hogs in his lots; that his hogs were immune from cholera. It was not long, however, before his hogs were dying just the same as other hogs, without being in contact with any diseased hog.

I do not believe any hogs are immune unless they have had cholera or have been treated with the simultaneous method of serum and virus, which would make them immune.—H. O. HARNY, Aurora, Neb.

The Mulefoot hog is not immune from cholera, but as it is a comparatively new breed, it is said to retain much of the vigor of its wild ancestors and therefore is less susceptible to hog cholera than the other breeds common to this country. Farmers and breeders should recognize the fact that the hog is one of the most artificial of animals. His whole appearance and quality has been given him by the skill of the breeders. He is raised under artificial conditions and hence is liable to infectious diseases in a way which would not apply to hogs in the wild state. If the Mulefoot hog is less susceptible to cholera than the other breeds, it may be true that years of breeding and feeding, under corn belt conditions, will serve to reduce this partial immunity so that he will be just as susceptible to cholera as are the other breeds now. This may not come for years, and it may never come, while there is a possibility that immune hogs may be bred in all the different breeds by careful selection of individuals which are naturally immune, and possibly through the help of the serum treatment. The breeders of the Mulefoot hog have developed them so that they are good hogs of strong constitution and are very prolific. Those who are breeding them think a great deal of them and their number is increasing.

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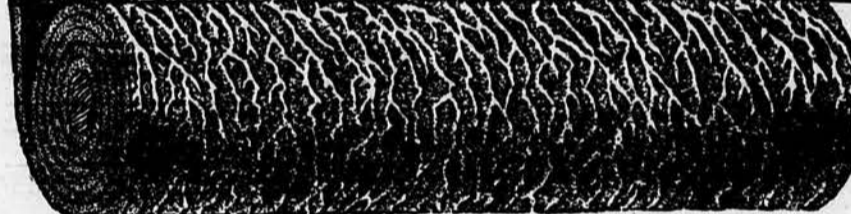
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KINGMAN 1,120 a. solid body, 350 cult., 500 COUNTS, fair bld., near market; KANSAS price \$32.50, half cash, bal. at 5 RANCH per cent. JOHN P. MOORE LAND CO., Kingman, Kansas.

A REAL BARGAIN. Fifty-acre farm, 6 miles Parsons; 3 1/2 miles good small town; new house, new barn, plenty fruit and water. \$3,000. Donahue Realty Co., Mound Valley, Kan.

320 A., 3 mi. from shipping point, 5 mi. from Hamilton; 150 a. of it is fine bottom land; part in alfalfa now; 5 a. timber, about 200 a. in cult., 9-room house, good barn. A fine farm, worth \$16,000. A. F. DOVE, Hamilton, Kan.

A HOME BARGAIN. 80 acres, well improved, 2 1/2 miles from town and graded school; good alfalfa land. Price \$6000. Write for list. V. E. Niquette, Salina, Kan.

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

FOR TRADE—An exceptional first-class stock of hardware and implements. Only exclusive store in a town of 4,000, and best farming country in Kansas. Invoice, \$14,000. Clear. Want land in central or eastern Kan- sas. Address M. W. CAVE, Salina, Kan.

TWO BARGAINS. 100 acres near Olathe, well improved, fine, \$110.00 per acre. Fifty-seven acres, improved, best of Kaw bottom land, greatest bargain in the county. AT KANSAS CITY'S DOOR. Write for lists. T. H. MILLER, Olathe, Kansas.

STAFFORD COUNTY SNAP 355 acres well improved, 6 miles of St. John. 275 acres in wheat, two-fifths goes with place; 40 pasture, alfalfa. Price, \$75 an acre cash; \$15,625 cash, balance terms. Have snaps in Ness County land. Buxton Land Co., Utica, Ness Co., Kansas.

\$175 PER MONTH For ten months, buys level, well located lot in Plains, Kan. "Special bargains." Only a few to be sold at this low price. Act quickly. JOHN W. BAUGHMAN, Drawer B, Plains, Kan.

MAKE MONEY in the Dairy and Poul- try business. Come to Mountain Grove, Wright County, Mo. The coming Dairy and Poultry country of the southwest. Good farm land cheap, good winters, fine water, fine grass, good health. Write for descrip- tive literature. NEIGHBORS & FRISBEE, Mountain Grove, Missouri.

FINE 160 A. FARM, lime stone soil, good house, barn, etc. Nicely located. Will pro- duce wheat, corn, clover, alfalfa. Part cul- tivated, balance pasture. Close to Fredonia, Kan. in oil gas belt. Will take \$40 a. and is worth \$75. Address Owner, Lock Box 307, Fredonia, Kan.

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

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

135 ACRES splendid alfalfa, corn and or- chard land, 1 mile from Chetopa, Kan., 160 miles south of Kansas City; high bottom; never loses crops from overflow; 25 acres in alfalfa, cuts 4 crops a year; no irrigation necessary; 60 acres in wheat, to be fol- lowed by alfalfa fall of 1913; all fenced; no buildings; \$50 per acre; easy payments; other bargains; send for list. J. B. COOK, Owner, Chetopa, Kan.

Will make a very attractive propo- sition to agents. I have a splendid as- sortment of land in Minnesota, North Dakota and Montana. Write me. My proposition includes a liberal commission for selling. D. J. McMAHON, 818 Commerce Bldg., St. Paul, Minn.

CHEAP FARM—EASY TERMS. Owing to other business, owner will sell 320 acres rich level prairie in Western Can- ada. Land produces 30 bushels wheat or 75 bushels oats per acre; 200 acres in cul- tivation; small buildings; water for stock on place; 2 miles from station and elevator. Price, \$30 per acre; \$1,000 cash, balance small yearly payments. Adjoining land sold higher and going up. Chance for free home- stead in connection with above. D. C. VAN BUREN, Creek Bend, Sask., Can.

Our Land Man

has traveled over Arkansas for 15 years and knows her Farm Lands. Himself a successful farmer, he recognizes LAND OPPORTUNITIES and will ac- cept none other for our offer- ings. LET HIM SERVE YOU. Write

NEW HOME LAND COMPANY Box 903 Little Rock, Ark.

200 ACRES FIVE MILES TO TOWN

14 miles from county seat; 60 acres culti- vated; half can be plowed; small house, spring water, plenty pasture and hay land. Price, \$4,000, half cash, balance four years at 5 per cent. Possession at once. Ideal dairy farm. The farms advertised last week sold. GET BUSY. F. L. NEWTON, Clay Center, Kansas.

THREE FARMS FOR SALE

One—320 Acres in Solomon Valley; 100 acres in alfalfa. All alfalfa land. One—70 Acres in Illinois. Part creek bot- tom, good house. Other improvements fair. One—30-Acre Farm in Illinois. Part creek bottom. Fair improvements. Full information and prices on request. J. E. BURBANK, Kansas City, Mo.

REAL BARGAIN

To make division of property, will sell 400 acres of bottom land in part of famous Ar- tesian Valley of Meade County. Improved. Fine pump well and flowing well. 200 acres cuts two crops fine prairie hay. Adapted to alfalfa. Write PAUL R. WALTERS, Fowler, Kansas.

Alberta--Canada

Farmers, we can place you on improved farms in the finest mixed farming section of Alberta. The best of black soil, good water. Two railroads operating this fall. Rural phones to be installed. Price of land has been rising steadily, but is still very much below its value. We will gladly send you all information free. Write us today. ECKFORD & ATKINSON, Eckville, Alberta, Canada.

BEST TOWN TO LIVE IN.

If you would like to live in the most beautiful city in the West, with unsurpassed educational, business and religious advan- tages, in a city clean, progressive, where real estate values are low but steadily ad- vancing, where living expenses are reason- able, a city with natural gas at lowest price, address the SECRETARY OF THE COMMERCIAL CLUB, Topeka, Kansas.

FINE DAIRY FARM

240 Acres, highly improved, in high state of cultivation; good orchard, silo, alfalfa; near best college town. \$52 per acre. Write for farm list. T. B. GODSEY, Emporia, Kan.

IDEAL FARM HOME

240 ACRES—60 acres choice bottom, fine improvements; 3 miles from good town. Price, \$15,500; easy terms. Address LOCK BOX 155, Clay Center, Kansas.

1700 ACRES! Double your money on this fine level body wheat land, east Finney Co., Kan. Only \$12.50 per acre; terms. Hutchinson property for good land. HAINES REALTY CO., Hutchinson, Kan.

Ozark Farms lands for sale or exchange, from \$5 to \$100 per acre. If interested write Avery & Stephens, Mansfield, Mo.

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

BUY or Trade with us—Exchange book free. BERSIN AGENCY, El Dorado, Kan.

FIELD NOTES

Alfalfa Covers. This week we start advertising for the Beatrice Tent & Awning Company of Beatrice, Neb. This firm makes a specialty of alfalfa stack covers and has built up an immense business selling direct to the farm- ers all over the West. Their catalog gives complete information and prices on their full line of goods. Write for it today, men- tioning this paper.

The Jones Auction School. This week we start advertising for the National Auctioneering School located at Chicago. This school is the oldest auction school in America. It was established about nine years ago, and every year since has graduated one or more classes. They have graduates in nearly every state in the Union. These classes are limited to from 50 to 60, and the course consists of work in voice culture, oratory and other drilling necessary to make a good salesman. It takes five weeks to complete the work and the successful auctioneers now earning good money is the best evidence of the splendid training to be had there. Carey M. Jones, president of this school, is one of the greatest auctioneers of the day, and his genius is a great factor in the school. Write for free catalog, mentioning this paper.

KANSAS STATE UNIVERSITY LIBRARY

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items or stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 300,000 readers for 4 cents a word for one week; 8 cents a word for two weeks; 12 cents a word for three weeks; 14 cents a word for four weeks. Additional weeks after four weeks, the rate is 3 1/2 cents a word per week. No "ad" taken for less than 50 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

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

HELP WANTED.

GOVERNMENT FARMERS WANTED. Examination April 9. Prepare now. \$75.00 monthly. Write Ozment, 44 F. St. Louis, Mo.

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

WANTED—RAILWAY MAIL CLERKS. \$90 monthly. Examinations everywhere May 3. Write for vacancy list. Franklin Institute, Dept. M 85, Rochester, N. Y.

WANTED—RAILWAY MAIL CLERKS. Examination May 3. Splendid salaries. I conducted gov't exams. Can help you pass. Trial lesson free. Write Ozment, 44 F. St. Louis.

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

MEN AND WOMEN WANTED FOR GOVERNMENT parcel post and other government positions. \$90 monthly. Annual vacations. Short hours. Thousands appointments coming. "Pull" unnecessary. Farmers eligible. Write immediately for free list of positions open. Franklin Institute, Dept. M 85, Rochester, N. Y.

AGENTS—\$173 IN TWO WEEKS, MADE by Mr. Williams, Illinois, selling the Automatic Jack combination 12 tools in one. Used by auto owners, teamsters, liveries, factories, mills, miners, farmers, etc. Easy sales, big profit. Exclusive county rights if you write quick. Automatic Jack Company, Box O, Bloomfield, Indiana.

SALESMAN—TO SELL HIGH GRADE guaranteed groceries at wholesale direct to farmers, ranchmen and all consumers. Earn \$4 to \$10 and up per day. A big chance to get into business for yourself. Save the buyers the retailer's profit. Every customer is a permanent one. Demand constantly increasing. Latest plan. K. F. Hitchcock Hill Co., Chicago.

A Customer For Everything You Have to Sell

The past few days we have had inquiries from no less than a half hundred readers who wanted to know where they could obtain kafir seed of a high-yielding type such as was described in our kafir article of March 1. We have also had numerous inquiries regarding cow peas for seed. We have also had two inquiries for aged Holstein bulls. These inquiries have all been referred to advertisers in KANSAS FARMER. The advertiser sells his stuff. If you have a surplus of any seed, live stock, or for that matter anything else to sell, our classified columns will sell it. Read the particulars at the top of this column.

WANTED

WANTED—STEAM TRACTION ENGINE, 16 to 20 horse-power; good condition. J. Vansweringen, Holton, Kan.

SITUATION WANTED.

MARRIED MAN 30 YEARS OLD, wants work on a farm. Experienced. Want house and good wages. J. C. Miller, Ingalls Hall, Atchison, Kan.

HORSES AND MULES.

FOR SALE—EXTRA GOOD YOUNG jack. Walter Strong, Moran, Kan.

SALE OR TRADE—1,000-POUND BLACK jack; home-bred English Shire stallions, 4 and 5 years. Wm. Rayl, Hutchinson, Kan.

FOR SALE—PERCHERON AND SHIRE stallions from rising 3 up. James Auld, Wakefield, Clay Co., Kan.

GOOD BIG JACK, 15.1, STANDARD, 8 years, right every way. A money maker. \$600. L. Cox, Concordia, Kan.

REGISTERED SHETLAND PONIES— The pure Shetland is the true child's pony. Choice young stock for sale. Write N. E. Stucker, Ottawa, Kan.

FOR SALE—TWENTY-FIVE SMALL jennets, blue and black; weight, 500 or 600. Twenty-five apiece, or take in good jack. Ronald Smith, Route 1, Box 37, Wichita, Kan.

JACKS FOR SALE—LARGE MAMMOTH black jacks, white points, abundance of bone, size, head and ear; 9 months old to 6 years old; reasonable prices. Guaranteed. S. C. Nunnally, Route 6, Lexington, Ky.

HOGS.

TEN DUROC FALL BOARS AND 15 gilts, all vaccinated. A. G. Dorr, Osage City, Kan.

POLAND CHINAS—TWO BRED SOWS, one sired by Growthy King, the other by O. K. Chief, and my herd boar sired by Long Orange, Orlando Fitzsimmons, Yates Center, Kan.

PATENTS

SEND FOR FREE BOOKLET. ALL About Patents and Their Cost. Shepherd & Campbell, Patent Attorneys, 500-R Victor Bldg., Washington, D. C.

PATENTS SECURED. IDEAS BRING wealth. Prompt service. Personal attention. Harry Patton Co., 323 McGill Bldg., Washington, D. C.

CATTLE.

REGISTERED JERSEY CATTLE FOR sale by C. S. Hart & Sons, Milan, Mo.

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

FOR SALE—JERSEY BULL, SONIA'S Tormentor \$4145, calved February 6, 1924. Cannot use longer. E. S. Parmenter, Route 1, Stockton, Kan.

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

FOR SALE—75 HEAD OF YOUNG dairy cows, just shipped in from Minnesota. Jerseys, Guernseys and Holsteins. Prices reasonable for quick sales. Also have some extra fine 2-year-old bulls. O. N. Himelberger, 405 Fillmore St., Topeka, Kan.

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

DOGS.

WANTED—WHITE ESKIMO SPITZ puppies under 8 weeks old. Brockway's Kennels, Baldwin, Kan.

HOUNDS WILL TRAIL AND RUN UN- til holed or killed. Fox, Wolf, Coon, etc., pedigreed. Sent on 10 days' trial. R. F. Johnson, Assumption, Ill.

GOATS

TOGGENBURG, FAANEN; HEAVY milkers. Pea fowl, Pekin ducks, mink. Prospectus, 4 cents. Golden Goat Reserve, Combs, Ark.

BEE SUPPLIES.

BEE SUPPLIES, ROOTS GOODS. SEND for catalog. O. A. Keene, 1600 Seward Ave., Topeka, Kan.

FIELD NOTES

Advertising All Right. Enclosed find draft for \$80, which please place to the credit of our account. Our advertising in Kansas Farmer was all right. We had a good sale and will probably hold another next year.—W. H. BAYLESS-DEKO & CO., Percherons, Belgians and Jacks, Blue Mound, Kan.

His Entire Approval. I have been a reader of Kansas Farmer for many years, and I can say that you are now making the most up-to-date paper. I have ever known. I think I know a good article when it is presented to me. As you know, I am sometimes a kicker, but you are making the "Old Reliable" a success.—C. P. BAKER, Valencia, Kan.

Buy Immune Pigs. J. L. Griffiths, Riley, Kan., breeder of Poland Chinas, makes change in his advertising this week. He now offers immune spring pigs to be taken at weaning time for \$25 each or \$45 per pair. Mr. Griffiths has about 75 pigs out of 700 and 90-pound dams—sows that have produced high-silling boars and gilts in the past. Orders are now being booked and they will be shipped as soon as weaned. The cost of shipping will be light and they can be grown out to suit the purchaser. Mr. Griffiths says he has already booked a boar out of the great sow, Lady Wonder 4th, the dam of Kansas Wonder. This animal will go to Perry, Okla. Look up Mr. Griffiths' advertisement in this issue and write soon while you can get the best.

It Pays to Be Particular. A farmer who, having the means to do so, would deliberately neglect keeping up the improvements on his farm, would refuse to buy new machinery when needed and fail to keep his live stock in sound, healthy condition, would be considered a very shiftless, indifferent sort of a farmer by his neighbors. And he is said to their great credit, there are very few such American farmers. But it is not only his fields, stock and barns which should receive the sole consideration of the farmer. If he will stop to think about it, he will realize that the household affairs are well deserving of his attention. There are certain modern conveniences for the home which by no means should be regarded as luxuries because they are, in fact, present day necessities, the first and most important among them being a serviceable, up-to-date kitchen range. In the selection of a range the same care should be exercised as in the purchase of a horse, wagon, a cultivator or any other item of farm equipment. No farmer would think of buying a brood mare, for instance, simply from her appearance. He would insist upon knowing something about her pedigree, record, etc., before investing his money. Nor would he judge the merit of a plow or any other farming implement from the way it happened to be painted, or buy it even though the price were cheap unless he had good reason to believe that it was honestly made throughout. The range for the home should be as carefully examined before buying. There is one range, the Great Majestic, which will stand the most critical inspection. It is the only range in the world which is made entirely of malleable iron which cannot break, and charcoal iron which will not rust like steel. It has many new and exclusive features which no other range possesses, including, an all copper, movable reservoir, in direct contact with the heat, accurate oven thermometer, oven lined with asbestos board, drop doors, etc. The farmer who buys a Majestic Range has the satisfaction of knowing that he is getting the best that his money can buy—a range that has an established reputation as a perfect baker, a big fuel saver and one that will outwear three ordinary ranges. Majestic Ranges are for sale by the best dealers in nearly every county in 40 states and therefore no one need experience any difficulty in making a personal examination of this vastly superior kitchen range.

Welding by Electricity. Welding by electricity has long been successfully established as the only process to perfectly amalgamate two metals into one. You have hardly a piece of machinery on your farm but that is electrically welded where there is a juncture of metals. The present state of perfection of garden and barnyard tools, mowers, reapers, binders, threshers, cultivators, kitchen utensils, dairy machinery, edge tools, chains, automobile engines and steering gears, bottoms of oil cans, frames of bicycles, etc., is made possible through electric welding. The same process produces "Pittsburg Perfect" electrically welded wire fencing, which is a solid, one-piece fabric enjoying many distinctive advantages, among them being the ease with which it is strung, the great tension to which it can be stretched because of the absolute elimination of "long" and "short" line wires, the smooth surface making wire-cuts impossible, and the neat appearance of the fence. Modern methods of manufacture in many lines have been greatly benefited by the discovery and practice of welding by electricity.

Cochran's Make Good Sale. The C. G. Cochran & Son Shorthorn cattle sale held at Salina, Kan., Friday, March 14, was well attended and a success from the standpoint of the offering was a good one and fully appreciated by the buyers present. A big crowd was present and a lot more could have been easily sold at prices a trifle lower than the general average. The bulls were young and lacked fitting. Col. Carey M. Jones handled the sale in a manner which clearly demonstrated his ability as an auctioneer and a judge of men and audiences. L. N. Noffsinger bought the top cow, paying \$300 for No. 16. Following is a partial list of buyers and prices:

1—Neeland Bros., St. Johns.....	\$155
2—John Nelson, Ada.....	185
3—Joe McCoulin, Beloit.....	110
4—Richard Roenicke, Morganville.....	175
5—William Solomon, Zurich.....	150
6—Gul Hagelman, Lindsborg.....	155
7—Lindquist Bros., Lindsborg.....	120
8—M. I. Converse, Peabody.....	230
9—M. I. Converse.....	235
10—M. F. Baer, Ramona.....	180
11—L. M. Noffsinger, Osborne.....	300
12—C. A. Cowan, Athol.....	295
13—John Gustenson, Lindsborg.....	180
14—Wm. Bender.....	230
15—G. G. Hegland, Lindsborg.....	155
16—F. Byse, Hays City.....	175
17—L. T. Merrifield, Minneapolis.....	145
18—William Bender, Ellsworth.....	150
19—J. A. Stein, Gypsum City.....	140
20—John Gustenson.....	190
21—L. T. Merrifield.....	175
22—Roy Noman, Bennington.....	125
23—F. C. Swierczinsky, Belleville.....	150
24—Mr. Luckner, Geneseo.....	150

Thirteen bulls averaged \$140; 53 females averaged \$151; 66 head sold for \$9,765, an average of \$147.95.

Lamer Makes Another Good Sale. C. W. Lamer, the successful Percheron breeder and importer of Salina, Kan., made another of his record breaking sales last Thursday. The offering was presented in

SEEDS AND PLANTS.

SEED CORN—LAPTAD STOCK FARM, Lawrence, Kan.

ALFALFA SEED FOR SALE—HOMER McClure, Republic, Kan.

250 STRAWBERRY PLANTS, \$1.00. BEST varieties. Wholesale prices on nursery stock. Free list. John F. Dayton, Waukon, Iowa.

SIBERIAN MILLET, 65c BUSHEL. ALSO car feed. Barley 40c f. o. b. Henry Snowberger, Goodland, Kan.

BOONE COUNTY WHITE SEED CORN, fine quality, \$1.50 bushel. J. B. Hunt, Oswego, Kan.

MAMMOTH BLACK-HULLED WHITE kafir, hand-threshed. Selected for early maturity, 17 years. J. G. Mitchell, Lafontaine, Kan.

SEED CORN, HAND SORTED AND tested. Boone County White, 96 test, \$1.25 per bushel f. o. b. Seward, Kan. J. H. Reigel, Box 83, Seward, Kan.

SEED CORN—CORN PLANTER (white), largest yield; highest germination; hand picked; graded; sacked. Per bushel, \$2.50; two or more bushels, \$2.25 bushel. George Dasher, Dwight, Kan.

GOOD ALFALFA SEED FOR SALE— Clear of obnoxious weed seed; using for my own sowing. \$9 per bushel. A. L. Brooke, Phone 351, Grantville, Kan.

SELECTED WHITE KAFIR SEED, black hulled variety, \$1.75 a bushel; big yielder. Hallgren Bros., Route 2, White City, Kan.

WATER MELONS, HALBERT HONEY, Pure guaranteed seed, \$1.10 pound; extra good, 75c; good, 50c. H. A. Halbert, Originator, Coleman, Texas.

SEED CORN—BOONE COUNTY WHITE, \$1.50 per bushel. This corn made 70 bushels per acre and germinated 1.00 per cent at Manhattan Agricultural College. C. L. Hall, R. F. D. 1, Winfield, Kan.

PLANT OUR KAFIR CORN. RIPE selected seed from 80-acre field, averaged 55 bu. per acre. \$1.00 per bu., sacked, Topeka. Grand Champion white seed corn from \$280 prize corn, \$3.00 per bu. Snyder Seed Co., Topeka, Kan.

FOR \$1 I WILL SEND YOU EIGHT apple, pear, peach, plum or cherry 2 year 4 to 6 ft. grafted trees, or 75 raspberry, blackberry or dewberry, or 20 grape, currant, rhubarb or gooseberry, or 100 asparagus or 200 strawberry plants, or 25 Red Cedar or other evergreens, or eight 2 year Rambler roses. Catalog free. Manhattan Nursery, Box 1, Manhattan, Kan.

NICE WHIPPOORWILL COW PEAS, \$1.75 per bushel, sacked. Four varieties of native seed corn—Reid's Yellow Dent, Hill-dreth's Yellow Dent, Ninety-Day Old Yellow, and Boone County White, shelled, cleaned and graded, put up in even weight sacks of 2 bushels each, \$1.45 per bushel, freight prepaid. Brooks Wholesale Co., Ft. Scott, Kan.

TYPEWRITERS

OLIVER VISIBLE TYPEWRITER FOR sale cheap. Perfect condition and does nice writing. Could send on trial. Charley Rickart, Route 5, Rosedale, Kan.

MISCELLANEOUS.

E. R. BOYNTON HAY CO., KANSAS City, Mo. Receivers and shippers. Try us.

ROOFING COMPOSITION, SLATE, TILE, sheet metal, tinwork. Rinner & Warren, Topeka, Kan.

WE PRESS, CLEAN, DYE, MAKE AND repair clothes. Glenwood Cleaners, Topeka, Kan.

H. W. BOMGARDNER, FUNERAL DI- rector. Excellent new chapel. Best attention. Topeka, Kan.

MAIL PRESCRIPTIONS TO GIBLER'S drug store. Filled correctly, sent parcel post. Topeka.

SAFETY RAZOR BLADES RESHARP- ened better than new. Single edge blades, 25c dozen; double edge blades, 35c dozen. Mail to Brunst Drug Co., Topeka, Kan.

GENUINE MEXICAN CHILE RECIPE OF the Palaros Cafe, Mexico City, will be sent for \$1. Address Chas. Clarke, 334 Kansas Ave., Topeka, Kan.

USEFUL, PRACTICAL, SENSIBLE poultry journal, 15 months for 25 cents. It's chock full of hen sense and common sense. Address Useful Poultry Journal, Trenton, Mo.

SELLING GOOD APPLES, BARREL, \$2.50; seed sweets, 90c; onions, 75c bushel. Paving 12c for hens. Cope's Sales System, Topeka, Kan.

BARN BUILDERS—USE FIR LUMBER. Best because the strongest. Can furnish long timbers and joists. Let us estimate your bill. Keystone Lumber Co., Tacoma, Wash.

FOR SALE—MARLIN REPEATING shotgun, 12-gauge; two sets barrels, one for ducks, one for quail; good condition, little used. First check for \$25 takes gun. A. M. Graham, 625 Jackson St., Topeka, Kan.

good form and conditions were favorable. Buyers were present from different sections of the state, with a few from other states. The mares averaged \$16.50 and the stallions \$96.50, general average being \$64.1. Following is a list of principal sales:

1—L. J. Work, Carmen, Okla.....	\$ 400
2—Ed Crews, Lorraine, Kan.....	280
3—O. L. Thisher, Chapman, Kan.....	310
4—Fred Hauf, Salina, Kan.....	299
5—O. L. Thisher, Chapman, Kan.....	245
6—C. D. McPherson, Topeka, Kan.....	400
7—L. J. Work, Carmen, Okla.....	290
8—O. L. Thisher, Chapman, Kan.....	275
9—Julius Shucky, Mound Ridge, Kan.....	215
10—E. S. Sloan, Fargo, Okla.....	625
11—Julius Shucky, Mound Ridge, Kan.....	150
12—Jacob Roman, Olathe, Kan.....	350
13—O. L. Thisher, Chapman, Kan.....	265
14—O. L. Thisher, Chapman, Kan.....	299
15—E. S. Sloan, Fargo, Okla.....	675
16—Will Hanson, Salina, Kan.....	635
17—Jacob Roman, Olathe, Kan.....	1,850
18—S. A. Hall, Gage, Okla.....	1,450
19—H. H. McVey, Plevna, Kan.....	1,000
20—W. P. Brassfield, Glasco, Kan.....	400
21—Will Myers, Beloit, Kan.....	410
22—O. L. Thisher, Chapman, Kan.....	1,175
23—Jacob Roman, Olathe, Kan.....	610
24—Jacob Belzer, Inman, Kan.....	165
25—O. L. Thisher, Chapman, Kan.....	300

POLAND CHINAS

GREEN LAWN STOCK FARM.

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

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

STRAUS SPOLAND CHINAS

Model Bill 54634 heads our herd, assisted by Model Wonder, one of the largest yearling boars of the breed. Fifteen spring boars for sale, priced to move them.

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

TWENTY-FIVE SEPTEMBER BOARS AND GILTS

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

J. L. GRIFFITHS, RILEY, KANSAS.

HERD BOAR FOR SALE.

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

Hubert J. Griffiths, Clay Center, Kan.

FALL BOARS FOR SALE—Sired by First Quality and First Prize, a Moww bred boar, out of such sows as Lady Goldust by Gold-dust. Hadley bred sow sale February 5.

James Arkell, Route 4, Junction City, Kan.

SATISFACTION OR MONEY BACK.

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

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

POLAND CHINAS

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

JEWELL BROS., Humboldt, Kan.

DUROC JERSEYS

TATARRAX HERD DUROCS

Chief Tatarax 74239 at head of herd. For Sale—Six fall yearling Tatarax gilts that raised October litters and are now bred for May litters. Price \$40. Also fall gilts and all boars in pairs and trios not related at reasonable prices. Write at once if you want them. Mention Kansas Farmer.

HAMMOND & BUSKIRK, Newton, Kan.

FOR SALE—Duroc March pigs, \$9.00 and up, by Model Again, Long Lad, or Tatarax Box. Five railroads. R. W. BALDWIN, Conway, Kan.

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

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

DUROC BRED SOWS AND GILTS.

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

HOWELL BROS., Herkimer, Kan.

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

GOLDEN RULE DURO JERSEYS

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

LEON CARTER, Asherville, Kan.

Crow's Durocs

Twenty-one good Duroc boars from 125 to 280 pounds. All vaccinated. Price reasonable.

W. R. CROW, Hutchinson, Kansas.

MARSH CREEK DUROCS.

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

R. P. WELLS, Formoso, Kan.

DUROC BRED SOWS FOR SALE.

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

ALVIN VILANDER, Manhattan, Kan.

OHIO IMPROVED CHESTERS

O. I. C.—125 Head Hogs

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

W. H. LYNCH, READING, KAN.

WOLFE'S O. I. C. SWINE.

Large, prolific kind, March and April litters. Gilts bred or open. Fall pigs. Prices low. Pedigrees free. Write your wants.

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

O. I. C. PIGS—PAIR, \$25.00.

H. W. HAYNES, MERIDEN, KANSAS.

MULE FOOT HOGS

WE PAY THE EXPRESS.

MULE FOOT HOGS

The Original Families

SULTAN STOCK FARM

Members of the National Mule Foot and American Mule Foot Record Associations.

R. 7. Bloomington, Ind.

Two bred sows, 15 fall pigs, in pairs, trios or herds; 1 boar, 4 sows, usable together.

THOMPSON'S growthy Mule Foot Hogs have won more first prizes than any herd in America. Stock of all ages for sale, sired by or bred to my 8 State Fair first prize winning males. Prices low, quality high. Write for prices and information. CHAS. K. THOMPSON, Letts, Ind.

FIELD NOTES

Baldwin's Durocs. R. W. Baldwin, of Conway, McPherson County, Kansas, has some March Durocs by Model Again, Long Lad or Tatarax Boy, for sale. Ask about these pigs.

The Emerson-Brantingham Implement Company of Rockford, Ill., has just issued a very excellent, instructive and well-illustrated catalog of Newton wagons. This book goes into the construction and makeup of the wagons very thoroughly and is replete with illustrations, making it very interesting.

Dairy Farm Bargain.

F. L. Newton, the land man of Clay Center, Kan., who finds the bargains, changes his advertising this week and offers a 200-acre farm near town, well located and a natural dairy farm. Plenty of spring water and lots of good pasture and hay land. Low price and exceptional terms. Write for full information.

Tatarax Herd Durocs.

In this issue we start the card of Hammond & Buskirk, owners of the Tatarax herd at Newton, Kan. There are 35 brood sows in this herd, sired by the leading herd boars of the West, and they carry the blood lines of the best known families of the Duroc breed. The chief herd boar is Chief Tatarax by Ohio Chief. He was the champion of Kansas and Oklahoma State Fairs and as a herd header he has made good, not because he was a champion or because his sire was a champion, but because he has proved himself a sire of the kind of Durocs we all like. His get are smooth, large, deep-bodied, red color, and with style, quality and finish. A large number of his get have won at our leading fairs. He is strong and active today and doing good service at the head of the herd. This firm is offering a number of fall yearlings for sale bred for May farrow, also spring gilts and spring boars in pairs and trios not related, at prices very reasonable. Please look up ad in this issue and write at once. Kindly mention Kansas Farmer.

G. C. Roan's Jack Sale.

G. C. Roan's fourth annual jack and jennet sale at La Plata, Mo., March 10, was well attended and was one of the good sales of the season. The offering of both jacks and jennets was good. The highest priced jack was \$1,300 and the entire offering of jacks, including the colts, averaged \$582.38. The highest priced jennet sold for \$390, and the average on the 27 head sold was \$169. This included the jennet colts. The sale was held in Mr. Roan's new sale pavilion. The following is a list of buyers and prices:

- 2—W. A. Newkirk, Kiowa, Kan. \$1,250
1—R. E. Webb, Belmont, Iowa. 1,300
3—J. M. Proctor, Braymer, Mo. 750
12—Gus Pence & Son, King City, Mo. 900
7—W. L. Wheeler, Quincy, Mo. 765
5—Wayne Davis, New Boston, Mo. 510
9—B. A. Nelson, Nevada, Iowa. 900
16—C. R. Porter, Novelty, Mo. 500
20—E. A. Gimple, Mankato, Kan. 600
13—Wayne Davis, New Boston, Mo. 470
19—E. R. Pefinger, Washington, Mo. 770
18—Ray Thompson, La Plata, Mo. 420
12—William Romajan, La Plata, Mo. 120
14—R. R. Jackson, Worthington, Mo. 690
8—O. O. Bandle, Ottumwa, Iowa. 400
4—J. M. Proctor, Braymer, Mo. 315
Thomas McCue, Sterling, Ill. 100
6—J. M. Moffet, Rutledge, Mo. 100
10—R. R. Jackson, Worthington, Mo. 340
21—Harrison Epperson, Elmer, Mo. 250
22—William Wilkerson, Novelty, Mo. 270
Deterling & Otto, Queen City, Mo. 305
Will Shaughnessey, Rothville, Mo. 55
James Johnson, Elmer, Mo. 75
19—Gus Pence & Son, King City, Mo. 105
16—C. F. Morton, Union, Neb. 330
1—Gus Pence & Son, King City, Mo. 430
2—Gus Pence & Son, King City, Mo. 380
6—J. C. Davis, New Boston, Mo. 275
4—G. R. Davis, New Boston, Mo. 185
2—Will Shaughnessey, Rothville, Mo. 195
3—C. F. Morton, Union, Neb. 140
12—C. A. Nickerson, Bucklin, Mo. 95
Tom Moorehead, Lancaster, Mo. 195
13—Herman Carr, Brookfield, Mo. 170
8—Amel Gustafson, Ethel, Mo. 165
9—Kern Bros., Alexander, Mo. 205
11—C. A. Nickerson, Bucklin, Mo. 125
24—Gus Pence & Son, King City, Mo. 275
17—R. Wainescott, Jacksonville, Mo. 125
14—James Johnson, Elmer, Mo. 126
10—Amel Gustafson, Ethel, Mo. 85
5—Stinson Roth, La Plata, Mo. 130
21—John Roan, Ethel, Mo. 130
22—Ed Davis, New Boston, Mo. 150
23—Tom Davis, New Boston, Mo. 75
18—Gus Pence & Son, King City, Mo. 50
15—James Johnson, Elmer, Mo. 55
Roy Davis, New Boston, Mo. 30

Drybread Makes Good Sale.

One of the most successful Duroc Jersey sales of the season was pulled off at the Star Breeding Farm, Monday, March 10. The sale was well advertised and a large number of breeders were in attendance. There were also a number of mall bids in evidence. Fifty head of sows and gilts sold for an average of \$51.40. Forty-eight catalogued made an average of \$47.00. Sows bred to Model Top were in strong demand. The bidding was spirited and at no time did the sale lack for interest. J. H. Johnson of Waldron, Kan., topped the sale at \$130 on No. 1, also on boar No. 51 at \$65. Col. Fred Reppert did the selling. Following is report of all selling for \$30 or more:

- 1—J. H. Johnson, Waldron, Kan. \$130.00
2—Ed Moulton, Neodesha, Kan. 100.00
3—Lee Marshall, Burden, Kan. 107.00
4—J. A. Reed, Lyons, Kan. 39.00
5—Regin Bros., Petersburg, Ill. 50.00
7—J. Bray, Neodesha, Kan. 40.00
8—J. James, Elk City, Kan. 30.00
9—William Berrow, Lafontaine, Kan. 30.00
10—William Warnock, Harris, Kan. 69.00
11—J. H. Johnson. 53.00
12—R. Coffelt, Neodesha, Kan. 49.00
13—E. A. Stark, Elk City, Kan. 42.00
14—R. Watson, Altoona, Kan. 45.00
16—E. E. Bloomford, Hayward, Okla. 45.00
17—W. S. Ticer & Son, Oklahoma City, Okla. 59.00
18—Lee Marshall. 75.00
19—D. M. Richards, Hills, Okla. 62.50
20—W. A. James, Elk City, Kan. 33.00
21—G. K. Boyal, Thayer, Kan. 50.00
23—W. S. Ticer & Son. 47.00
24—F. Knapp, Oxford, Kan. 100.00
27—J. H. Johnson. 60.00
29—J. H. Johnson. 48.00
30—C. T. Miner, Selma, Kan. 49.00
31—W. G. Bookter, Coffeyville, Kan. 51.00
35—A. D. Trump, Formoso, Kan. 32.00
36—J. R. Chaney, Chickasha, Okla. 38.00
37—Charles Rodgers, Petersburg, Ill. 34.00
38—W. C. Whitney, Agra, Kan. 35.00
39—F. M. Wheeler, Altamont, Kan. 33.00
43—J. E. Ware, Chickasha, Okla. 40.00
44—L. McCullin, Kincaid, Kan. 32.00
45—H. A. Merrett, Elk City, Kan. 50.00
45 1/2—W. G. Bookter. 30.00
49—B. F. Drist, Lafontaine, Kan. 65.00
51—J. H. Johnson. 36.00
53—J. D. Shepard, Abilene, Kan. 36.00

POLAND CHINAS

C. S. NEVIUS, GLENWOOD HERDS The Designer kind of large type Poland Chinas and Searchlight Short-horns

We are sold out of early-bred sows but have some good young boars, ready for service, to spare. Sired by Designer 39199, Major Look 48038, Good Metal 51700, or Forest Wonder 62329.

C. S. NEVIUS, Chiles, Kan.

Dean's Mastodon Polands. The big-boned type, will weigh when mature 800 to 1,000 pounds. Boars, Bred Sows and Gilts for sale. ALL IMMUNIZED BY DOUBLE TREATMENT AND ARE IMMUNE. Phone, Dearborn; Station, New Market, and Postoffice, Weston, Mo. Address CLARENCE DEAN, WESTON, MO.

WRAY & SON'S BIG TYPE POLAND CHINAS

Herd headed by Sterling Prince, one of the largest and best 2-year-old boars of the breed. Assisted by Chief Price's Wonder, one of the best sons of the great breeding boar, Chief Price Again. Young stock for sale. Better than your grandpa ever raised.

B. T. WEAY & SONS, Hopkins, Mo.

Hillwood Herd of Hampshires

Twenty head of choice gilts sired by the great boars, Earlinger, Pirate and Edward's True Belt, the prize winning boars, bred to Sure Shot and Taft for March and April farrow. Priced right for quick sale. Have no room for them.

J. Q. EDWARDS SMITHVILLE, MO.

BRED SHROPSHIRE EWES

Both imported and American bred, and all mated to the best imported rams obtainable. These rams have won many important English prizes, as well as the most coveted American blue ribbons, and now head the flocks at Henley Ranch.

Our flocks are large and we can offer you the best values on all classes of Shropshires. We absolutely guarantee all stock shipped. Place your order with us early, while the ewes can be safely handled.

HENLEY RANCH, GREENCASTLE, MO. Henley & Vrooman, Managers.

SHROPSHIRE SHEEP

Yearling and Two-Year-Old Shropshire Rams, sired by imported sire and out of registered ewes, priced right for quick sale.

ED GREEN, Howard, Kan.

RED POLLED CATTLE

PHILIPS COUNTY RED POLLS. For Sale—Cows and heifers, sired by the great Latnufal and bred to Cremo 22d.

CHAS. MORRISON & SON, Phillipsburg, Kan.

AULD BROTHERS Red Polled Cattle

Five head of bulls from 11 to 17 months old, ready for service and for sale right. Herd headed by Prince, one of the best sons of Actor.

AULD BROS., Frankfort, Kansas.

Coburn Herd of Red Polled Cattle and Percheron Horses. 25 extra good young bulls and 7 first class young stallions for sale at bargain prices. Also young cows and heifers.

GEO. GROENMILLER & SON, Pomoná, Kansas.

SHORTHORN CATTLE

Choice Young Shorthorns

Several blocky, sappy bulls, in age from 7 to 12 months. Females all sold. 25 choice strictly big type Poland China fall boars and gilts, \$20 to \$25 each. IMMUNE FROM CHOLERA.

S. B. AMCOATS, Clay Center, Kan.

PEARL SHORTHORN HERD.

One of the oldest and strongest herds in the west. Scotch and Scotch-topped. Reds and roans. Good individuals and tracing to noted ancestors. Choice young bulls for sale. Sold out on females. Can ship over Rock Island, Santa Fe or Missouri Pacific. Inspection invited.

C. W. TAYLOR, Abilene, Kan.

High Class Shorthorn Bulls

Lord Mayor 3d 249943, 8 years this spring, weight 2200, on pasture alone. Three years in show ring, won 22 championships. His calves never defeated. Price \$200. Lord's Duplicate, May Calf. Good all over, Show prospects. Price \$150.

LAUDE & SON, ROSE, KANSAS. 125 Miles Southeast of Kansas City.

GALLOWAY CATTLE

SMOKY HILL GALLOWAYS

A carload of yearling and 2-year-old bulls for sale.

E. J. GULBERT, Wallace, Kan.

When writing advertisers, please mention KANSAS FARMER.

POLAND CHINAS

HAMPSHIRE HOGS



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

A. M. BEAR, Medora, Kan.

HOLSTEIN CATTLE

Holsteins For Sale

High grade cows and heifers, about 40 head, heavy springers, from two to five years old. Fifteen head coming two-years to freshen this spring and summer; all bred to registered bulls. Also bulls, high grade and registered, from 4 to 12 months old. These are all highly bred dairy cattle and fine young stock.

IRA ROMIG, Station B, Topeka, Kansas.

M. E. MOORE & CO.

Cameron, Missouri. A special bargain in registered young bulls, sired by our herd bull, and tuberculin tested. Females all sold at present.

MISSOURI HOLSTEINS.

Largest herd of Holsteins in the state. Nothing but registered stock for sale. Eighty head to choose from. Twenty-five bulls, all ages. Will sell one to a carload. Write us just what you want and we will describe and price some to pick from.

S. W. COOKE & SON, Maysville, Mo.

Pure-Bred Registered HOLSTEIN CATTLE

The Greatest Dairy Breed. Send for FREE Illustrated Booklets.

Holstein-Friesian Association, Box 114, Brattleboro, Vt.

CHENANGO VALLEY GRADE HOLSTEINS

Fifty extra fine, well bred, nicely marked young cows to freshen in two months. Also high grade, well bred heifers coming two and three years old and bred to registered bulls.

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

HOLSTEINS FOR SALE.

Fifty head of registered heifers and bulls; also 75 head bred heifers and young cows, \$58.50 up. Come and see them.

M. P. KNUDSEN, Concordia, Kan.

CORYDALE FARM HERD.

Holsteins. For sale, three registered bull calves, 1 to 5 months old. Also 20 head of 1/2 or better grade Holstein cows and heifers.

L. F. CORY, Belleville, Kansas.

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

H. B. COWLES, Topeka, Kansas.

POLLED DURHAM CATTLE

ROAN HERO, THE INTERNATIONAL CHAMPION, AND ARCACIA PRINCE X 8079-308159

The first prize winners, head my herd of Double Standard Polled Durhams. M. P. Ry. 17 miles S. E. of Topeka, Kan. Farms adjoins town. Inspection invited.

D. C. VAN NICE, Richland, Kan.

POLLED DURHAMS.

One yearling bull and several bull calves sired by Roan Choice (junior champion of 1911), also a few young cows and heifers from the greatest show and prize winning herd in Kansas, priced reasonable.

C. J. WOODS, CHILES, KANSAS.

STANDARD BOOKS.

FOR THE FARMER AND BREEDER

Address, Kansas Farmer, Topeka, Kan.

KANSAS STATE UNIVERSITY LIBRARY

HORSES AND MULES

For Sale at Riverside Stock Farm—Registered Percherons.

10 head of young stallions from 2 to 3 years old. 4 head coming 3 years old that weigh from 1500 to 1800 pounds. 4 head coming 2 years old that weigh from 1500 to 1800 pounds. blacks and dark greys. They are the big bone kind. 2 head standard bred and weigh from 1250 to 1350 pounds. 3 head of large young jacks, Mammoth bred, from 15 to 15 1/2, well broke. A warrantee goes with every animal as to soundness and breeding.

O. L. THISLER & SONS, Chapman, Kan. On the main line of the Union Pacific R. R., 150 miles west of Kansas City, Mo.

Imported Stallions: Percheron, Shire, Belgian

Each year we show our new importation the same month they land. Each year they win more than all other exhibitors combined. At the American Royal this year they won second on 4-year-old Percheron; first, third and fourth on 3-year-old; first and third on 2-year-old, and first and champion group of five stallions. Our horses are handsome and the best to buy; our guarantee and insurance the very best.

PERCHERON IMPORTING CO., Chas. R. Kirk, South St. Joseph, Missouri.

PARK & FIRKINS' PERCHERONS AND JACKS.

Imported and American-bred stallions. All blacks and greys, all registered in P. S. of America. Some ton 3-year-olds. Also Kentucky and Missouri Mammoth Jacks from 15 to 15 1/2 hands high, heavy bone and good performers, registered. Everything sold with safe breeding guarantee. Barns in town, 50 miles north of Kansas City, on Rock Island Railroad, 3 1/2 miles east of St. Joseph on Burlington Railroad.

J. E. PARK AND A. A. FIRKINS, CAMERON, MO.

50—PERCHERON STALLIONS—50

Bishop Brothers have 50 big boned stallions that weigh 1,700 to 2,100 pounds that they can and will sell for less money than any firm in the business, quality considered. Write us what you want.

HORSES AND MULES

Mammoth Jacks and Percheron Stallions

33 head of mammoth jacks and Percheron stallions—32. Jacks from 2 to 6 years old, from 15 to 16 hands high. Percherons from 2 to 5 years old weighing from 1,800 to 2,000 pounds. Farm and sale barn on 21st, one mile east of Union stock yards.

J. C. KEER, Wichita, Kan.

JACKS AND JENNETS

17 head large mammoth black jacks for sale, ages from 2 to 5 years; large, heavy-boned, broken to mares and prompt servers. Prices reasonable. Come and see me.

PHIL WALKER, Moline, Elk Co., Kansas.

AL. E. SMITH STOCK FARM.

Black Mammoth Jacks and Jennets, Percheron Horses. You will find what you want in large boned, registered, 15 to 16 hands standard. Special prices on fall sales. Both phones.

AL. E. SMITH, Lawrence, Kan.

Mammoth Kentucky Jacks

Nine black, mealy-nosed, heavy-boned fellows, 6 months to 7 years, weighing up to 1,800 pounds, and 15 hands high. Also 15 Jennets, all ages. Inspection invited.

A. ALTMAN, Almena, Norton County, Kansas.

Thompson's Mammoth Jacks

Forty head of Mammoth Jacks and Jennets. Ten big, high-class Jacks ready for service, from 15 to 16 hands high. Black with white points. Herd headed by Gen. Wood 850, winner U. S. championship cup, 1907. Jacks sold on a guarantee and priced right.

C. D. THOMPSON, Brimson, Missouri.

Imported and Home Bred Stallions and Mares PERCHERONS—BELGIANS—SHIRES

Percherons—Belgians—Shires The best importation we ever made is now in our barns ready for inspection. The mares include some of the best fillies that came out of the Perch this year. See what we have before buying elsewhere.

Address, HART BROS., Osceola, Iowa.

HORSES and JACKS

FOR SALE—Two Percheron Stallions, aged 5 and 7 years. Will weigh 1,700 and 1,900 pounds. Both are fine breeders. Also one 7-year-old jack, weight 1,000 pounds; black with white points. A good performer and fine breeder. All priced to sell quick.

ISAAC C. LOHMAN, R. 3, Turney, Mo.

JACKS JACKS JACKS

I have an exceptionally good lot of jacks for sale. They are from 2 to 6 years old from 14 1/2 to 16 hands high, black with white points. They are all big boned mammoth jacks, priced to sell. Come and see them. Lawson is 38 miles from Kansas City.

MOSS B. PARSONS, LAWSON, MO.

PERCHERONS.

Three coming 4-year-old; three coming 3-year-old; two coming 2-year-old stallions. Home bred. Registered P. S. A. Trains direct Kansas City, St. Joseph.

FRED CHANDLER, R. 7, Chariton, Iowa.

HOME-BRED STALLIONS

ported stallions \$700 to \$1,000, two higher. All draft breeds. Reference: Any banker in Creston.

FRANK L. STREAM, Creston, Iowa.

GOOD YOUNG JACKS Ready for Service, \$300 to \$500. One Imp. 6-year-old Belgian.

BRUCE SAUNDERS, Holton, Kansas.

EXCELSIOR SHETLAND PONIES.

Registered stock. Ponies for sale, reasonable prices. Spotted and solid colors. W. Fulcomer, Belleville, Kan.

FIELD NOTES

FIELD MEN.

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

PURE BRED STOCK SALES.

Holstein Friesians. Oct. 21-22, 1912—Woodlawn Farm, Sterling, Ill.

Shorthorns. June 6—C. S. Nevius & Sons, Chiles, Kan.

Poland Chinas. April 3—Roy Johnston, South Mound, Kan. April 18—W. F. Fulton, Waterville, Kan. Oct. 21—H. B. Walter, Effingham, Kan. Feb. 10—H. B. Walter, Effingham, Kan.

Hampshires. Nov. 4—H. D. DeKalb, DeKalb, Iowa. Sale at Council Bluffs, Iowa.

C. S. Nevius & Sons, Chiles, Kan., write that they are entirely sold out of early bred sows and gilts but they have some fine young boars ready for service for sale. They were sired by Designer 33199; Major Look 48033, Good Metal 51700, or Forest Wonder 93229. He says: "We have had 150 letters asking for bred sows in the past 30 days, and Kansas Farmer has done mighty well and brought its share."

Miller's Percheron Sale.

The sale of Percherons and jacks held by S. J. Miller at Kirksville, Mo., March 6, was fairly well attended, and the offering, like all offerings by Mr. Miller, was high class in every respect. The local support was poor and the average was not what it should have been for the high-class lot of stallions and mares as well as jacks and Jennets sold at this sale. Missouri breeders, especially in the territory surrounding Kirksville, overlooked one of the best offerings of the year, and only a very few of the animals sold went to local or near-local buyers. The top for the stallions was \$390. The top price for mares was \$475, and the top for jacks was \$1,550. The average on the stallions was \$436, including a number of weanlings. The average on mares was \$340, and on jacks, including colts, was \$506.25. The sale was conducted by Col. Charles and Kemp Hieronymus of Sedalia, Mo. The following is a list of the principal buyers:

- W. H. Scane, Bedford, Iowa.....\$ 90
J. E. Downing, Silex, Mo..... 525
L. M. Payton, Fayette, Mo..... 505
T. O. Pemberton, Macon, Mo..... 700
H. Watson, Kirksville, Mo..... 655
J. P. Schmitt, Nauvoo, Ill..... 595
W. W. Downing, Hawk Point, Mo..... 410
Deardorf Bros., Hale, Mo..... 205
A. F. Aaron, Minden, Ill..... 330
A. F. Aaron..... 145
W. H. E. Moewlock, Greencastle, Mo..... 360
Deardorf Bros., Hale, Mo..... 200
O. T. Sutzler, Bucklin, Mo..... 475
R. P. Brinkman, Stillwell, Kan..... 318
R. P. Brinkman..... 254
I. W. Deering, Zenda, Kan..... 304
I. D. Morey, Hurdland, Mo..... 304
I. W. Deering, Zenda, Kan..... 235
S. F. Shoop, Connelville, Mo..... 304
J. W. Deering, Zenda, Kan..... 174
H. H. Dooley, Kirksville, Mo..... 484
J. W. Deering, Zenda, Kan..... 724

- Jacks:
Neal Vaughn, Tina, Mo.....\$1,550
E. J. Miller, Kirksville, Mo..... 1,200
M. Sweeney, St. Marys, Kan..... 575
C. F. Aaron, Minden, Ill..... 375
George Nau, Middletown, Iowa..... 404
W. L. Arnold, Lewistown, Mo..... 294
E. J. Doyle, Hale, Mo..... 200
George Adams, Greentop, Mo..... 620
Clarence Starbuck, Greentop, Mo..... 600

W. F. Davis' Seed Corn.

The attention of parties wanting guaranteed seed corn is called to the card of W. F. Davis of South St. Joseph, Mo. In this issue of Kansas Farmer. Mr. Davis is one of the pioneer corn breeders, and the seed corn he is offering is his own production and is thoroughly tested. Great White Pearl, Reid's Yellow Dent and the Ever Ready are the varieties offered. Write for price list, mentioning Kansas Farmer.

DeKalb Makes Record Sale.

The growing popularity of Hampshire hogs was again forcibly demonstrated at the Hampshire sow sale held by H. D. DeKalb, of DeKalb, Iowa, March 12. The sale was held at Council Bluffs, Iowa, and was attended by Hampshire breeders from many states. The offering was extra high class and the sale a record breaker in every way. The 48 head sold for \$5,185, an average of \$108 per head, the record average for Hampshire. The top of the sale sold for \$460, the record price for a Hampshire sow. Fourteen head of the offering sold for \$100 and over. The offering was sold by Colonels Duncan and Kraschel. The following is a list of buyers and prices paid:

- F. W. Timmerman, West Liberty, Mo.....\$75.00
Frank Schrick, Cummings, Kan..... 90.00
E. Norris, Magnolia, Iowa..... 70.00
Saltone Stock Farm, Greensburg, Ind. 50.00
Walter Scheely, Nishnabotna, Mo..... 72.50
H. C. Mehring, Manson, Iowa..... 55.00
Catherine Zehr, Peoria, Ill..... 70.00
E. Dunn, Prairie City, Iowa..... 52.50
R. B. Steele, Malloy, Iowa..... 75.00
E. E. Williams, Redfield, S. D..... 85.00
J. E. Cower, Eben, Neb..... 80.00
F. W. Timmerman..... 82.50
Albert Cloetter, Humphrey, Neb..... 62.50
J. C. Manley..... 70.00
Hyden & Croy, Denison, Ill..... 72.50
J. M. Gittner, Madison, Neb..... 125.00
Fred Newmeyer, Breda, Iowa..... 62.50
J. M. Gittner, Madison, Neb..... 65.00
E. S. McCandless, Thurman, Iowa..... 137.50
E. S. McCandless, Thurman, Iowa..... 125.00
Earl Smith, Council Bluffs, Iowa..... 55.00
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On account of other business, I am compelled to close out my jacks. The great herd jack, Easter, by Black George, and a great grandson of the famous show jack, Compromise; also outstanding 2 and 3-year-olds and one jack colt. They are priced to sell quick. A bargain. Come and see them.

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I am offering for sale at very low prices a fine lot of young Percheron, Belgian, French Draft and Coach Stallions. These horses are not fat, but in good, thrifty condition and will make good. Come and see me.

C. T. RICKETTS, Paola, Kansas.

A new sweet corn with the combined merits of Golden Bantam and Stowell's Evergreen, is being introduced this season by Vauhan's Seed Store, Chicago and New York. Because of its parentage this 1913 novelty is named Bantam Evergreen. The ears are a golden yellow of good size and possess the quality of the Golden Bantam. The earliness of Bantam Evergreen makes it a very valuable sweet corn.

The Last Chance to Get Bred Sows This Spring

ON APRIL 3, ROY JOHNSTON WILL SELL AT SOUTH MOUND, KANSAS, 40 HEAD OF BRED SOWS AND GILTS

There Will Be in This Offering Six Tried Sows, Eight Yearlings, Fourteen Early Spring Gilts, and Fourteen Late Spring Gilts. Also Ten Summer and Fall Boars.

The Blood Lines Represented Are of the Very Best Big Type. Bred Along Same Lines Long Enough to Insure of Their Producing True to Type.

Do Not Miss This Opportunity

price. If you are in the market for something good, be present sale day and you will not be disappointed in the offering. There will be a few May gilts in the sale, but none of them will weigh under 275 pounds and from that up, the tried sows weighing 550 pounds. These hogs have been bred, fed and handled so that there is little doubt but that the results will be good. No small runty breeding stock is used, neither is any of the extreme big rough stuff, as they have both been proven failures as producers of the utility porker. As to health, this herd is free from any kind of disease. There has been no disease in the neighborhood for four years. There is no vaccine used here. The catalog will give a limited account of how these hogs are kept healthful. Will say this much here—it is absolutely out of the question to keep hogs or anything else in good health if one is constantly shooting disease into them. Ninety per cent of the disease is pneumonia, or typhoid fever? Will venture to say more hogs die of these troubles than of cholera. Come to this sale, buy a good, clean, healthful hog, then if you believe in doping disease into them that is your business, not mine. The catalogs are ready and will be sent to any address for the asking. If you are busy with spring crops and can not attend, do not let that keep you from buying a good sow cheap. Mr. O. W. Devine will represent this paper, and any bids entrusted to him will be handled with the bidder's interest in view. No postponement on account of weather. Sale under cover.

Auctioneers: Col. C. E. Bean of Garnett, Kan.
Col. John Snyder of Hutchinson, Kan.

ROY JOHNSTON, SOUTH MOUND, KAN.

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We are showing the best lot of big, high-quality jacks that can be found anywhere. They are from 2 to 5 years old, from 15 to 16 hands high, and are all black with white points. Our offering includes our prize winners at Missouri, Iowa and Illinois State Fairs, 1912. We have the big, high-quality kind that make good. We sell our jacks on a positive guarantee. Queen City is on the Moberly-Des Moines



branch of the Wabash Railway. Good train service. Barns in town. Come, let us show you.

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Fifteen Belgian Stallions, the good kind.

Thirty Percheron Mares, 22 showing heavy with foal.

Ten Shere Mares and Stallions.

Ten head of good Jacks.

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One hundred fifty percheron stallions, mares and colts. Fifty imported. All for sale.

J. C. Robison, Towanda, Ks.

FIELD NOTES

A Brief History of the South Mound Herd Since 1908.

In 1908 there was some disease in the country around here, and through buying and other ways Mr. Michael got disease into his herd. He had a herd of sows at that time that all the newspaper men, auctioneers and breeders who saw them said were the best in the entire corn belt. This disease struck him and he lost some 60 to 100 head. Roy Johnston was hog crazy at that time and bought all he had left but some three or four, and bought them at prices that would look big even today were they free from disease. After buying them he took them to another farm some three miles from the home herd. Just about that time they all came down sick but four, and as good fortune would have it a certain party who was manufacturing a conditioner came along, and when he saw what was up he just camped for a week and doctored these hogs and instructed in caring for them. Every sow and just half the litters were saved. Armed with knowledge gotten this way and with the boiled down product of Mr. Michael's ten or more years' work and heavy expense, Roy Johnston went into this breeding business to better the breed if possible and at the same time to a financial issue. He had taken what Mr. Michael thought was the best families he had. In the sow line they were, first, the Bonnie family, coming from the good sow, Black Bonnie. From her we have this Bonnie tribe, using such as Michael's Wonder, Bonnie B., Bonnie's Sister, Bonnie Wonder and many others, all from this old sow and sired by Blain's Wonder. The next family was the Cora's Wonders, coming from old Long Cora and by Blain's Wonder. From this family were produced several herd boars and many good herd sows. The third family was old Tu Tu. She was an Expansion bred sow and has left more good daughters in the herd and that of Mr. Okeefe's of Stillwell, Kan., than any other tribe. To show that there is really something to this selection from good, strong, long-lived families, will say old Tu Tu raised a fall litter last fall and she is right at 10 years old. Another great family was the Logan Beauty tribe. These were more noted for great boars than sows. It was a daughter of Logan Beauty that produced Logan Ex, who sired Okeefe's Big Logan Ex, who at 7 months and 12 days of age weighed 354 pounds. She is also the grand dam of Big Lige, now used in the herd. All of her pigs were extra large and smooth.

You will find if you trace back the pedigrees contained in the catalog, that all of it traces to Logan Beauty, Bonnie, Long Cora and Tu Tu. Please read the quarter-page ad in this issue and send for a catalog. It tells the whole story of the herd and is worth anyone's time to read. Kindly mention Kansas Farmer when you write.

Golden Rule Durocs.

Note the change in copy made by Leon Carter, Asherville, Kan., this week. Mr. Carter's Duroc herd is headed by the great Dreamland Colonel, and he has some choice things for sale.

Percheron Mares for Sale.

O. L. Thisler, Chapman, Kan., has two black Percheron mares for sale, also four young Mammoth bred jacks from 15 to 15.2, in addition to the big Percheron stallions which he has been announcing in his advertisement. Mention Kansas Farmer and write him.

The farmers of Iowa could give the high cost of living a solar plexus blow from which it could not recover, as far as they are concerned. In just one item they could increase their income by practically two million dollars a year, an amount that would more than take care of the increased cost that has been added to living. Without any effort worth mentioning the farmers of Iowa could add two millions of dollars to their income and every single farmer in the state could get his share of this amount in proportion to the number of hogs he owns. The most progressive farmers are getting their share now, and if the method of saving were not simple all the farmers would be only too anxious to follow. The amount we have named could be added to the hog profits in Iowa simply by having the farmers feed Lewis' Lye and insure the utmost nutrition from the feed that is given the hogs. Here's the pyramid that leads to the \$2,000,000 the farmers of Iowa might just as well have as not. It's just a simple example in arithmetic: A quarter can of Lewis' Lye is enough to get the most out of a barrel of slop. One barrel of slop will feed 30 hogs for one meal. Hogs are fed twice a day, making one quarter of a can of Lewis' Lye sufficient for 15 hogs for one day. It takes 120 days to fatten a hog for market. Two cents a day for 120 days is \$2.40 for the 15 hogs, or 16 cents per hog.

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CASPER A. GANTZ, Prop. - King City, Missouri



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Several nice, straight, registered cows for sale that are due to calve soon. Tirania Lady Aouda 5th King 61250 and Sir Pontiac Artia De Kol 77152 head this herd, a combination hard to beat.

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