

# KANSAS FARMER

For the improvement  of the Farm and Home

Volume 54, Number 26.

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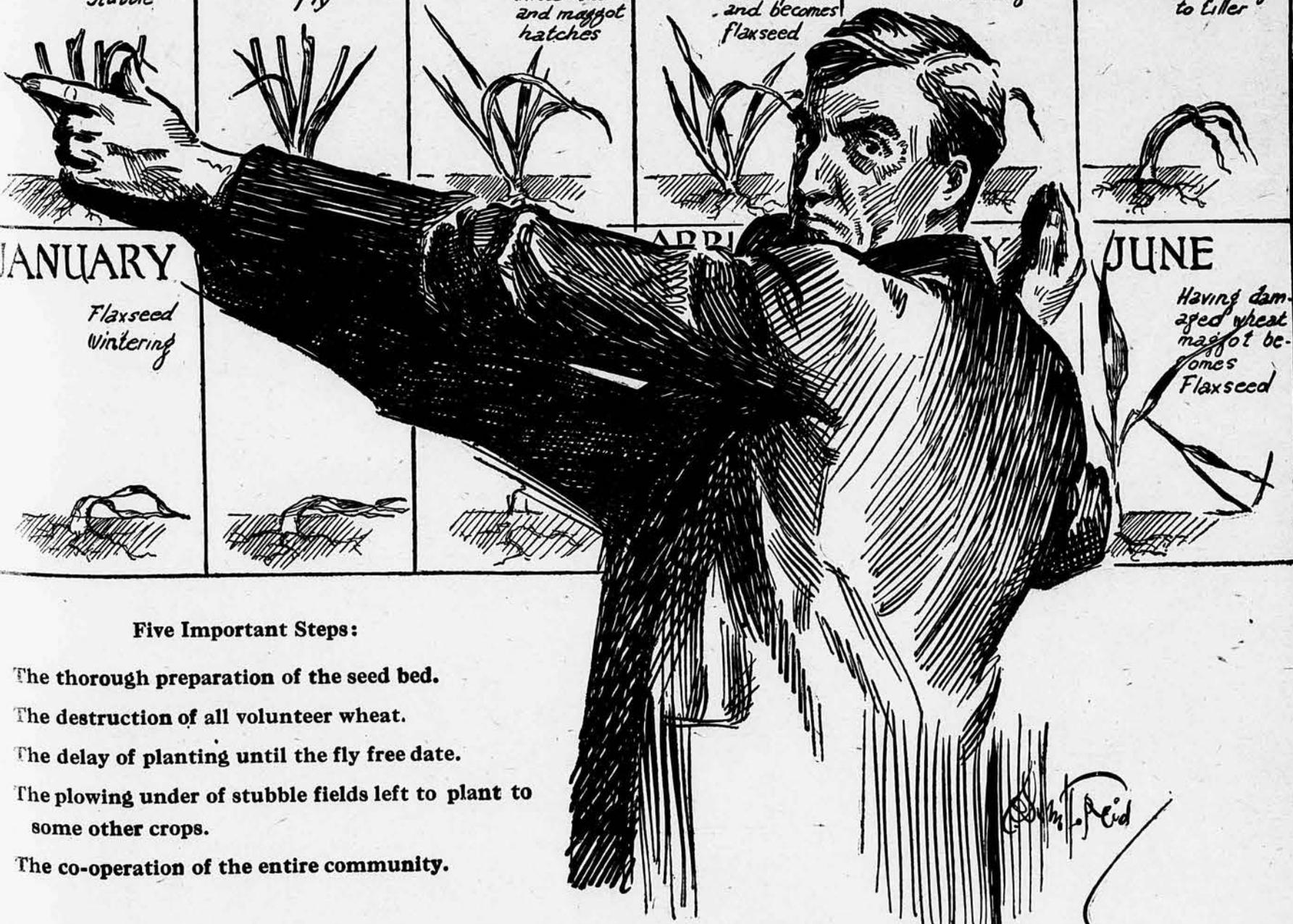
Established 1863. \$1 a Year

**T**HIS year the serious Hessian fly infestation is in the very heart of the great wheat belt of Kansas. The injury amounts to millions of dollars.

To prevent a repetition of this serious damage, wheat growers should immediately after harvest put into practice the methods which have been found practical and effective, not only for the control of the fly, but also for producing maximum yields of wheat.

The infestation in the fall wheat comes from two sources—the stubble of the previous crop and from volunteer wheat. Plow them under deep.

Fields of volunteer wheat or oats also constitute the initial breeding grounds of the green bug.  
—Geo. A. Dean

JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Flaxseed left in Stubble 	Flaxseed becomes fly 	Fly lays eggs on young winter wheat and maggot hatches 	Newly hatched maggot seeks base of plant and becomes flaxseed 	Flaxseed ready for wintering 	Plant weakened and failing to tiller 
JANUARY Flaxseed wintering 				APRIL	MAY
				JUNE Having damaged wheat maggot becomes flaxseed 	

**Five Important Steps:**

1. The thorough preparation of the seed bed.
2. The destruction of all volunteer wheat.
3. The delay of planting until the fly free date.
4. The plowing under of stubble fields left to plant to some other crops.
5. The co-operation of the entire community.

**You Must Fight Hessian Fly From July to November**

# FARM POWER

## Items of Interest About Automobiles, Engines, Tractors, and Motorcycles

THE following rules and regulations have been adopted for the management of the National Tractor Farming Demonstrations. The Kansas demonstration will be held in Hutchinson; July 24-28.

1. Public demonstrations shall begin at 1 o'clock and end at 3. Private demonstrations may be held in the forenoon from 8 o'clock to 11:30.

2. No exhibitor will be allowed more than one tractor of each size on the field during the public demonstrations doing the same kind of work. He may have one or more machines performing different operations, namely: one plowing, one disking, one seeding, etc.

3. Size of land for each tractor exhibitor for plowing demonstrations will be determined by the average number of plow bottoms pulled, the width of plows and speed of machine as given in company's catalog. Each tractor exhibitor must plow out dead furrow to its left.

4. All exhibitors will be allotted land in the same field or adjoining fields during each day's demonstration. Land for private demonstrations will be provided daily.

5. All plows on any given gang must be set at the same depth and kept there during the day's demonstration. This depth will be announced daily, by the general manager. (Plows found operating otherwise will be ordered from the field for the balance of the day's work.)

6. In all public demonstrations, the motor or tractor must not be run at more than 10 per cent above its catalog plowing speed. Tractors may be run on high gear with normal engine speed, when disking, harrowing, seeding, etc.

7. Positions on field first day will be arranged alphabetically. Each field will be divided into four divisions: A, B, C, and D. These positions will shift daily, making each exhibitor occupy a similar position in the field as does his competitor. Each exhibitor will be required to finish his land daily, in a workmanlike manner, and assist in plowing the end lands as directed by the general manager.

8. Each field plowed will be surveyed and staked ready for afternoon demonstrations. These fields will be tested for the drawbar pull of a 14-inch plow, plowing at the specified depth previous to the demonstration. All manufacturers will be furnished information relative to drawbar pull so they can better determine the number of plows to use on each gang.

9. Each tractor shall bear a placard showing the brake horsepower of the engine, the revolutions per minute, the plowing speed in miles per hour, and the kind of fuel used.

10. All tractors on the demonstration field belonging to one exhibitor must be kept on or along the land allotted him for that day's demonstration, until the hour designated by the management for returning to headquarters.

11. No machine will be allowed to operate with special equipment other than that designed for practical use with same. No spectacular methods will be permitted on the part of salesmen, or others, to attract crowds. The demonstration must speak for itself.

12. Each tractor exhibitor will have the privilege of burning any kind of fuel he desires, but no one will be permitted to burn fuel of higher gravity test than that used by his competitor burning the same kind of fuel. All exhibitors will be required to obtain fuel from source designated by the general manager.

13. Public demonstrations will start on Tuesday of each week and close on Fridays. Mondays will be known as opening day.

14. No time will be required of exhibitors to make movie pictures or group photographs for commercial purposes. Manufacturers can arrange to get photographs during demonstration if they desire. Any manufacturer or representative of farm or trade papers will be allowed to have their official photographer on the grounds to get pictures for their own use.

15. Manufacturers will be privileged to make dynamometer tests of drawbar pull of their tractors during any day of demonstration, but these will not be official and cannot be published as authorized by the management of the demonstration (such tests will be purely educational). They may also make fuel

consumption tests if they so desire. These tests must be made in the forenoons, or following public demonstrations afternoons.

16. Arrangements will be made for daily demonstrations, showing use of tractors harrowing, disking, seeding, and other farm operations, demonstrating general utility of the tractor. The rules governing these demonstrations will be the same as those applied to plowing.

17. The interpretation and enforcing of these rules shall be left to the local manager of each demonstration and the general manager of demonstrations.

18. Each company exhibiting at these demonstrations shall appoint one manager who will be expected to report to the general manager not later than 9 o'clock each morning for instructions and information regarding the day's work. This manager of exhibits will be held accountable for the work of his company, and no instructions will be issued to anyone else, nor will requests, instructions, or complaints be recognized from anyone but this exhibit manager. He shall wear a badge furnished him, specifying his being official exhibit manager.

19. Each exhibitor will be expected to keep plows, tractors, etc., around his tent arranged in first class order, and the land allotted him for exhibiting purposes free from circulars, rubbish, etc., such as will be distributed around headquarters daily. They will also be expected to use care at all times in operating machinery with respect to its safety for all visitors. The management will appreciate co-operation of these exhibit managers in all matters.

General manager and National Tractor Committee reserve the right to add new rules necessary to make the demonstrations a greater success.

### More Land for Making Meat

The bicycle did not bring the "horseless age," nor has the automobile, nor will the farm tractor. It will take a much more adaptable and economical machine than has yet been invented to supplant the horse as a source of power on the farm. Still there is every reason to believe that motors and tractors are destined steadily to decrease the proportion of farm labor done by horse power and so reduce the number of horses kept in proportion to acres cultivated and crops produced.

This means that as the use of tractors becomes more general less of the land cultivated will be needed to produce feed for horses. The farmer will not need to tend so much land to produce feed to keep horses to tend land—around and around the circle. It seems inevitable, therefore, that he grow more feed crops for other live stock—for meat and milk-producing animals—and keep more animals of these kinds. Certainly he will be able to keep more of them on the same farm if he can make one team and a tractor do the work he has been keeping three or four teams to do.

In 1913 over thirty-eight million acres were devoted to oats. Not all the oat crop was fed to horses, but most of it was. Nearly forty-nine million acres grew hay, and the greater part of this hay was fed to horses. On almost every farm a large part of the farmer's labor is to provide feed for his horses; and these horses furnish power only.

A gradual shifting of the proportionate acreage of various crops and a gradual increase in the number of cattle and sheep kept on the majority of farms may be looked for with the increasing use of the traction engine. The tractor will not only release the faithful farm horse from his heaviest burdens but will also release many thousands of acres, now applied to the production of power, for the production of human food.—E. E. MILLER, in National Stockman and Farmer.

Taken all in all tractor troubles are very similar to mule troubles in that they are to be expected. They are more or less serious according to the care given by the operator and the adaptability of the tractor to the work it is doing. Wise men do not work Kentucky thoroughbreds to plows or Clydesdales to rubber-tired runabouts. Get a tractor suited to your work and get acquainted with it—your motor troubles will then amount to nothing.



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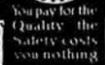
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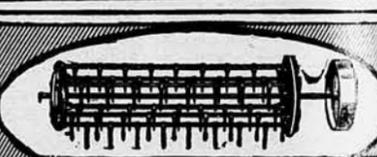
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# KANSAS FARMER

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## WAR ORDERS HURT AGRICULTURE.

Farmers are vitally interested in the steel market. Unless conditions are radically changed in the near future, they will feel the adverse effects of the situation even more keenly than they do now, and already there has been a marked increase in the price of farm machinery. The farmer is not alone in experiencing inconvenience and loss due to the conditions in the American steel trade at the present time. The manufacturers of his equipment are more agitated over the problem just now than he. Many of them have been unable to get material from the steel mills in quantities sufficient to keep their plants under normal operation.

What is hitting the manufacturers of farm operating equipment hard now, if the behavior of the steel fabricators is not corrected, will soon be hitting the users of that equipment, and citizens at large. The Implement & Tractor Trade Journal comes out with information that reveals a serious state of the steel market. According to this authority, a situation has arisen because of the war abroad that has begun to work almost unbearable hardships on the implement manufacturers who depend upon the steel mills for most of their material.

It would be difficult to exaggerate the danger lying in the steel problem now confronting the American farm implement and machinery manufacturing industry, which more directly serves the public than any other class of manufacturers, for it supplies those tools and machines to farmers with which they soil, cultivate and harvest their crops.

If the problem involved only price, declares the Implement & Tractor Trade Journal, it would be considerably simplified, but it is largely a matter of getting the material at any price. Nearly all farm implements and machines are reasonable—that is, they are built to be sold in time to meet the requirements of the farmer in caring for particular crops. It is plain that the latter must have his tools promptly, else his efficiency will be greatly impaired, not to mention his livelihood.

The steel mills are so engrossed in supplying material for inordinately profitable war munitions that they display little disposition to meet even the barest needs of the domestic manufacturer. Possibly it is only human that they should thus yield to the temptation to slight their old home customers in favor of foreign governments willing to pay upward-of prices. At any rate, in their anxiety to get this business, the steel people have seen fit, apparently, to abandon their obligations to the manufacturing and agricultural industries of the United States.

The hurt has already been done for 1916. Many manufacturers have had to suffer delay after delay in getting delivery of material—all on account of the war orders. It is not their hope that any corrective measure can be taken that will bring relief this year. It is their hope, however, that either with or without the co-operation of those in governmental authority, they can induce the steel fabricators to accept orders for prompt delivery so that the mischief already done will not be redoubled in 1917 if the war lasts that long.

## CREOSOTE PRESERVES WOOD.

Wood is likely to hold an important position as a structural material for some time to come. Its use has increased so rapidly that means of adding to its life have been carefully studied. On the farm one of the constant sources of annoyance and expense is the replacing of posts that have rotted off in the ground. Long-lived post material is none too plentiful, and means of making the less valuable woods more resistant to decay are of great interest to everyone using posts.

The railroad, telegraph, and telephone companies are among our heaviest users of wood, and their studies in methods of preservation are most valuable. Several years ago the Santa Fe Railroad began making extensive tests in its wood treating department, not only with ties and bridge timbers, but with fence posts. This company has found that posts properly treated with creosote

that were put into the ground in 1909 and only recently removed for inspection, are as firm in fiber as when set—seven years ago. These fence post experiments show conclusively that a big saving can be effected by giving posts proper treatment.

"I would not hesitate to guarantee a post treated by a standard process to last twenty years or longer," said George Rex, superintendent of treating plants of the Santa Fe. "The treated posts we put in the ground in 1909 are as good as new—they are better because the kind of untreated posts we formerly used lasted an average of four years. I am sure these will be good fifteen or twenty years longer."

The average white cedar posts offered for sale cost about 25 cents apiece at lumber yards, depending, of course, on size and freight. The results of these railroad tests indicate that it would pay big to add the small amount necessary to secure posts properly treated. A cheaper grade of wood—one that is more abundant than the more lasting woods—takes the creosote as well as does the high-priced post, and this effects another saving.

Just at the present time creosote is considerably cheaper than it has been. It is a by-product of the coal tar products and a number of these are in much demand in Europe at the present time.

Increasing the life of posts not only is a direct source of economy, but it saves a great deal of labor due to the constant replacing of rotten posts and the necessary repairs of the fence.

## INDEX AUTO ENGINE NUMBERS.

Automobile engine numbers are now being kept by the Secretary of State in the automobile department of his office. The law does not require this, and heretofore it has not been done, but the stealing of automobiles is on the increase, and it is to aid in bringing thieves to justice that numbers are now being recorded. There seem to be organized gangs who are making a business of stealing cars, and a great many are stolen and never recovered. Registering cars by the serial numbers of their engines will help in tracing them if stolen. Owners of cars can greatly assist in the work of restoration of stolen cars and bringing thieves to justice by seeing that the correct numbers of their engines with full description of the cars are furnished to the license department. Whenever a car is stolen the Secretary of State should be promptly notified.

The present automobile license law has now been in effect four years. It does not seem likely that Kansas or any other state will abolish the registration system. The law can, without doubt, be improved. Automobiles are increasing in numbers rapidly and car owners are entitled to the best system of registration that can be worked out. If the present law can be strengthened in any particular it should be properly amended at the next session of the legislature. Car owners who have suggestions can be helpful along this line by sending in their ideas to the office of the Secretary of State. Almost ninety thousand automobiles have been registered during the fiscal year to date. The funds collected are being used on the highways of the state, and it is important that this money be wisely expended.

## VALUE OF LAND.

The basis for the value of land as set forth by P. P. Claxton, the Commencement Day orator at the Kansas Agricultural College, differed quite materially from that of the average real estate boomer. Mr. Claxton hinged his whole address around the general proposition that land, water power, mineral wealth,—in fact every natural resource—can have a value only in proportion to the use that man can make of it. Some of his illustrations were most vivid and served to fix the mind most indelibly the fact that the richest and most productive soil would be absolutely worthless except as the skill and intelligence of the people using it made it possible to realize on its wealth of raw material. It is intelligence that makes raw material available.

Manhattan Island, where now stands

New York City, was purchased from the Indians for \$28. Recently a little piece of land in this great city changed hands at the rate of 23 million dollars an acre. Man's ingenuity and skill have made it possible to capitalize this bit of land for this enormous sum and make it pay by the use of that is made of it.

Mr. Claxton showed that there are three factors giving land value, first, natural resources, such as character of the soil, location, climate; second, the native ability and vigor of the people inhabiting it, and third, their acquired intelligence or education. The first two are fixed characters. The third character is variable, and by increasing it the value of land can be greatly increased.

This address was a most wholesome one, and left a deep impression on the outgoing class and others in attendance. It gave them a clearer vision of what education means in the development of our natural resources. It put the educated man to the front and showed that culture is but a by-product of education and not its primary purpose. "Culture," said Mr. Claxton, "does not come through studying any one subject. I have known a gentleman farmer and a highly cultured blacksmith. It is the result of an attitude toward life. I have no sympathy with the philosophy that thinks of the man who handles clods as being himself a clod."

The wealth of Kansas comes from the soil, and the great increases have been possible in crop production have come about largely through the influence of such education as comes from schools and colleges. Mr. Claxton closed with the statement that the agricultural college of Kansas has been worth at least a billion dollars to the state.

## TRACTOR DEMONSTRATIONS

Success in tractor farming requires that the tractor used be adapted to the size and character of the farm and the type of farming followed. It is just as important to select a tractor suited to the work it is to perform as it is to select live stock for specific purposes. Tractor farming is so new a departure that it is easy to make mistakes.

The national tractor farming demonstrations were planned to help farmers in making wise selections. The demonstration conducted at Hutchinson last year was attended by thousands. This year the demonstrations are organized into a national circuit, beginning at Dallas, Texas, the week of July 17 to 21.

Those in charge will devote their whole time to handling the different demonstrations. No one need question the efficiency of the management. Their purpose is to show all makes of tractors under conditions with which farmers are familiar. They will all be at work in one field at the same time. The prospective tractor user can study the different outfits as they perform different farm operations and be his own judge as to which one most nearly suits his requirements. Farmers interested in tractors should by all means take advantage of this opportunity to see the different makes in operation. Not only will tractors be shown, but plows and other accessories of power farming.

The Kansas demonstration will be held at Hutchinson, July 24 to 28. No fees are to be charged and there will be no contests. The primary purpose is to demonstrate the working of the various outfits, and this rule will be strictly followed. The rules governing the demonstration are given in full on the opposite page.

## POOR KAFIR STANDS

Last year much of the kafir seed failed to mature properly and lacked in vigor and vitality. Many poor stands this spring can be traced to the use of 1915 seed. H. L. Popenoe, agricultural agent of Lyon County, reports testing samples that showed an average germination of only 56 per cent. Much of this immature seed molded in the tester.

It is easy to see why poor stands of kafir have been so generally reported.

Mr. Popenoe found, however, that some of the farm bureau members in that county had carefully saved seed of the 1914 crop. It had been selected in

the field and stored in the head. One man reported that this old seed was up a week before seed from last year's crop planted in the same field the same day. A delay of a week in germination indicates very poor vitality.

Such experiences emphasize the importance of definitely planning to save seed in the head and to save enough for two years' planting. This will insure having strong, viable seed in case the season should be unfavorable for maturing the crop. It is not too early to plan for a seed field. Give the field selected the best of care and cultivation. Later watch for heads indicating mixing with cane or other grain sorghums, so that the seed saved will be from as pure a strain as possible.

We find that agricultural agents are assisting in this kafir selection, some of them even helping to conduct head-to-row tests in order to develop purer and more desirable strains for their counties. This is important work and they should be given every encouragement possible.

## NEW ADVANCED REGISTRY TEST

At the thirty-fifth annual meeting of the Holstein-Friesian Association which was held in Detroit, June 7, a resolution was passed that is of considerable interest to Holstein breeders. There has been some criticism of the methods employed in making the year records for Advanced Registry. It has been charged that they are produced under abnormal conditions, that the cows are not bred during the progress of the test, and that in general the conditions are far different from what they would be in practical dairy work. The recent action of the association paves the way for a new kind of long distance records. It took the form of the following resolution which was unanimously passed:

"To authorize and direct the board of directors to provide in our advanced registry classification for a 305-day test, under the same regulations and classification as those now governing the 365-day test. To assign a reasonable proportion of prize money offered in advanced registry division for milk and butter fat records to the 305-day test classification. To provide that cows whose records have reached or exceeded the 305 days may be entered in this new classification, but those records that have been completed prior to May 1, 1916, shall not be eligible to compete for prize money in the 305-day classification."

A 305-day record is long enough to establish the milking capacity of a cow. A test of this length can be conducted without interfering with the breeding of the cows so they will produce calves each year. This length test will be a great benefit to the breed. Many breeders will take advantage of a 305-day test who would make no effort to conduct a 365-day test.

## CREATING NEW BREEDS

Creating a new breed is the work of several generations. No worthy breeds of domestic animals have ever been created in a day. It has required long years of painstaking work. In the beginning the number of animals worthy of being saved for breeding purposes is small, indeed. Only occasionally does an animal appear that marks any advance. Men with the constructive skill to bring about such results, are not numerous. Only such men have the patience and knowledge necessary to bring about real improvement in animal form or capacity for production. This has been the history of every established breed of stock.

We heartily agree with Dr. C. W. McCampbell of the State Live Stock Registry Board, who discusses the developing of a new breed of horses on another page in this issue. Even though such breed were needed and desirable it could not be arbitrarily created. Horses of a certain size and weight, irrespective of ancestry, can be registered and given a record number, but this does not by any means create a new breed that will reproduce true to type. Even in our well established breeds there is enough tendency to deviate from the accepted type to make it interesting for the man who would grow pure-bred stock.

# BABY BEEF FROM KAFIR

Ground Kafir Lot Made Profit of \$13.14 a Steer in Recent Experiment

**P**ROFITS per steer ranging from \$7.28 to \$15.26 were made in the baby beef experiment closed at the Kansas Experiment Station June 3, and which was publicly reported at the cattlemen's meeting June 9. The table given in last week's KANSAS FARMER showed results in detail. Even the feeding of ground kafir heads to steers with a little cottonseed meal and alfalfa and silage for roughage, gave a profit. If this head meal lot could have been fed thirty days longer they would have been more nearly finished and would have brought a higher price and a greater profit.

While all these lots made money, the most significant result was that kafir as a grain can be successfully used in finishing baby beef for market. The silage fed was made from cane and kafir with the exception of some corn silage that was fed toward the latter end of the test. The cane and kafir did not mature last season, and as a result the silage was poor in quality. In this test, however, all lots received the same kind of silage, so there was no comparison as regards results secured from feeding silage of different kinds.

The ground kafir lot made a profit of \$13.14 a steer, and the ground corn lot \$12.15. At the time the experiment closed, the corn-fed calves showed just a little more finish and were priced at \$10.25 a hundred, while the kafir-fed steers were priced at \$10 a hundred. The total feed consumed by the kafir-fed steers during the 180 days they were on full feed, was a little less than 40 bushels of kafir, 280 pounds cottonseed meal, a little over a quarter ton of alfalfa, and 1,700 pounds of silage. All but the cottonseed meal were farm-grown feeds, and such feeds as can be grown over most of Western Kansas. All over the western part of the state there are creek bottoms where alfalfa can be grown, and when properly handled, the sorghums are sure of producing forage in almost any year. The Western Kansas man can full-feed cattle whenever he has raised a good crop of kafir or milo, and every year he can grow cattle through the winter season in good shape. This has been shown by the work at the Hays Experiment Station, and all over the West there are cattlemen who are equally successful.

Professor Cochel, in commenting on this feeding test, stated that cattlemen should always handle their stock according to the conditions. It is not a good



THESE STEERS WERE FED GROUND KAFIR, COTTONSEED MEAL, ALFALFA AND SILAGE.—THE PROFIT PER STEER WAS \$13.14

or profitable practice to attempt to full-feed cattle where but little grain can be successfully grown. At Hays cattle have been handled mainly by feeding roughage with only enough concentrates to properly balance the ration. Silage, wheat straw, and a pound of cottonseed meal daily, has given excellent results in carrying stock cattle through the winter. The heifers purchased with these steers just finished at Manhattan, have been grown out at Hays during the past season, and have made good gains on such a ration.

The history of these cattle that have just been finished at Manhattan, is of considerable interest. They were grown by Poole Brothers, of Riley County, who have been raising cattle for the past ten years. They have never used anything but pure-bred Hereford bulls and have culled their females closely. They sold almost their entire crop of calves to the college last fall at \$40 a head, weighing about 460 pounds apiece. They had only four steers left, so it will be seen there was little opportunity to cull in picking cattle for these experiments. This uniformity and good quality is a strong argument for the breeding methods practiced on this ranch.

The most profitable lot in the test was the one fed shelled corn. They averaged \$15.26 a steer in profit. Only one other lot made better gains, and that was the one in which the steers did not

receive silage. This fact called for a number of questions relative to the feeding of silage to fattening cattle. Usually some silage, even in a fattening ration, results in better gains and greater profits. In this case, however, the silage lot did not gain quite so much as the one receiving the same ration with the exception of silage. It is planned to duplicate this test next year. Professor Cochel stated that up to thirty days ago there was little difference between these two lots, but since that time the one getting the ration containing no silage had gained slightly more than the silage lot.

The gains made by these steers were exceptionally good. For ninety steers taken just as they come, to gain at the rate of from 2.12 pounds to 2.45 pounds daily for 180 days, is a splendid record.

The lessons of the feeding tests being conducted at Hays and at Manhattan, are showing farmers the possibilities of growing crops and feeding them out with profit to cattle. It is impossible to separate cattle feeding from farming. The old-time cattle feeder who bought both his cattle and his feed is rapidly dropping out of the game. In the tests that have been conducted by the Kansas Experiment Station, the crops grown would have been of little value except as they were fed to cattle. In this last test the alfalfa hay was not marketable, and the cane and kafir fed as silage

would have been worthless if left in the field.

All over Central and Western Kansas cattlemen are growing these sorghums and storing them in silos. Farmers were present at this meeting who told of having silos filled with cane and kafir to be used only in case they failed to grow feed enough this year to carry their cattle through. Many of these are simply pits—the cheapest form of silo that can be made, but thoroughly practical in a dry country.

No cattleman who has followed the experimental work Professor Cochel has been doing for the past few years can doubt the feasibility of founding a profitable cattle business on the growing and feeding of the sorghums. These crops are sure, and when preserved in the silo, can be carried over from year to year so a lean year will have no terrors to the man so equipped. Practical cattlemen are learning the lesson and are placing less and less dependence upon exclusive wheat farming. Hardly a week passes without some comment being made in the stock yards' daily papers of cattle coming to market that have been profitably finished with kafir or milo.

While these tests show the possibilities of making baby beef from kafir, the big end of the cattle business in the West will be in growing stock for the men farther east to finish with grain. It is worth something, however, to know that the sorghum grains can be used successfully in putting on the final finish, for it makes the cattle grower independent of the feeder to whom he may offer his cattle. If the price is not right he does not have to sell, providing he has any surplus of kafir or milo grain. He can finish them himself and not have to ship in expensive grain to do it.

The cut on this page shows how the kafir steers looked on the day the experiment closed. They were well finished and brought very close to the top price when sold. The lot fed the kafir head meal was somewhat handicapped in figuring the results, for they were not finished. The heads contained so much fiber that the finishing process had been somewhat slower. This method of handling kafir can be used if a little more time is taken to get the stock ready for market.

Those present at the Manhattan meeting who inspected the cattle and studied the results, could not help being convinced of the value of kafir in a fattening ration.

## Pure-Bred Cattle Success

By H. T. NEILSEN

**D**RIFTWOOD Hereford Farm is in Rawlins County, Kansas, out in the short grass country, and is owned by John Focke. Mr. Focke runs a combination farm, raising wheat on a large scale, but also has a lot of rough land for pasture purposes, and it is this part of his farm on which he raises the Herefords this little sketch tells about. At one time wheat was practically the only source of revenue, but as the owner of Driftwood Farm remarked: "We don't always raise a crop of wheat; but it don't make so much difference to me now, for I know that this little bunch of pure-bred Herefords will keep things going."

Mr. Focke began in the registered Hereford business six years ago, buying his foundation stock at the Sunny Slope Dispersion sale at Emporia, Kan., in March, 1910. At that time he bought eight cows, to heifer calves, four to five months old, and a herd bull. This stock cost him \$1,295. He has bought another herd bull since for which he paid \$300. He has not bought any other stock in the six years, so the herd and the sales represent the normal increase. One of the original eight cows died before having had a calf, so the beginning was really made with seven cows.

Since the beginning was made, ninety-one calves have been raised. Mr. Focke has, in the main, sought to keep all the heifers, so as to increase his herd to about as many animals as he can conveniently handle. Forty-eight head have been sold, only seven of which were heifers. Gross receipts from sales have been \$6,245. The inventory shows fifty-four head on hand, and at a conservative estimate, their value is \$7,550. This makes a grand total of \$13,795, or an increase in value in the six years of

\$12,200, which is not bad for the pure-bred business in the short grass country. The owner of Driftwood Hereford Farm could well afford to remark, as he did, having such a record to his credit.

The most interesting single thing in connection with Mr. Focke's experience in the Hereford business is the record of one of his cows. She is one of the original eight head bought. She is Sarah IV (65,915) calved May 3, 1896. Because of her age, she sold for only \$85 at the time of the sale in Emporia. She had

raised ten calves previously to coming to Driftwood, and has raised five for Mr. Focke, and was due to calve again about the first of June. She celebrated her 20th birthday on the 3d of last May, and is still an excellent individual. Three of the five calves she has raised for Mr. Focke have been bulls that have sold for a total of \$310. The two heifers (one is a cow now), are valued in the inventory at \$425, and Mr. Focke wouldn't part with them for that. This makes an income of \$735 from the one cow which



SARAH IV, AGE 20 YEARS.—PRODUCED TEN CALVES BEFORE COMING TO DRIFTWOOD FARM, AND FIVE SINCE.—THREE OF THESE SOLD FOR \$310, TWO RETAINED IN HERD, VALUED AT \$425

cost only \$85 in the beginning. Naturally the old cow is given the best there is to be had now, and has a very warm place in the owner's heart.

The cattle are well cared for at Driftwood. Mr. Focke lives on high divide land, but has some creek bottom land on which he raises alfalfa. It is necessary to haul the alfalfa ten miles from where it is grown to the winter feeding place, but Mr. Focke says even so it pays big to have it for the young stock. The growing stock receives grain enough during the winter months to keep it in a thrifty condition. Crushed barley is the main grain feed, though some corn is also used. The mature animals are fed well, but usually do not get any grain. At present there is no silo at Driftwood, but it is planned to construct one in the near future. It will likely be a pit silo, as they are very serviceable in that part of Kansas, and are not nearly as expensive as those built above ground.

A visit to Driftwood Farm is an inspiration. The owner is an enthusiast, and a very fine man to meet. His cattle are high class and being gentle, you can see them to good advantage even if they are in the pasture.

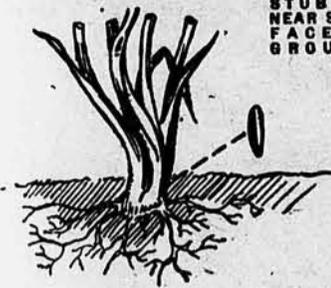
Is your well in such a condition that there is no danger of polluting the farm water supply? Grade up to the well from all sides and make the platform water-tight with a little slope so the overflow from the pump will run off easily. If the well is poorly located, the upper six feet of curbing must be water-tight. Dug wells may be protected by making the upper six feet of the curb with concrete six inches thick and extending at least eight inches above the ground level.

# STARVE HESSIAN FLY

*You Must Plow Stubble Early and Deep to Destroy Fly*

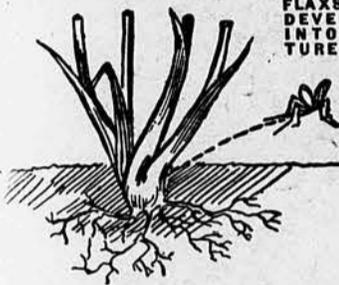
By J. W. McCOLLOCH, Kansas Experiment Station

July



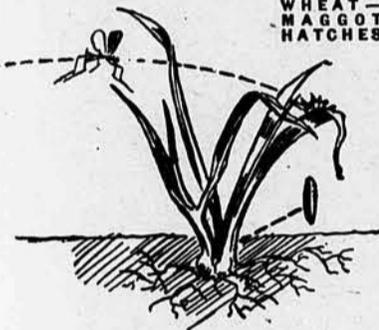
FLAXSEED LEFT IN STUBBLE NEAR SURFACE OF GROUND

August



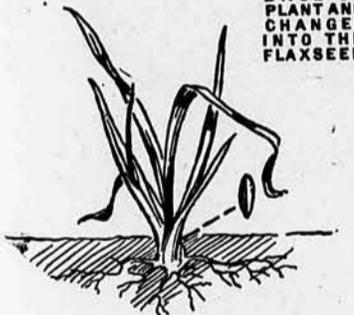
FLAXSEED DEVELOPS INTO MATURE FLY

September



FLY LAYS EGGS ON YOUNG WHEAT—MAGGOT HATCHES

October



MAGGOT SEEKS BASE OF PLANT AND CHANGES INTO THE FLAXSEED

November



FLAXSEED IS NOW READY TO PASS THROUGH WINTER

December



THE PLANT WEAKENED BY TINY MAGGOTS FAILS TO STAND

## Community Co-Operation Is Essential

IN 1912 an outbreak of Hessian fly began to develop in Northeastern Kansas which has gradually moved westward until the western limit now includes Norton, Logan and Clark Counties. During the five years of this outbreak, the Hessian fly has reduced the value of the Kansas wheat crop by at least forty-five million dollars.

### Some Lose Total Crop

The destruction of the fly's work to the individual farmer is not measured by its average annual damage to the entire wheat crop, but by the percentage of his own crop that it may destroy, which may be one hundred per cent as has been actually demonstrated in many cases in some localities.

Nothing can be done to control the fly after it once infests the fields, but after harvest it is possible to put into operation methods of control that are practical and effective. The infestation in the fall wheat comes from two sources—the stubble of the previous crop and volunteer or early sown wheat.

### Control Measures Necessary

The stubble should be disked immediately after harvest. This starts the growth of volunteer wheat and tends to bring an early emergence of the fly. It also conserves moisture and makes plowing much easier at a later date. About three or four weeks after disking, the ground should be plowed to a depth of six or seven inches and all stubble or volunteer wheat buried under at least three inches of soil. The ground should then be refirmed and worked into a good seed bed, after which the soil should be kept mellow and free from weeds and volunteer wheat until planting time. The sowing of the crop should then be delayed until the fly-free date, which can be determined for any locality by consulting the accompanying map.

### Good Farming Destroys Fly

The Agronomy Department of the Kansas Experiment Station has shown that where the ground is prepared in the above manner it not only produces the maximum yields, but the crop may be planted with safety later in the season. On the average seed bed the maximum yield of wheat in the south half of the state will be obtained in an average season by seeding a little earlier than the fly-free date. The better the seed bed is prepared, the safer it is to wait until the fly-free date to sow. It should be understood that if the wheat is seeded earlier there is a greater risk of the crop being injured by the fly, and therefore seeding should be delayed to as near the fly-free date as is practical.

### Co-operation Essential

Where old wheat fields are left to be planted to spring crops, it is important that they should be listed or plowed early in the fall, otherwise they will serve as a source of infestation to nearby fields.

For the best results in the control of the Hessian fly, all of the farmers in the infested area should co-operate and follow the methods outlined above, for the Hessian fly, like most of the grain insects, is most successfully controlled when a concerted fight is made against it.

Many wheat growers believe that the most important method in the control of the fly is late sowing. This is simply one of the important steps, but it should not be overemphasized. The important thing is the destruction of all volunteer wheat. The Department of Entomology of the Kansas Experiment Station has always emphasized five things: (1) The thorough preparation of the seed bed; (2) the destruction of all volunteer wheat; (3) late sowing; (4) the plowing under either in the fall or early spring of all stubble fields left to plant to some other crops; and (5) community co-operation.

### Life History of Insect

The Hessian fly passes through four different stages in its development—adult, egg, maggot, and flaxseed. The adult flies begin to emerge about the

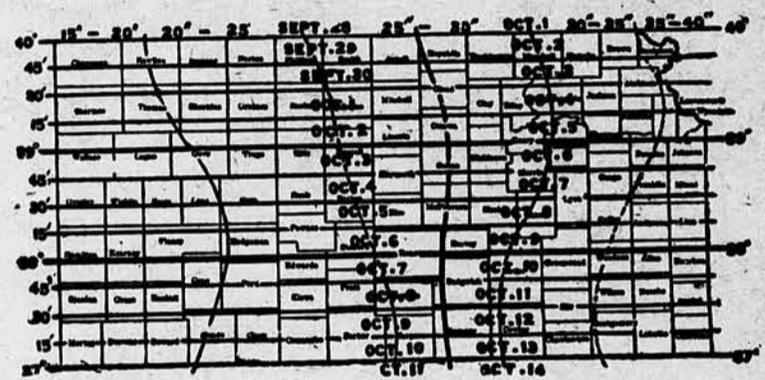
**DISK STUBBLE AT ONCE** after harvest. This starts volunteer wheat.

**PLOW EARLY AND DEEP**, burying stubble and volunteer growth.

**KEEP GROUND ABSOLUTELY FREE** from volunteer wheat until seeding time.

**FEMALE FLY LIVES** only five or six days. Delay sowing until fly-free date.

**THE ENTIRE COMMUNITY** must co-operate. A single carelessly-managed farm can keep a whole neighborhood infested.



MAP SHOWING THE FLY-FREE DATES FOR KANSAS.—THESE DATES ESTABLISHED BY CAREFUL EXPERIMENTS

first of April from the flaxseeds that pass the winter in the volunteer and regular crop of early sown wheat. This spring brood of flies is just as apt, and probably more so, to lay its eggs on late sown wheat as on early sown, especially if the late sown adjoins badly infested early sown or volunteer wheat.

The eggs hatch in from four to eight days, and the young maggots work their way down the leaf to a place between the leaf sheath and the stalk, or where the leaf has its origin. At this time of year, this is generally at the crown of the plant. Here the maggots feed, grow, and in a few weeks reach maturity and then transform to the flaxseeds, in which stage the fly is to be found at harvest time.

Under favorable conditions, such as warm, wet weather, a partial second brood of adult flies may emerge about the last of May, which will lay their eggs upon the leaves of wheat and cause more or less injury up to harvest time.

After harvest, most of the flaxseeds will be found just above the crown of the plant down beneath the surface of the ground, although some may be found above the first or second joints.

The main fall brood of flies which come from these flaxseeds will emerge from the last of August until the middle of October, the greater number probably appearing during the last week of September. The life history is similar to that in the spring and about the first of November flaxseeds are found just above the crown of the plant between the leaf sheath and the stalk. The fly passes the winter in this stage and about the first of April the spring brood of adults will again emerge.

### Organize and Control Fly

The Hessian fly is a tiny insect, but it has cost the farmers of Kansas millions of dollars. Ever since it began its career of destruction in our state it has been studied by our trained entomologists. Most destructive insects have some weak point where they can be successfully attacked. It is the job of the entomologist to study the life history of insect pests most minutely in order to find this point of attack, and having found it, test out practical means of control, such as can be carried out in connection with regular farming operations.

For eight years Hessian fly has been subjected to this sort of observation. It

has been found that the mature female does not live more than five or six days. They emerge from the flaxseed in the stubble at different dates in different parts of the state. The date at which the largest number come out has been definitely established and for several years KANSAS FARMER has been printing the map showing these fly-free dates so wheat growers would be informed as to when they could safely plant wheat and not have the eggs of the fly deposited on the young plants.

Some few communities in the state have organized and effectively controlled the ravages of this pest. However, it has been spreading over a wider area each year. A slight infestation failed to alarm the wheat growers, although they were warned that the flies would increase until the damage instead of being only 10 or 15 per cent, would be 100 per cent. In the wheat belt of Kansas the damage this year is so great that it cannot be ignored longer. Wheat growers that paid little attention to a 10 or 15 per cent damage are now becoming aroused.

It is time wheat growers took steps to stop the ravages of this serious pest. The prestige of Kansas as a great wheat state is at stake. Will the wheat growers organize and control the pest, or will they go on, letting the damage become more serious each year until wheat growing cannot profitably be followed? If every wheat field in the community is plowed deep early in the season while the flaxseeds are still in the stubble, and if no volunteer wheat is allowed to grow to furnish a nursery for the flies that escape the plow, a big step will have been taken in reducing the numbers of these insects. Then, after all this has been done, if no wheat is sown until after the fly-free date, the numbers will be still further reduced.

This is not a job for a few farmers but for all. Three or four carelessly handled farms in a community will keep a whole neighborhood permanently infested. No matter how careful the others may be, their control measures will be fruitless if neighbors harbor this pest. Organize the community into a fly-fighting machine, and follow to the letter the rules laid down, and the fly will be conquered.

Some advocate starving the Hessian fly by not growing wheat for a few years. This would be more difficult to carry out than the measures outlined on this page.

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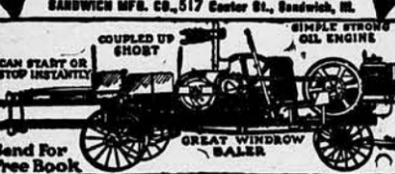
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**When to Cut Alfalfa**

THE proper stage to cut alfalfa is being studied on the experiment station farm at Manhattan. Prof. L. E. Call gave the visiting cattlemen the results of two years observations and when the visit to the farm was made the plots were pointed out. The following extract from the explanation given by Professor Call will be of value to alfalfa growers:

"We are trying to determine the best methods of handling farm crops. Work was started two years ago to determine the best time to cut alfalfa hay. This work consists of a series of plots where alfalfa is cut at different stages of growth in order to determine the effect of time of cutting on the yield, permanency of stand, chemical composition, and feeding value of the hay. Alfalfa has been cut at four stages of development—first, when the buds are formed but before the flowers appear; second, one-tenth in bloom; third, full bloom; and fourth, after the seed has formed. The bud stage hay was cut six times in 1914 and five times in 1915, the one-tenth bloom five times in 1914 and four times in 1915, the full bloom four times both seasons, and the seed stage three times each season. The yields of hay secured are given in the table.

"The first season—(1914)—the highest yield and the largest total amount of protein was obtained when the alfalfa was cut in the bud stage. The differ-

earlier cutting, the hay could be left without fear of injuring the vitality of the alfalfa plants."

**Do Not Top Shade Trees**

A. B., Dickinson County, writes that he has some soft maple trees now thirty years old. They are planted close and are slender and bushy at the top. He asks if it would not be a good plan to cut them off half way up and let them start over again. Also if this is a good plan, whether it should be done now or in the fall.

Professor C. A. Scott, State Forester, answers as follows:

"Cutting the tops out of the trees as you suggest is what is known as pollarding. This is a very foolish and injurious treatment for trees, especially for maples and cottonwoods, as these are soft, perishable woods. The cutting out of the tops or cutting off of large limbs afford easy entrance of fungous spores to the wood, which invariably results in decay that weakens the strength of the trees and shortens their life.

"Your maple trees have practically reached full development, and will, in a few years, die a natural death. My suggestion for maintaining your grove would be to cut out fully one-half of your trees. This would allow the crowns of those remaining to develop as full as possible and at the same time would al-

EFFECT OF TIME OF CUTTING ALFALFA ON YIELD.				
Time of cutting.	No. of Cuttings.	Yield, Lbs.	Per Cent of Grass.	
1914				
Cut in bud.....	6	6,909	} No grass	
Cut in one-tenth bloom..	5	6,769		
Cut in full bloom.....	4	5,385		
Cut in seed.....	3	4,266		
1915				
Cut in bud.....	5	7,723	} Fourth cutting, 30 per cent grass Fifth cutting, 85 per cent grass	
Cut in one-tenth bloom..	4	10,633		Trace in 3d and 4th cuttings
Cut in full bloom.....	4	12,706		None
Cut in seed.....	3	9,309		None

ence, however, in yield between the alfalfa cut in the bud and the one-tenth bloom stage was not sufficient to pay for the extra labor involved in cutting the bud stage an extra time. At the end of the season of 1914 the alfalfa that had been cut in the bud stage was less vigorous, while the vigor of the plants increased as the time of cutting was delayed, the most vigorous plants being those that had been allowed to produce seed.

"In 1915, the greatest yield of hay and the largest total quantity of protein was produced on the plots cut in full bloom, while the plots that had been cut throughout the two seasons in the bud stage produced the smallest yield, producing less hay in the five cuttings than the seed stage plots produced in three cuttings. The plants on the plots cut in the bud stage had at the end of this season become so weakened in vitality that the fourth cutting of this hay was 30 per cent grass and the fifth cutting 85 per cent grass.

"It appears from the results up to this time that alfalfa cut continuously too early—that is, before the crop is one-tenth in bloom—will be greatly reduced in vitality and yield, and that in a period of time will be run out by crab grass, foxtail, and blue grass. In the eastern part of the state where there is difficulty in holding a stand of alfalfa because it is crowded out by bluegrass in the course of a few years, it would appear advisable to delay cutting until the alfalfa plants reached full bloom.

"The vitality of the alfalfa has not been injured by allowing it to pass into full bloom before cutting or even to form seed. In fact, this practice has increased the vitality of the plants. The strongest, healthiest, and most vigorous plants are those that have been cut in the seed stage. It would not be advisable, under most conditions, to allow alfalfa to stand this long before cutting because of the loss of leaves, decrease in the quality of the hay, and decrease in total yield secured when compared with earlier cutting, but if unfavorable weather or rush of work prevented

low enough light to strike the ground so that you could plant the open spaces with mulberry, green ash, or red cedar, which would constitute an understory and would ultimately take the place of your maples as they gradually fail."

**Quality of First Alfalfa**

A. B., Dickinson County, asks if the first cutting of alfalfa is as good as the crops that follow.

This crop is seldom as good as the later cuttings. There are several reasons for this. It always grows more rank and stemmy in the early part of the season. When this rank, stemmy growth is made into hay, the proportion of leaves and finer parts will be less than in the later cuttings. These finer parts are more nutritious than are the coarse stems. Stemmy alfalfa is not only less nutritious, but lacks in palatability. Milk cows will not eat this first cutting hay without considerable waste.

The weather is nearly always unfavorable for hay-making during the period in which the first cutting is being handled, and as a result much of it is more or less damaged by exposure to rain. Frequently first-crop hay has to lie for several days before it can be cured sufficiently to go into the stack or shed.

This hay should be fed to stock cattle, saving the later cuttings for the dairy cows and calves. If it is cured so as to be free from dust, it makes good horse hay. Horses seem to relish the stems of alfalfa better than do cows. In some cases the stems left by the milk cows can be removed from the mangers and fed to the horses and considerable waste thus saved.

**Cost of Producing Crops**

Good business on the farm requires that there be some knowledge as to the cost of producing crops. Cost accounts are most helpful in locating farm leaks. A circular recently published by the Minnesota Experiment Station gives some of the results of cost accounting work done on twenty-four farms in that

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state, extending over a period of five years. The following extract will be helpful to those attempting this sort of work:

"The factors that enter into the cost of producing field crops are: man labor, horse labor, land rental, seed, twine, threshing, values consumed in machinery, and other items.

"Man labor constitutes a large proportion of the cost of production. The monthly wage paid greatly influences the cost of crop production. In Minnesota most of the month labor is hired by the season or year. The wages are fixed to meet the demands of two seasons: the crop season, from April 1 to November 30, and the winter season, from December 1 to March 31. On many farms carrying dairy stock the work is fairly well distributed throughout the year and labor is hired on that basis.

"In addition to the monthly cash wages, the laborers receive board, which constitutes an important share of the labor cost. The monthly wage paid varied from \$12 in winter to \$31 in summer with an average of \$24.54. The board cost averaged \$13.73 per month, or 45.7 cents per day. This brought the average wage rate per hour for all farms to 13.7 cents, with the lowest rate, 12.5 cents, in January, and the highest, 14.6 cents, in September, October and November. For man labor hired by the day the rate per hour for all farms—including board—averaged 20 cents, with the lowest rate, 14.7 cents, occurring in February, and the highest rate, 24.6 cents, in September.

"The management of a farm so as more nearly to distribute horse labor throughout the year and at the same time provide profitable employment for the horses is one of the difficult problems. The average annual cost of maintaining a farm work horse in this state is approximately \$94, or about 25 cents a day, for which is returned about three and a half hours of labor a day. Keeping the cost at a minimum and obtaining the maximum number of labor hours should be the aim of every farmer.

"The average cost of horse labor per hour on the farms studied was 9½ cents. This cost is determined by dividing the average annual cost of maintenance by the average number of hours each horse works annually. The cost per hour rather than per day is the proper basis for computing horse labor. In the latter method a day's labor—eight hours—would be charged at 25 cents while the proper charge would be about 75 cents, for the horse must be maintained during many idle days, and the total annual cost of maintenance must be distributed pro rata to the various enterprises by hours.

"The annual depreciation of farm machinery is usually estimated at 10 per cent. The statistics gathered on these farms for the years 1902-1907 showed that the average depreciation of all machines was approximately 7.3 per cent. The farm records on practically the same farms for the years 1908-1912 indicate a slightly lower figure as the average depreciation on all machines. For the latter period approximately 6.7 per cent is the figure arrived at from the records. This is to be accounted for by the fact that these farmers have taken better care of their machinery during the latter period. It has also been found that many of the machines that were purchased in 1902, 1903, and 1904, are in such good condition as to bring the rate nearer 6 per cent than 10. The longer such records are kept, the more clearly it is shown that as machines grow older the rate of depreciation becomes less. For instance, a grain binder may seemingly depreciate at the rate of 10 to 12 per cent for a few years, but it is found that the machine will last much longer than eight or ten years. On the farms studied, many machines from twelve to sixteen years old are in use and apparently have considerable usefulness left.

"The inventory value of a machine is based on the following considerations: Number of years used, manner cared for, amount of work done, repairs during the year, present condition, and apparent future usefulness. Consideration is also given to the possible auction or exchange value of the machine.

"In order properly to charge machinery values consumed in producing crops it is necessary to determine the acre cost of each class of machinery and distribute it to the various crops. The values consumed in farm machinery are made up of depreciation, labor, and cash repairs, and interest on the average annual investment."

In the crop costs on these farms it is interesting to note that corn husked from standing stalks cost \$14.52 an acre; cut, shocked and husked from the shock, \$17.09, and stores as corn silage, \$19.49 an acre.

**New Breed Not Needed**

Many horse raisers have received or will receive a letter attempting to show an insistent need for a new breed of horses. Whether or not this proposition is simply the result of a wild dream of a well meaning but misguided enthusiast or a scheme, the primary object of which is financial profit through registration fees, remains to be seen. Whatever the motive may be, the scheme in itself is decidedly absurd, and if carried out will tear down and destroy the results of half a century's work in trying to improve the horses of this state.

It is proposed to establish this breed by crossing certain breeds of horses, particularly undersized, light boned Percheron stallions and a type of mares most of which would be big, rough, plain trotting bred stock. Such a scheme is highly impractical because of the fact that establishing a new breed is not the work of a year or a generation, but the work of a century. It is a work full of failures and disappointments, and when we take into consideration the fact that we already have a breed of horses for practically every kind of work, the impracticability of trying to establish a new breed to compete with one already existing is quite apparent.

This is the day of specialization, and it applies to horse raising just as forcibly as it does to any other line of business, and the horse that is of most value today is the one that can do well one line of work.

The greatest concern of the horse raiser should be the selection of a type and breed of horses best suited to his particular needs and then raising of the best horses possible of this particular type and breed. It is most earnestly urged that Kansas horse raisers be not misled by an impractical and impossible scheme that is sure to result in failure, but that they continue steadfast in their purpose of raising the best horse possible of the type and breed that has proven most profitable and satisfactory.

—C. W. McCAMPBELL.

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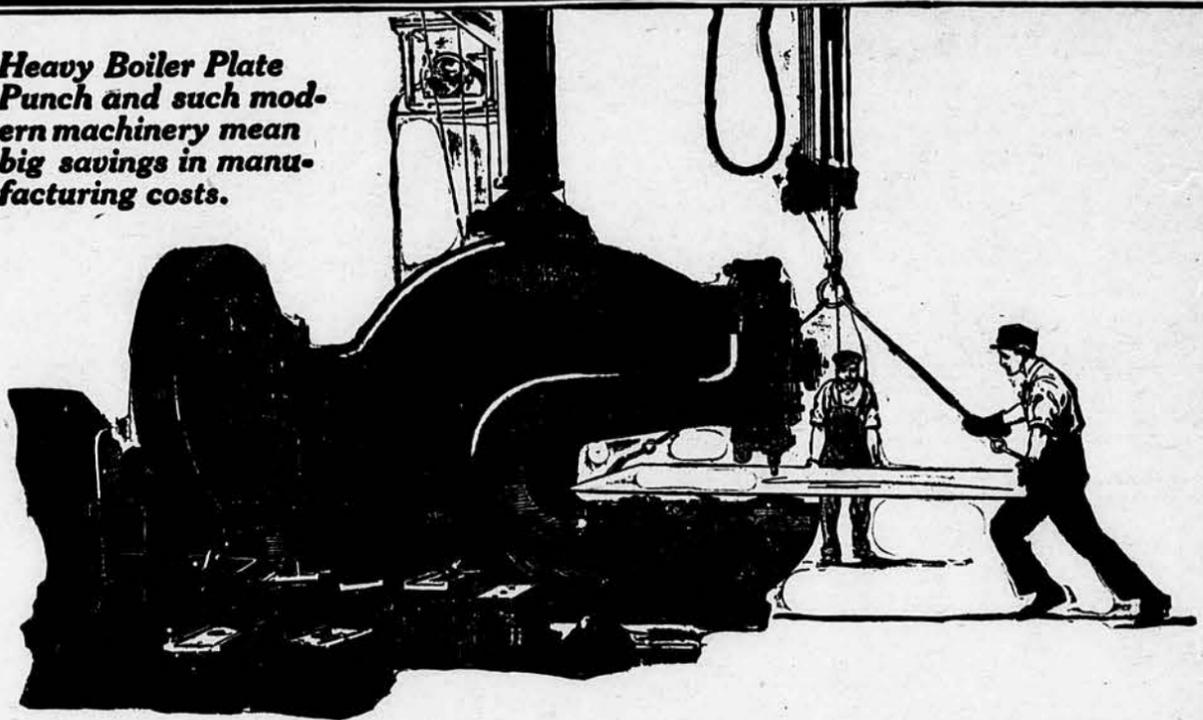
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**More Than Two Reasons**

But these reasons alone do not give Case first place. Case has earned this leadership—selling more outfits yearly than any three other concerns combined — because of many, many superiorities. And because of Case Service, parts are always near. Delays are cut to hours or minutes, instead of days.

Case has held first rank for many years. Others have long tried to win this place from us, but the verdict of the farmers is still in favor of Case. For 74 years, Case has set the pace. Today our final types of Case engines and separators cannot be matched. And they are known by the work they do.



The Sign of Mechanical Excellence the World Over

**What Further Proof?**

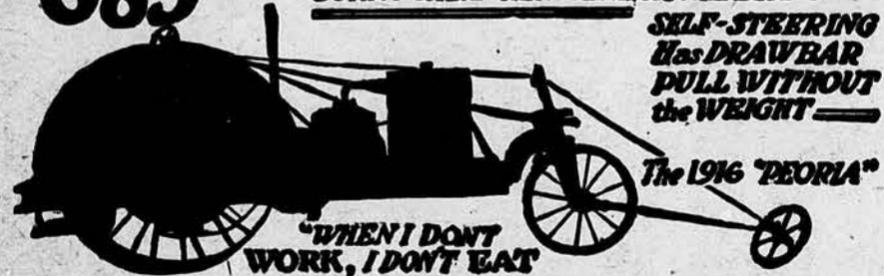
Isn't it a sure sign that Case threshing outfits are superior when Case has such a tremendous lead in the sales? Doesn't this popularity mean that this place has been won through satisfying our customers? Whether you are a thresher or a farmer having your grain threshed, you want to be sure—then insist on Case.

Write right now for our book illustrated in colors. You will find it full of just the information you want on threshing outfits. After reading it, then talk to one of our local representatives.

**J. I. Case Threshing Machine Co., Inc. (FOUNDED 1842) 711 Erie St., Racine, Wis.**

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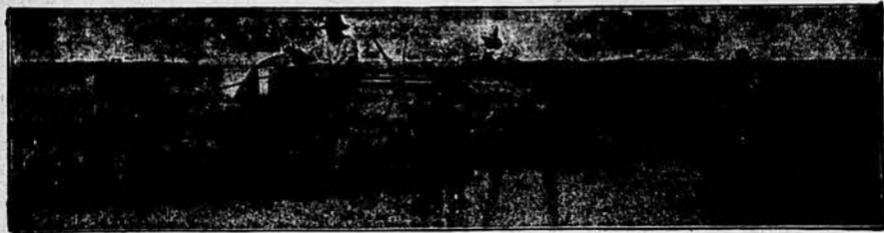
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MENTION KANSAS FARMER WHEN YOU WRITE.

# Kansas Farmer Dairy Club

## Importance of Neat, Accurate Records

**R**EMEMBER, boys and girls, that in placing the awards for the dairy club work, your monthly milk and feed records and the story you write about your work count for twenty points, or one-fifth of the total 100 points.

Think of it—this is something entirely controlled by yourself. Can you think of any reason why you should not get the full twenty points on records and story? It is only necessary that your reports be correct and neatly made. So far, we have received some reports like this, but some show carelessness. Our neatest and most accurate report is from a girl. Try harder next time, boys—and girls, too.

In making the reports, give all the information asked for on the blank and write it in the correct space. We do not know what you may have meant when you made out your report unless you put it on the sheet, for you are not here so we can ask you.

Again, we would ask that our club members read the Dairy Club Department of June 3, showing how the milk record should be made.

### How Do Your Results Compare

The first six milk records received from dairy club members for the full month of May show results as follows:

	Total Lbs.	Per Cent	Total Lbs.
May	Milk	Butter Fat	Butter Fat
1-31	1,808.50	3.1	56.06
1-31	824.75	3.	24.74
1-31	479.50	3.75	17.98
1-31	967.	5.	48.35
1-31	1,508.75	3.45	52.05
1-31	630.	4.95	31.18

These figures, though not many, are interesting to study and ponder. Keep in mind that two things directly influence these results, namely, the cow's natural capacity for producing butter fat, and the kind and amount of feed given her to use in making butter fat.

If your cow has a natural capacity for producing sixty pounds of milk a day, but you give her enough materials to make only forty pounds, you can be certain you will get no more. On the other hand, if your cow's capacity is forty pounds a day and you are feeding a ration sufficient for producing sixty pounds, that feed over and above what is needed for the forty pounds is wasted.

Do you know your cow's capacity? This you can find out by feeding a good milk-making ration, steadily increasing it day by day, and noting whether or not your cow is returning you an additional amount of milk for the extra feed.

### Letters from Club Members

We are receiving some interesting letters from our dairy club boys and girls and have promises of pictures which we hope to receive soon. Have you written us yet? If not, we would be glad

to hear from you and would also like to have a picture of you and your cow. Read the following letters, which will suggest to you something about your work or your cow that you should tell us.

Find enclosed picture of cow. She is Jersey and Durham mixed—not just what I wanted, but I think she will make a good cow. She is not quite three years old and is at present giving twenty-five pounds of milk a day. I am feeding her five pounds of bran each day, besides grass pasture. My test on her milk is 4.6 per cent. She will be fresh again about September 18. I paid \$90 for my cow. I am selling whole milk.

I am glad I joined your dairy club, and will do all I can to succeed. Any suggestions from you will be appreciated.—**ERNEST WENDEL**, Leavenworth County.

I am enclosing picture of cow and self. It is not very good. I am also enclosing those blanks asked for. Sorry that I neglected to send them.

The cow is doing better. When you were here her average was twenty-five pounds a day, now it is above thirty pounds and she is gaining all the time. I had 726 pounds of milk from April 6 to April 24, testing 4.2, making 30,492 pounds of butter fat. I received 33 cents a pound for butter fat, making my income \$10.06. Subtracting the cost of feed from this, \$3.44, leaves a profit of \$6.62, plus the price received for skim milk at creamery, which was 20 cents a hundred pounds after deducting 20 per cent for the cream contained in the milk, making a total net profit of \$7.78.

The calf is doing fine.—**RALPH S. EDWARDS**, Leavenworth County.

Thanks for your offer to help me secure a cow. I should have written you before now. I bought my cow on the thirteenth of May, but she will not be fresh until about August. She is a high grade Holstein, weighs between eleven and twelve hundred pounds. Our farm agent, Mr. Ross, helped to select her. I bought her from one of our neighbors, Mr. Bert Jamison, a very reliable man. She is absolutely guaranteed in every particular. She is giving between twenty and twenty-five pounds of milk a day. I paid \$125 for her.

I didn't think of entering the contest until my cow is fresh, although I am selling her milk and paying for the feed. I will send you a picture of her in the near future.—**BENJAMIN E. ZOLL**, Leavenworth County.

If you milked your cow any of the days in May, make your feed and milk records covering those days and mail them to us at once. We should have had these by June 10.

## Do You Need Sample Bottles?

**W**E have at last been able to make arrangements for obtaining sample bottles and mailing containers for them. These are the bottles and containers necessary for sending the monthly milk sample to the Dairy Department of the agricultural college at Manhattan.

The reason it has taken us so long a time to get these, is that we had hoped to get a bottle that when filled ready for mailing would not exceed four ounces in weight, which would permit its being mailed under the old merchandise rate of one cent an ounce. But we find we cannot get a bottle and container large enough for the required quantity of milk, weighing four ounces when ready for mailing. It will therefore be necessary for the Dairy Club members to pay the regular parcel post rates on samples.

Our price on these bottles and containers, complete, is ten cents for each set. It is necessary for each member of the Dairy Club to have one sample bottle and container, as a sample of milk must be taken the fifteenth of each month and sent to Manhattan to be tested. It would be safer for each member to have two of these sets, as there is a possibility of one being lost or broken in the mail.

We can also furnish the corrosive sublimate tablets at ten cents a dozen. One dozen of these is all that will be needed, as only one of these little tablets is necessary for each milk sample.

If you want us to furnish you sample bottle or bottles, and corrosive sublimate tablets, send us your order and the amount to cover same in postage, at once, and we will be glad to take care of the order for you.



## Milking Machine a Success

**W**E have just completed our first year's experience with a mechanical milker. On the whole, we are very well satisfied with it, although we have not found it perfect in every respect and it does not eliminate all the labor from dairying.

We have been using the Hinman. It is a very simple machine and this is a strong argument in its favor. Some of the more expensive machines may do better work, but I am unwilling to believe that any machine is perfect, and simplicity is always a strong argument. I am not trying to boost the Hinman. It merely happens that this is the only machine I have ever operated. My experience with others has been largely, though not entirely, through reading of them, talking with other dairymen, and studying the advertising material. From what I have learned from these sources, I feel sure that our experience will apply quite generally to all makes.

To answer a very commonly asked question—the machine does not milk the cows perfectly clean. At least we cannot make it do so, though much depends upon the operator and the condition of the machine. Not infrequently less than half a pint is left. Occasionally, however, a quart or two may be left for the hand stripper. A careful operator who is acquainted with the cows can usually operate the milker so that it will not be necessary to strip more than one to two pints. Cows vary a great deal, some regularly milking out clean and others quite regularly requiring careful stripping. As a rule, the cows that are hard hand-milkers do not milk as satisfactorily with the machine as do the easier milkers, although we had one hard milker that the machine milked as completely as the average, and one or two easy milkers in which the machine generally left more than the average amount of milk.

The majority of our cows took to the machine from the very first as though they had never been milked in any other way. After a few milkings nine-tenths of them seemed to have no preference as to methods. Nearly all of our cows are grade Holsteins and I have wondered if the breed has anything to do with their indifference. Only three of our thirty-seven Holsteins made much objection, and the one Shorthorn was willing to be milked either way.

Our daily records cover only twenty-one months, so I cannot tell exactly until we close our second year, September 1, how the production per cow will compare under the two methods. Present indications are that 1915 and 1916 will show a heavier production than did 1914 and 1915. Of course, other factors besides the machine have to be considered, but I am satisfied that the milker does not reduce the cow's production. I can easily see how it might do so if the stripping were neglected or carelessly done.

No farmer who can operate a gas engine need fear to undertake the mechanical milker, at least this has been our experience. Ninety per cent of our trouble has been with the engine and perhaps nine per cent with the shafting, which transmits the power. However, we have had almost no trouble for the last two months and having had a year's experience, we think we have solved the problems that are most likely to confront the user of the milker. In zero weather we experienced some difficulty on account of the first milk forming slush in the cold valve chamber, but after the milking was well started there was no further trouble even on our coldest day, which was eighteen below zero. Sometimes this difficulty could be remedied by operating the valve with the finger until the flow was well started. Sometimes we had to warm the valve with a lantern. A slight bit of dirt in the valve will prevent the machine doing good work, and of course it must be kept air-tight by keeping the rubbers in good order.

Our repair bill has been light, the only source of expense being new rubbers for the teat cups and a minor repair made locally. The company has repaired a few bent parts free, charging only postage, and there have been no breaks aside from the minor one mentioned.

From the standpoint of sanitation, the machine seems to be ahead of the old method if it is thoroughly cleaned. The machine is vastly superior to the aver-

age hand milker in getting clean milk. However, this gain may be easily lost through carelessness or negligence in cleaning the machine. It takes time to care for the machine properly, but it becomes a menace if allowed to become dirty. We find the machine saves much more work than it causes.

We use three single units with an extra pail for changing, and find the most satisfactory arrangement to be as follows: One man operates the machine and shifts cows, while the other strips. We have only six stanchions at present, so the cows have to be brought in, fed, milked, and turned out in regular order. The machine operator attends to the feeding as well, and the work of weighing, recording, and straining the milk is done by either as happens to be convenient. The limited stanchion room is a serious disadvantage in several ways and prolongs the milking time. Under these conditions, two of us—neither an experienced milker—can milk thirty cows in an hour and a half. If the cows could all be stanchioned and fed at one time, this time could be reduced very materially. We figure that the machine takes the place of a good hand.

While the machine reduces the labor considerably, I am still looking for the twelve or fifteen-year-old boy who can properly milk twenty to thirty cows an hour with a milking machine.

Taking everything into consideration, I have no hesitation in saying we have found the machine a success.—N. W. G., Chase County.

### Cream Buyers' Examinations

The laws of Kansas require cream buyers to be examined every three years. This is a great protection to those selling cream. The following notice of dates and places for holding examinations has been sent out by State Dairy Commissioner Geo. S. Hine:

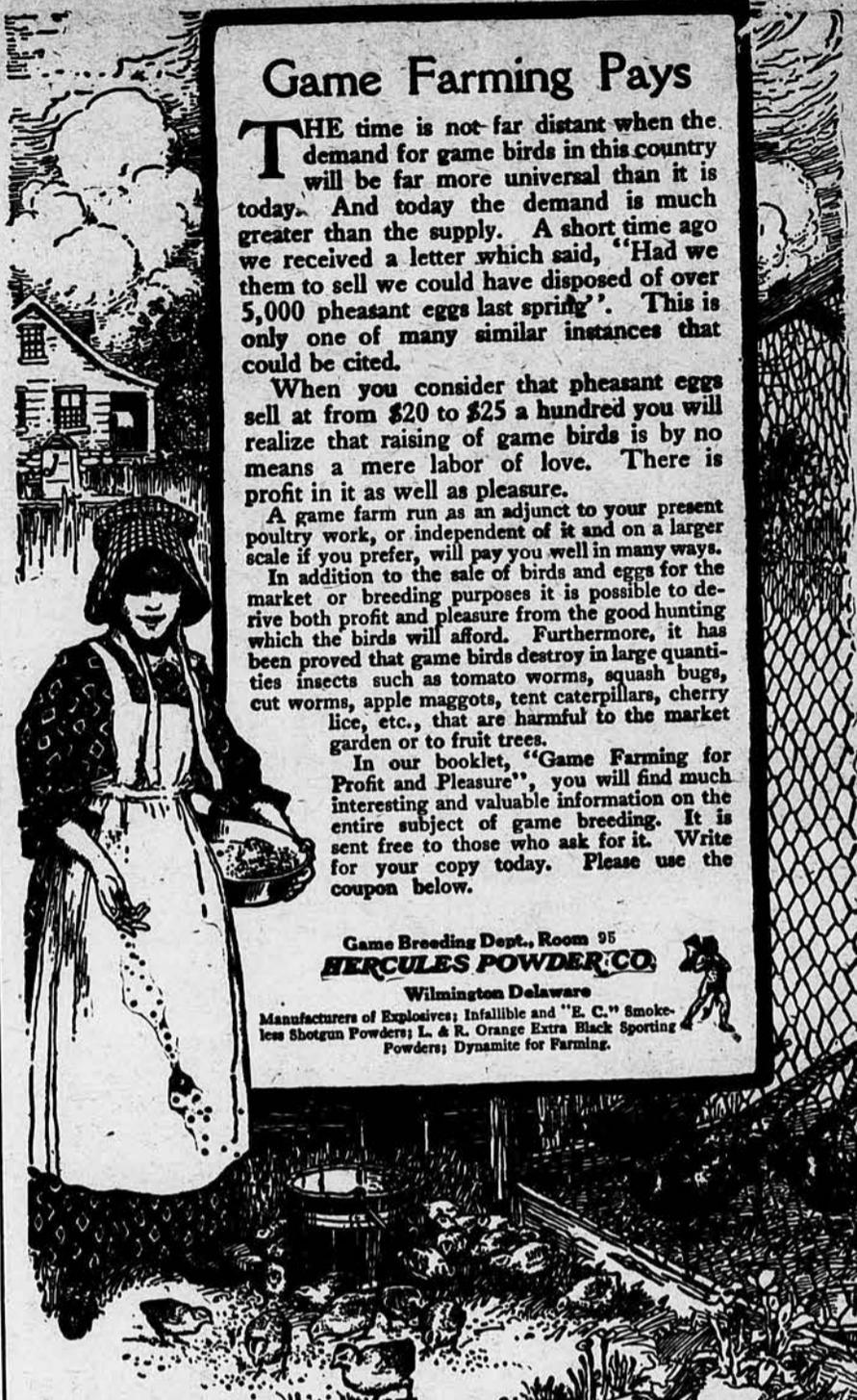
"Persons holding three-year permits expiring on or before June 1, 1917, are expected to appear at the scheduled examination points or cease buying cream, upon expiration of their permit, until a new permit is procured. This notice has been sent to all persons holding temporary permits and final permits about to expire, and has been advertised through the press. Failure to receive notice will not excuse from the examination persons holding temporary permits or final permits about to expire. The notices have been sent to the addresses given when the permit was secured, and alleged failure to receive notice will be due to change of address and failure to notify the state dairy commissioner.

"Sharon Springs, June 26; Wa Keeney, June 27; Russell, June 28; Hill City, June 29; Lincoln, June 30; Great Bend, July 5; Topeka, July 5; Scott City, July 6; Hiawatha, July 6; Ness City, July 7; Atchison, July 7; Lakin, July 11; McPherson, July 11; Dodge City, July 12; Salina, July 12; Meade, July 14; Washington, July 14; Hutchinson, July 18; Wichita, July 19; Harper, July 20; Winfield, July 21; Independence, July 25; Belleville, July 25; Norton, July 26; Columbus, July 27; Iola, July 28; Garden City, July 28; Manhattan, first Tuesday of each month at office of state dairy commissioner."

### Dairy Show Plans

The Southwest Dairy Show Association was not organized until last April, but through the activity of its manager, J. G. Watson, well-matured plans have been made for educational exhibits of the best dairy machinery, utensils, and equipment, including such labor-saving devices as milking machines and separators in addition to the principal exhibits of Jersey, Guernsey, Holstein, Ayrshire, Brown Swiss and Dutch Belted cattle. About 400 animals have already been promised for exhibition. The show will be held in Convention Hall, Kansas City, September 18-23.

Any event that would destroy eighteen million bushels of wheat in one place in Kansas would be the talk of the state for a long time. That is the estimated amount destroyed by the Hessian fly in the last month in Kansas, but the damage was hardly realized until it was all done. The Hessian fly can be controlled. Is it not about time we co-operatively carried out the measures necessary?



## Game Farming Pays

**T**HE time is not far distant when the demand for game birds in this country will be far more universal than it is today. And today the demand is much greater than the supply. A short time ago we received a letter which said, "Had we them to sell we could have disposed of over 5,000 pheasant eggs last spring". This is only one of many similar instances that could be cited.

When you consider that pheasant eggs sell at from \$20 to \$25 a hundred you will realize that raising of game birds is by no means a mere labor of love. There is profit in it as well as pleasure.

A game farm run as an adjunct to your present poultry work, or independent of it and on a larger scale if you prefer, will pay you well in many ways.

In addition to the sale of birds and eggs for the market or breeding purposes it is possible to derive both profit and pleasure from the good hunting which the birds will afford. Furthermore, it has been proved that game birds destroy in large quantities insects such as tomato worms, squash bugs, cut worms, apple maggots, tent caterpillars, cherry lice, etc., that are harmful to the market garden or to fruit trees.

In our booklet, "Game Farming for Profit and Pleasure", you will find much interesting and valuable information on the entire subject of game breeding. It is sent free to those who ask for it. Write for your copy today. Please use the coupon below.

Game Breeding Dept., Room 95  
**HERCULES POWDER CO.**

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Manufacturers of Explosives; Infallible and "E. C." Smokeless Shotgun Powders; L. & R. Orange Extra Black Sporting Powders; Dynamite for Farming.

Game Breeding Department, Room 95  
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Wilmington, Delaware

Gentlemen:—Please send me a copy of "Game Farming for Profit and Pleasure". I am interested in game

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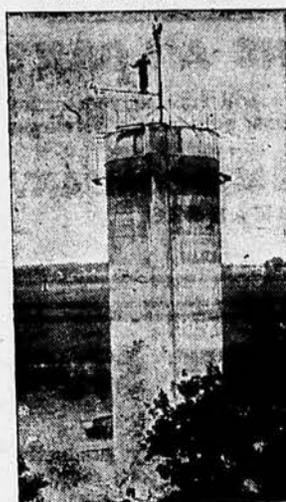
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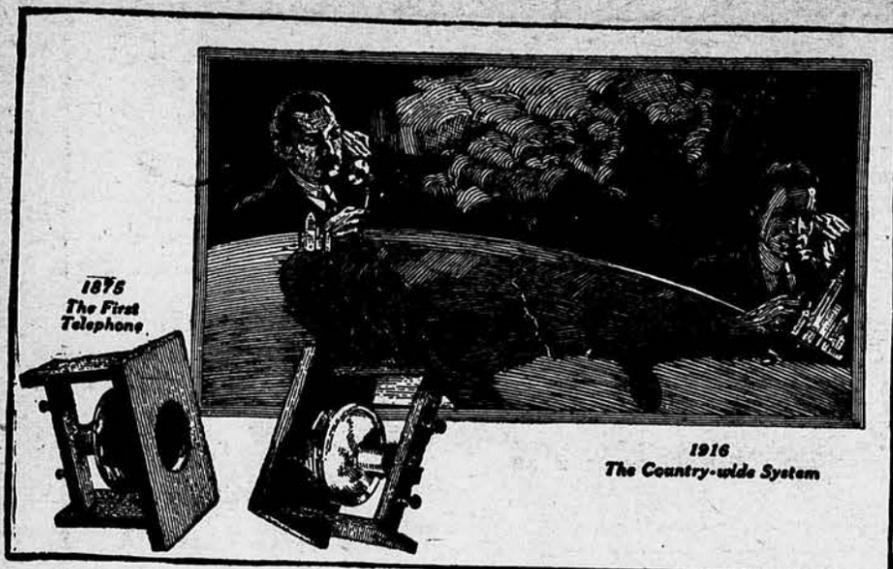
DICK HOPPER, Manhattan, Kansas

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If you will give us the former, we will pay you the latter. We would like to have you look after subscription renewals and new orders for KANSAS FARMER, the oldest farm paper west of the Missouri River, full of farm information. Just a farm paper—no political, religious or race subjects discussed. Will pay you liberally for so doing. Territory arranged to suit. If you are interested, address

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The faint musical sound of a plucked spring was electrically carried from one room to another and recognized on June 2, 1875. That sound was the birthcry of the telephone.

The original instrument—the very first telephone in the world—is shown in the picture above.

From this now-historic instrument has been developed an art of profound importance in the world's civilization.

At this anniversary time, the Bell System looks back on forty-one years of scientific achievement and economic progress, and gives this account of its stewardship:

It has provided a system of communication adequate to public needs and sufficiently in advance of existing conditions to meet all private demands or national emergencies.

It has made the telephone the most economical servant of the people for social and commercial intercourse.

It has organized an operating staff loyal to public interests and ideals; and by its policy of service it has won the appreciation and good will of the people.

With these things in mind, the Bell System looks forward with confidence to a future of greater opportunity and greater achievement.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY  
AND ASSOCIATED COMPANIES  
**One Policy One System Universal Service**

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Has been continuously making  
**WAGONS·BUGGIES·HARNESS**  
For every farm use since 1852  
SEE THE STUDEBAKER DEALER



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### DO YOU WANT A LOAN?

If you do, write us. We will furnish you money at the lowest rate, best terms, prepayment privileges with every loan.

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## Long Breeding Experiment

An interesting departure from the usual scope of experiments with live stock has been made by the Kansas Agricultural Experiment Station at Manhattan in co-operation with the animal husbandry division, Bureau of Animal Industry, Washington, D. C. A breeding experiment has been started with beef breeding cows that is to run twenty years, the purpose being to ascertain whether or not there is a specific type of cow which can be relied upon to produce beef calves of prize-winning merit.

Twenty Shorthorn cows have been put into this experiment. They were selected by Prof. W. A. Cochel of the Kansas Agricultural College and W. F. Ward, senior animal husbandman in beef cattle investigations, of the Department of Agriculture, from the herds of the best Shorthorn breeders in the country. They were not selected solely upon the basis of their individual merit and breeding, but because each, in addition to being a good individual, had produced an outstanding calf.

Shorthorns were selected for this experiment as the beef breed most widely distributed throughout the United States and because of the natural tendency of the Shorthorn cow to produce both beef and milk in profitable quantities.

An inspection of this group of females furnishes the evidence that Professors Cochel and Ward had a clear and definite conception of the purpose in hand. They adhere to the type generally accepted by experienced breeders as the most reliable producing type. They are of breedy appearance, distinctly feminine in character, of smooth conformation, level lines, carrying an even distribution of flesh and also displaying pronounced milking qualities. The shoulders are well laid, hips well covered and there is ample depth of middle. Without exception they adhere decidedly to the breed type. It is remarkable that this number of females could be obtained from nearly as many herds in various states representing different strains of breeding so nearly of one type. This demonstrates at the outset that Shorthorn breeders are working definitely toward a standard.

It is the purpose to mate with these females, Scotch bulls bred along show yard lines. The first sire to be used is Matchless Dale, the present stock bull in the college herd, a massive son of the noted sire of show winners, Avondale. Matchless Dale has made a record as a sire of show steers, being accredited with having sired more champion steers than any bull, living or dead.

The experiment is now under way. The first crop of calves will be dropped in September and it is needless to say that more than ordinary interest will center in this first group of youngsters.

The purpose is to follow a process of elimination, discarding those cows that do not measure up to the required standard as producers and substituting others bred within this group. Whether the specific purpose for which this experiment is being conducted will be fulfilled or not, there is certain to be a vast amount of light shed upon the problems that confront cattle breeders who will attentively follow the progress of this undertaking. The result should have a far-reaching influence in the important field of cattle improvement.—FRANK D. TOMSON.

### New Markets for Beef Cattle

There is a growing inclination on the part of various Oklahoma oil producers whose daily income has reached large proportions, to invest a portion of their profits in pure-bred beef cattle. These men have proven liberal bidders in the various sales where they have been represented.

It is generally known that the beef producers of Argentina and other South American countries are looking to the United States for their supply of breeding stock. For many years they depended almost wholly upon the British Isles for their seed stock, but gradually they have turned their attention to this country, and the various breed associations have co-operated with them and have filled large orders during the past year.

At a recent Iowa Shorthorn sale in which C. A. Saunders sold forty-eight Shorthorns at an average of \$1,074 per head, the Oklahoma oil men, led by F. A. Gillespie, of Tulsa, and Francisco V.

Maissa, Buenos Aires, Argentina, competed for various high class entries with the result that prices gradually mounted upward, as indicated by the average of over \$1,000. It should be understood that the representatives of these large interests are most discriminating in their selections and are not offering liberal bids merely to get rid of their money, but, on the other hand, are determined to secure the best representatives of the breed, considered from both the standpoint of individual merit and the strength of the pedigree. The draw marked distinction between seed of a high order and the ordinary standard. This is a day when good seed is at a premium because knowledge of the reproductive powers of good seed is more widely disseminated than ever before.

The cattle breeder who has bred his herd along intelligent lines with this fact clearly in mind is today reaping his reward and apparently we are only at the threshold of a period of discrimination and broad expansion. It is a wholesome fact that in all of the more important sales, the more discriminating breeders are competing sharply with the Argentine buyers and the representatives of the oil interests, and it is to their credit that many of the most desired breeding animals retain their home in the old established breeding ground of the Central West—a source from which our people may continue to obtain the best available breeding material.

### Sheep Raising Opportunities

Frank Klienheinz, of the Wisconsin Experiment Station, is constantly urging the importance of the sheep industry. Some of his advice is condensed in the following paragraphs:

"Sheep make excellent land clearers. Many settlers use sheep to clear land and put it in shape for dairying. A diet of brush alone will not make the sheep thrive—they need grass or a little grain besides.

"Sheep can be sheltered in a common shed, open to the south and having a hay or straw roof. It should be free from draughts. The roof must not leak and the floor must be dry. If the ewes lamb early, a warmer place is needed for them during lambing.

"It pays to use a good lamb for half the flock. If ewes from the western ranges are purchased and crossed with a pure-bred ram of a mutton breed, offspring improve rapidly. This is an inexpensive but profitable way to start in sheep.

"Start with a small flock, until a knowledge of sheep is secured. Large flocks are harder to handle, more susceptible to disease and are expensive to experiment with. A small flock, handled right is profitable and rapidly develops into a larger flock.

"Ewes need watching at lambing time, more than at any other. Feed them the right ration, keep them dry and warm. Castrate and dock the lambs while they are very young.

"Early lambs are more profitable than late lambs. The best prices are for a lamb weighing sixty or seventy pounds in May or June. The lambs need more feed than their mothers' milk if the best gains are to be made.

"Dip the flock about a week after shearing them. A warm day should be selected and the dipping done early in the morning. Then the sheep are dry by night. Shear the sheep as soon as the weather is warm enough so that they will not take cold if fleece is removed."

The average value of farm land throughout the United States in 1910, aside from buildings, was \$32.49 an acre, according to the census. In 1916, according to the Department of Agriculture, this value had grown to \$45.50, an increase of 40 per cent. Since the total value of farm lands, aside from buildings, was returned in 1910 as \$28,475,000,000, the total increment since that time must be more than eleven billions. The total agricultural wealth production in 1910, according to the Department of Agriculture, was \$38,498,311,413. The entire production of that year would not even pay increase in land values for the six years since then, to say nothing of the inflated prices that prevailed during the census year. And it requires as much capital to make the land productive, as it did in 1910. Is it any wonder that farm tenantry is increasing?



## DESPURRING MALE BIRDS

NATURE has seen fit to provide animals with some means of defense—dogs bite, cats scratch, mules kick, cows use their horns, and male birds use their spurs. It is a common practice among cattle breeders to dehorn their cattle so they cannot injure each other. It is just as important but not so extensively practiced, to remove the spurs from the male birds if two or more are to be kept together. Those who have made a study of the actions of a male bird while fighting, tell us that the male does not strike his enemy with his wings intending for the stroke from them to affect any injury upon the enemy, but that the bird strikes simultaneously with the feet and wings and that the bird strikes the enemy on both sides at the same time, and the wings strike on the outside of each leg, which drives the spurs into the enemy. Therefore, the best way to control the fighting among male birds is to remove the spurs.

Another danger is the male birds with spurs tear the skin on the backs and sides of the females. While part of this is done with the nail on the hind toe of the male, yet if the spur is removed, this danger is lessened.

The spur of a bird is made in very much the same manner as the cow's horn, having a hard, horny shell around a more porous bony structure, and the same principles may be observed in despurring fowls as are observed in dehorning cattle. One of the principal points to be observed is to take all the spur by cutting close to the shank. If the spur is not cut off close to the shank, the injury does not heal so readily and is not generally as satisfactory as cutting close.

The spur is much easier to remove from a young bird than from an old one. The spurs may be taken off with a fine saw, a knife, or a pair of pruning shears.

On "Swat the Rooster" day at the experiment station, fifty-eight birds which were to be kept for next year's breeding pens, were despurred and placed in a pen together. Of this number, only one bird was lost from either fighting, handling, or despurring.

Many valuable birds, both males and females, will be saved if the despurring of male birds is more generally practiced.

A number of males placed in a pen together without females seldom fight.—Missouri Experiment Station Bulletin.

If the chicks are droopy, examine them for lice. Probably the gray lice are troubling them. Pour a little sweet oil on the head and rub some under the wings.

Hot weather is apt to take the enthusiasm out of beginners in the poultry business, and they neglect their chickens and allow them to go without shade or water.

White Plymouth Rocks led for seven months in both individual and pen records at the national egg-laying contest at Mountain Grove, Mo. The individual record is 176 eggs laid by a White Rock hen, and the pen record 721 eggs laid by five White Plymouth Rock hens. The six best hens for the seven months are divided equally between Plymouth Rocks and Leghorns. Two White Plymouth Rock hens and one Barred Rock, and three White Leghorn hens.

Have a routine of work for each day and then stick to it. You have no idea how much easier the work is when you know just what you are going to do and how you are going to do it. The haphazard method makes the work much harder and the hours longer. If you know that the feeding pails are in just such a place, and the grain in certain bins or barrels, you will know just how to go to work. By doing the same thing in the same way each time you will soon be able to do the work in much less time. This counts where you have much to do. System and method are essential in a poultry plant as well as in an office or factory.

The past hatching season has been an uncertain one. Some poultrymen have lived in sections of the country where conditions have been ideal for the hatching and raising of young chicks, while others have been where it is hard to hatch and raise the birds. Changeable

weather plays havoc with the breeding stock, producing colds and bowel trouble, and this in turn affects the hatchability of the eggs. Even when eggs are fresh and properly incubated, the chicks do not do well where the weather conditions are not right, and they certainly have not been right for the chicken fancier this year. All along the weather has been too cold up to the middle of June, and now it appears to be getting too wet. However, this means good prices for those who have raised a number of chicks, while for others who have not raised many so far, it means late hatching, which is not always so profitable. However, if one can get out a strong bunch of chicks, even though it is very late in the season, he can do well with them. With good care and proper food these late-hatched pullets will produce eggs in the winter, and many times as quickly as those hatched earlier. The summer is a growing time and chicks will improve rapidly. They will run right ahead of the early-hatched chicks sometimes, and put on size and flesh daily. If you have had a poor hatching season, it will pay you to fill your houses with the later-hatched pullets, for they will be profitable for you during the late winter and early spring.

### Scaly Leg

Scaly leg is not as bad a disease as chicken pox or roup, but it is more of a disgrace to the poultryman than either, for they may come to our fowls through no fault of our own, by contamination from an outside source. But scaly leg is always a sign of neglect and can always be prevented or checked as soon as the first signs appear, by almost any treatment that will force some grease under the scales and destroy the parasite that causes the trouble. Lard, kerosene and sulphur answer well for either prevention or cure.

If the case is of long standing, and very bad, it will be best to soak the shanks thoroughly in warm soapsuds until the scales are softened and loosened. Then the above mixture can be well rubbed in under the scales, for which purpose an old tooth brush may be used.

Several treatments may be needed to get the shanks in good condition, but when once a cure is effected, an occasional treatment will keep them in good condition. It will pay to treat all birds, especially as they come toward their second year, and prevent the trouble from getting started. In old poultry houses these parasites thrive, and unless the feet of the chickens are greased, they are bound to get on their feet and produce scaly leg.

If the legs are very bad and it is desired to cure the fowls in a short while, such as for instance to attend a show, a few drops of carbolic acid added to the grease and oil will kill off the parasites sooner than without it. However, don't put too much acid in, for it is apt to be a pretty severe remedy. You can apply this every three or four days until the scales fall off.

### Hens Without Males Lay Best

In the Australian egg-laying contest, 600 hens were used. The contest was continued several years, keeping the same number of hens. The hens averaged 186 eggs per year. No males were allowed with any of these hens at any time.

In a test made by one of our experiment stations a pen of ten hens having no rooster with them was compared with a pen of ten hens with which a rooster was kept. This experiment was carried on from January 1 to September 1. During this time the hens without the rooster laid 972 eggs, while hens with which the rooster was kept laid only 959 eggs.

As infertile eggs keep better than fertile eggs, can we not afford to keep the roosters away from the hens during the hot months when the eggs spoil quickly, and we are not using any eggs for hatching?—J. E. PAYNE, Oklahoma.

### Seasonable.

"In what direction does the village lie, my friend?"  
"Well, sir, it's liable to lie in any old direction that comes handy, but at this time of the year, it's mostly about fish."  
—Fun.

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Put one of these machines to work for you. It will pay bigger dividends than any other machine on your farm. Huskers will work for less money. Cribbing done in one-fourth the time. Practically pays for itself, the first year, out of the money it makes and saves for you. Ask for our very attractive prices for 1916.

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is the best and strongest elevator on the market. Made of steel on same principle as corrugated culverts—strong and rigid enough to carry the load. Only in place of corrugations has 16 angles to the section instead of 6 as on ordinary elevators. Also has 4 wood ribs running the full length and Corrugated Steel Couplers which eliminate all chance of bending, buckling or breaking. Ribs also keep flights from dragging, making lighter draft—doing away with unnecessary noise.

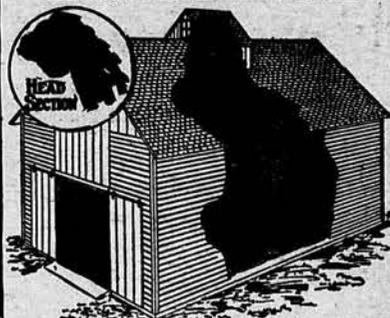
Other features are: The National Steel Elevator has greater capacity, cribs a 60-bushel load in 3 minutes. Doesn't crib silk or shelled corn, which causes rotting in the crib. Screen arrangement separates shelled corn and silk from the ear corn.

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Send us a postal for proof of the superior strength, the greater capacity, the easier-running and better working ability of our National Giant Steel Elevator. We'll send you book and plans, and quote you a very attractive price. Terms arranged to suit. Write us—NOW!

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## National Giant Inside Elevator



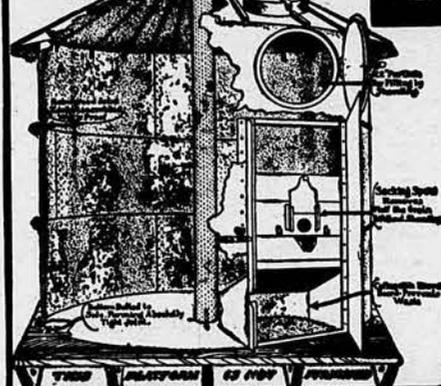
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This is the year to hold your wheat. Don't dump it on the market at harvest time for 65c per bushel. HOLD AT LEAST 1,000 BUSHELS for a month or two and get \$1.00 or more per bushel. This will net you over \$200 clear profit and pay for the bin besides.

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COLUMBIAN BINS may be mounted on platforms and hauled out to the threshing for filling. This saves the cost of sacks, twine and labor of handling.

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Columbian Steel Tank Co., 1607 W. 12th St. Kansas City, Mo.

Columbian Steel Tank Co. No. D Kansas City, Mo.

Please ship { 500 Bushel Galv. Bin \$88.88 } We pay { 1000 Bushel Galv. Bin \$123.00 } the freight

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P. O. ....

Shipping Point.....

Send Bill of Lading to:

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**RANCH FOR SALE.**  
1,280 Acres, two streams, two sets improvements; 175 acres under irrigation, fenced and cross-fenced, outside range. \$10.00 per acre. No trade considered. This is a bargain.  
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480 Acres Unimproved Wheat Land, one mile west of Shields, Lane County. Reference required.  
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1,000 A., two miles McAlester, city 15,000. 200 a. fine bottom land. 150 a. in cult. 60 a meadow. Bal. pasture. Splendid fence, water. Good imp. \$21 per acre. Terms.  
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800 Acres adjoining town; two sets of buildings; every acre lays perfect; 250 acres of finest growing wheat, all goes with sale if sold before cutting, which will be about July 4th. Price, \$27.50 per acre. Will carry \$10,000 at 6%. No trades. Other bargains.  
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Do you want to move to Topeka to educate your children? If you do, this modern five-room home near Washburn College will just suit you. New, only occupied ten months. A choice location. Must sell quick. \$3,200 takes it. Address **S. CABE KANSAS FARMER, TOPEKA.**

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640 Acres of Land, well improved. 582 acres in good state of cultivation, every foot tillable; fine black wheat land. Last year's 1915 wheat crop made 47 bushels per acre. Good 5-room house, big barn, lots of sheds and outbuildings, 3 miles from town. Price, \$35.50 acre. Will trade for Kansas wheat land. What have you to offer? For further information write to  
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Two miles of town, all smooth, tillable land, nicely located, nicely divided into farming land, meadow and tame grass, well watered, close to school, splendid neighborhood. Write for full particulars and descriptive booklet of farm bargains.  
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We are offering 25,000 acres of our cut-over uplands for sale and settlement. The price ranges from \$12.50 to \$25 per acre. Easy terms. Lands are located in Bossier County, La., near Shreveport, La., and adjoining on the east the celebrated Caddo Oil Field. We are offering a good investment. These lands will grow all kinds of agricultural and fruit crops, and are well adapted to stock raising. Write for booklet. Address Land Department, S. H. Bolinger & Company, Shreveport, Louisiana.



## Little Talks to Housekeepers

Helpful Hints Here for the Women Folks of the Farm

All things, save Man, this Summer morn rejoice;  
Sweet smiles the sky, so fair a world to view;  
Unto the earth below the flowers give voice;  
Even the wayside weed of homeliest hue,  
Looks up erect amid the golden blue,  
And thus it speaketh to the thinking mind:—  
"O'erlook me not! I for a purpose grew,  
Though long mayest thou that purpose try to find;  
On us one sunshine falls! God only is not blind!"

—Thomas Miller.

### Fourth of July Accidents

Have you made your plans for your Fourth of July celebration? The significance of this national holiday should never be forgotten by Americans and it is fitting that the day should be specially observed each year, that present and coming generations may know its meaning.

But if the day's celebration ends in sadness—if some member of the family is killed or injured for life—our patriotism will be of little comfort to us and we will only be able to think how much better it would have been had we not sought to commemorate the signing of

the Declaration of Independence, than to have sacrificed so much for part of a day's enjoyment.

By due planning the day can be made enjoyable and patriotic without risking lives, and the memory of it will be pleasant instead of darkened with casualties.

### "Food for Young Children"

In the last few years much attention has been paid to the proper care and feeding of children. Interest has been aroused to the extent that "Baby Week" was observed all over the country. In this connection the Department of Agriculture issued a bulletin on "Food for Your Children" which is easy to understand and should be helpful to mothers who are trying to care for their children so that they will grow up into strong and efficient men and women. The following suggestions from the bulletin should be of great help in providing a satisfactory diet for small children:

"A little child 3 to 6 years of age who

### FASHION DEPARTMENT - ALL PATTERNS TEN CENTS

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



No. 7293—Children's Rompers: Cut in sizes 1, 2 and 3 years. This novel design has the inseam of the leg buttoned together so that there is no need of any opening across the waist line at the back. Each half of body and trousers is cut in one piece, joined at shoulder and underarm, and the closing is in the back. The neck is round and the sleeves long or short. No. 7818—Ladies' Shirtwaist: Cut in sizes 36 to 44 inches bust measure. Comfort every minute and daintiness all the time are expressed in this waist with a shoulder yoke to which the fronts are gathered. The open neck is becoming and the front closing is convenient. The collar and cuffs in light tone temper the plainness of the model. No. 7818—Girls' Dress. Cut in sizes 2, 4, 6 and 8 years. The girle is always ready for "anywhere," dressed up in this frock with a novel closing at the left side to yoke depth. The lower edges of the dress body are gathered under a belt, where the skirt with an under box plait at each side is joined. Bloomers attached to an underwaist are included in the pattern. No. 7209—Ladies' Apron: Cut in sizes 34 to 44 inches bust measure. In this front of the waist is separate. The skirt sections are divided into a narrow front gore which is plain at the top, and two wide side back gores which are gathered. No. 7833—Ladies' Skirt: Cut in sizes 24 to 30 inches waist measure. A tasteful model in four gores with its closing at the left side of the front. Introducing a platted section at each side of the yoke and back, below the hips, gives a panel front, and a yoke is suggested by the button trimming as pictured. High or regulation waistline may be used. No. 7834—Ladies' Dress: Cut in sizes 36 to 44 inches bust measure. Just full of style and snap with contrasting goods for the collar, rever fronts and cuffs. Novelty pockets in the four-gored skirt give a smart touch to the front where the closing is made. Linen, gingham, pique or figured percale can be used for this dress.

### PURE BRED POULTRY

**POULTRY WANTED.**  
FOWLS MARKETED NOW MOST PROFITABLE. Cash offers on request. Coops loaned free. The Copes, Topeka.

### LEGHORNS.

PURE-BRED SINGLE COMB BROWN Leghorn eggs, \$3 per hundred. Mrs. F. E. Tonn, Haven, Kan.

SINGLE COMB BROWN LEGHORNS—Pullet mating only. Tiff Moore, Osage City, Kan.

PRIZE WINNING SINGLE COMB WHITE Leghorns, one-half price. Eggs, 3c; chicks, 7c. Guaranteed stock, \$1 each from good layers, Ferris strain, that pay \$7 per year per hen. Clara Colwell, Smith Center, Kan.

### ORPINGTONS.

SINGLE COMB BUFF ORPINGTONS—Eggs from large vigorous farm range birds, \$1 per setting, \$4 hundred. Martha Brown, Parkerville, Kan.

### PLYMOUTH ROCKS.

BARRED ROCKS—72 PREMIUMS STOCK sale. Eggs half price. Italian bees. Mattie A. Gillespie, Clay Center, Kan.

BRED TO LAY BARRED ROCKS—EGGS from selected farm fock, \$1.00. Special matings headed by ten-pound exhibition cockerels, \$3.00. C. D. Swaim, Geuda Springs, Kan.

WHITE PLYMOUTH ROCKS STILL hold their popularity. Barring one, they were the largest class at the World's Fair at San Francisco. Good to lay, good to eat and good to look at. I have bred them exclusively for twenty-four years and they are one of the best breeds extant. Eggs from first-class birds, the same kind I hatch myself, \$2 per 15, \$5 per 45, and I prepay express or postage to any part of the Union. Thomas Owen, Route 7, Topeka, Kan.

### RHODE ISLAND REDS

S. C. RED EGGS—LARGE BONE, DARK red, from prize stock. Write for prices. Mrs. Elmer Nicholson, Route 5, Wellington, Kan.

EGGS AT SACRIFICE PRICES AFTER May 22nd from our six grand pens; Rose Comb Reds mated to roosters costing \$15.00 to \$35.00; 15 eggs, \$1.50; \$20, \$2.50; 50, \$4.00. Pure-bred range flock \$3.50 per 100. Also good hens and roosters cheap. Catalog. W. R. Huston, Americus, Kan.

### BABY CHICKS.

REDS, BARRED ROCKS, BUFF ORPINGTONS from free range flocks, \$15 per hundred. L. E. Castle, 1920 W. Maple, Wichita, Kan.

### WYANDOTTES.

WHITE WYANDOTTE EGGS FROM prize winning stock, \$1.80, thirty; \$4.50 hundred. Mrs. Will Beigtel, Holton, Kan.

### SIX SILVER POPPY TEASPOONS FREE.

We have just made a large purchase of Silver Plated Teaspoons at the advanced price. They are extra weight, full standard length, very deep bowl and the handles are beautifully embossed and engraved in the popular Poppy design, which is the very latest in spoons. Every housewife will be pleased with them and will be proud to place them on her table. Notwithstanding the advance price, we will give a set of these remarkably beautiful Poppy spoons absolutely free, postage paid, to all who send just \$1.00 to pay for a year's subscription to KANSAS FARMER. Send your subscription order quick and secure for yourself a set of these handsome and serviceable spoons. THIS OFFER IS GOOD TO EITHER NEW OR OLD SUBSCRIBERS. IF YOU ARE PAID IN ADVANCE, TIME WILL BE EXTENDED ONE YEAR.

Address **KANSAS FARMER, TOPEKA, KANSAS**

PLEASE MENTION KANSAS FARMER Please Mention Kansas Farmer

is carefully fed in accordance with his bodily needs, as these are now understood, receives every day at least one food from each of the following groups:

1. Milk and dishes made chiefly of milk—most important of the group as regards children's diet; meat, fish, poultry, eggs, and meat substitutes.
2. Bread and other cereal foods.
3. Butter and other wholesome fats.
4. Vegetables and fruits.
5. Simple sweets.

The relation of food to the condition of the bowels is also an important matter. Grains, particularly those containing the outer or branny layers or coats, are laxative; so, too, are such mildly acid fruits as apples, oranges, and grapefruit. So far, therefore, as the important matter of preventing constipation is concerned, coarse grains and mildly acid fruits serve the same purpose. When fruits are to be obtained in abundance, the kind of cereal served is not of great importance. When they are not, the coarser cereals should be used.

**A QUART OF MILK A DAY.**

The basis of a child's diet should be



ERNEST WENDEL, LEAVENWORTH COUNTY, AND OTHER MEMBERS OF HIS FAMILY, IN THE STRAWBERRY PATCH

clean whole milk—at least a quart a day. Such milk, in addition to water, contains about half a cupful of the very best food substances—butter fat, milk sugar, lime, and other materials needed by the child to make muscle, bones, and teeth. In addition milk contains a substance thought to promote growth by helping the body make good use of other foods. Where good whole milk is not obtainable, clean, fresh skim milk supplies these substances with the exception of the butter fat, and is, of course, preferable to dirty or questionable whole milk. Milk, however, contains very little iron and therefore spinach and other green vegetables and egg yolks, which are rich in iron, combine well with milk.

The child should drink the milk with the child taken off, or should consume his full quart a day with cereals and in milk toast, cocoa, milk soups and stews, in cereal puddings, egg-and-milk puddings, custards, junkets, or simple ice creams. Milk stews may be made with vegetables or fish, or to vary the diet these things can be combined with cream sauce and served on milk toast. The bulletin therefore gives a large number of recipes for the preparation of various milk dishes which will help children consume the requisite amount of milk without growing tired of this valuable food. These for milk soups will be found particularly useful, as they give the mother an easy means of preparing many vegetables which are essentials in the child's diet.

**BREAD AND CEREALS.**

Well-baked bread and thoroughly cooked breakfast cereals are both good for children, and with milk should make up a large part of the diet. Bread and cereal mushes are to a certain extent interchangeable, but neither can take the place of milk, meat, eggs, fruits, and vegetables. An ordinary slice of bread is equal in food value to about half a cupful of boiled or steamed cereal and about a cupful of flaked or puffed cereal. Different kinds of bread may be used for variety.

The yeast-raised bread given to young children should be at least a day old or should be toasted or twice baked. Hot breads are likely to be swallowed in large pieces and are therefore not desirable. Hot breads which are almost all crust, like thin tea biscuits or crisp rolls, are best of the hot varieties.

**MEAT, FISH, AND EGGS.**

Under the heading "Meat, Fish, Poultry, Eggs, and Meat Substitutes," the author states: "In some families children do not get enough meat and eggs; in others they get too much. A good general rule commonly followed is to give a child two years old or over an

egg every other day and about the same amount—two ounces—of meat, fish, or poultry on the intervening days. Where meat is omitted care must be taken to see that other suitable foods take its place—preferably an extra amount of milk and eggs."

Fried meats should not be given to a child, because they are likely to be overcooked and tough, and also because the fat may be scorched and thus changed in composition. Scorched fat is almost certain to be hurtful to children.

Meat is best given as broiled chop meat or in simple meat stews combined with vegetables. Poultry may be boiled and served with rice. When roasted, only the tender portions should be fed. Highly seasoned stuffing or rich gravy should not be given to a young child.

Dried and other fish, and oysters, may be used in milk stews. Well-boiled fish is good for variety. Eggs must not be overcooked or they are likely to cause indigestion. The best way to cook eggs is to poach or coddle them. Scrambled eggs may be served occasionally, provided care is taken not to scorch the fat or to overcook the eggs.

**FATTY FOODS.**

Fat is an important part of the food of children. There is more than an ounce of fat—at least two and one-half level tablespoonfuls—in a quart of whole milk. If the healthy child is given a quart of milk, has butter on his bread, and meat or an egg once a day, he gets enough fat, and that which he receives is in wholesome form. It is well, therefore, not to give such fatty foods as pastry, fried meats and vegetables, and doughnuts or rich cakes. If the child is constipated, the occasional use of cream or salad oil is desirable, for fat in abundance is laxative.

Bacon or salt pork, cut very thin and carefully cooked, may be given occasionally. It is very important not to burn the fat.

**VEGETABLES AND FRUITS.**

Vegetables and fruits are grouped together because they are similar in that both supply iron, lime, and other mineral matters, and also mild acids. Vegetables are an important but often a neglected part of the child's diet. They should be served at least once a day, as they help to keep the bowels in good condition. Fruits are important for their flavoring, and for their laxative effects, and should be served in some form at least once a day. Fruit juices and the pulp of cooked fruit, baked apples and pears, and stewed prunes, are the safest. The child should not be allowed to eat the skins unless they have been made very tender by cooking.

**SIMPLE SWEETS.**

Sugar is a desirable part of the diet provided it is given in simple sweets and not allowed to take the place of other foods and spoil the child's appetite. Simple sweets are such things as lump sugar, maple sugar, syrups, honey, and plain candy; and those foods in which sugar is combined in simple forms with fruit juices as in lemonade, water ice, jelly, etc., or with flour or starch, as in plain cakes—cup cakes, sponge cake, cookies—and with fruit, as in jams, marmalades, and similar things.

**Raspberry Whip**

- 1 1/2 cupfuls raspberries
- 1 cupful powdered sugar
- White of one egg

Put ingredients in bowl and beat with wire beater until stiff enough to hold in shape. This will require about thirty minutes' time. Pile lightly on dish, chill, surround with lady fingers or other fancy cakes, and serve with boiled custard.

**Steamed Cherry Pudding**

- 1/2 cupful butter
- 1 cupful sugar
- 3 eggs
- 3 1/2 cupfuls flour
- 1 1/2 tablespoonfuls baking powder
- 1/2 cupful milk
- 1 1/2 cupfuls drained canned or stewed cherries

Cream butter, add sugar gradually, and eggs well beaten. Mix and sift flour and baking powder and add alternately with milk to first mixture, stir in the cherries, turn into buttered mould, cover, and steam three hours.

Serve with sauce made of the cherry juice heated, thickened with a little flour, sweetened well, lump of butter and few cherries added.

**Summer Fashion Book, 10 Cents**

As owing to the large number of departments, it is not possible for us to illustrate the very many new designs that come out each month, we have made arrangements to supply our readers with a quarterly fashion catalog illustrating nearly 400 practical styles for ladies, misses and children, illustrating garments all of which can be very easily made at home. We will send the latest issue of this quarterly fashion book to any address in the United States, postage prepaid and safe delivery guaranteed, upon receipt of 10 cents.

**Classified Advertising**

Advertising "bargain counter." Thousands of people have surplus items of 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 per week. No "ad" taken for less than 40 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.**

**LADY OR GENTLEMAN TO TRAVEL** for old established firm. No canvassing. Staple line. \$18 weekly, pursuant to contract. Expenses advanced. G. G. Nichols, Philadelphia, Pa., Pepper Bldg.

**MEN AND WOMEN WITH SELLING** ability earn \$3 to \$10 a day. Staple goods and straight business proposition. C. W. Carmen, Department D, Merchants Bank Bldg., Lawrence, Kan.

**FARMERS WANTED—\$75 MONTH.** MEN and women, U. S. government jobs. Short hours. Common sense education sufficient. Write immediately for list positions now obtainable. Franklin Institute, Dept. L 82, Rochester, N. Y.

**CATTLE.**

**GUERNSEY HEIFERS OF DESIRABLE** breeding and promising development. Registered. Soon to freshen. J. W. Marley, Oswego, Kan.

**HOLSTEIN COWS AND HEIFERS—TWO** carloads. Fancy grades. What do you want? Paul E. Johnson, South St. Paul, Minn.

**HIGHLY BRED HOLSTEIN CALVES,** either sex, 15-16ths pure, crated and delivered to any station by express, charges all paid, for \$30 apiece. Frank M. Hawes, Whitewater, Wis.

**REGISTERED HOLSTEIN BULL, NINE** months old; five of his dams averaged 106 pounds milk in one day, and eleven of them 30 pounds butter in seven days officially; \$100. Wisconsin Live Stock Association, Appleton, Wis.

**GUERNSEYS OF ALL KINDS, ESPECIALLY** high grade heifers and registered bulls. Klement Bros., our representatives, will drive you to the different breeders. This service furnished to all purchasers by Jefferson County Guernsey Breeders' Association. H. A. Main Secy., Fort Atkinson, Wis.

**DOGS.**

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

**PATENTS.**

**PATENTS PROCURED. INQUIRE ABOUT** our \$100 cash prize. Free advice. Free search. Free official drawings. Capital Patent Co., Dept. E, Washington, D. C.

**MISCELLANEOUS.**

**MONEY TO LOAN ON IMPROVED KANSAS** farm lands. All negotiations quickly closed. No delays. A. T. Reid, Topeka, Kan.

**FOR SALE—BEST GRADE PLAYER** piano, good as new. Bargain. Must sell. Leaving city. Address 710 Harrison Street, Topeka, Kan.

**WANTED—A FARM LOAN APPRAISER** and inspector to inspect and appraise Alabama farm lands as a representative of a well established firm in Birmingham, Alabama, engaged in placing of farm loans in Alabama for eastern insurance companies. Applicant must have ability to appraise farms, and must also have had some experience placing farm loans for large insurance companies. Write fully regarding qualifications, references, salary expected, etc. R. J., care Kansas Farmer.

**FOR SALE—LATEST PLAT BOOK OF** Shawnee County, 44 pages, size 14x19 inches. Shows each township in the county, with name of each property owner on his land, also rural routes, school houses, railroads and complete alphabetical list of taxpayers in county outside Topeka and Oakland. Satisfaction guaranteed. Cloth binding, \$5.00. To close out remaining Bristol board binding will sell a year's subscription to Kansas Farmer and Plat Book for only \$1.50. Last previous county map sold for \$10. Send all orders to Kansas Farmer, Topeka, Kan.

CHILICOTHE, MISSOURI, May 27, 1916.

KANSAS FARMER, Topeka, Kansas.

Gentlemen: Please take out my advertisement. I have sold all my Percherons and a good many jacks. I have some twenty head of extra good jacks that are young and this young stuff is getting so high that I have about decided to keep twenty head of them over for early sale next spring. I thank you for a good many sales. Every man who came in answer to the advertisement found what he wanted and bought it. My only trouble has been with answering so many inquiries, which is not a bad fault for an advertisement. Send me your bill. Respectfully yours, S. J. MILLER.

**TANNING.**

**LET US TAN YOUR HIDE—COW, HORSE** or calf skins for coat or robe. Catalog on request. The Crosby Frisian Fur Co., Rochester, N. Y.

**HOGS.**

**BIG-TYPE POLAND CHINAS. U. A.** Gore, Seward, Kan.

**BEE SUPPLIES.**

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

**HORSES AND MULES.**

**SHETLAND PONIES, GELDINGS, MARES** and colts, all colors. C. H. Clark, LeCompton, Kan.

**REAL ESTATE.**

**WANTED—FARMS. HAVE 3,357 BUYERS.** Describe your unsold property. 679 Farmers' Exchange, Denver, Colo.

**FOR SALE OR TRADE FOR STOCK—A** clean 35-cent restaurant in Sylvia. Address A. W. Duer, Sylvia, Kan.

**WASHINGTON, IDAHO AND MONTANA** red cedar posts in car lots. Pay after inspection. Farmers Co-Operative Co., Sagle, Idaho.

**FOR SALE—A MODERN HOME IN** Topeka, located on a good street, near school and business district; two lots, modern seven-room house, barn, a choice location. Will sell at a bargain. No trades. Address Z, care Kansas Farmer.

**BUY A FARM IN TEXARKANA TERRITORY.** Truck, dairy, fruit and all round farms in the uplands, \$10 an acre up. Red River valley lands leveled and drained, \$15 an acre up. No richer land anywhere. Fifty miles good roads, 60 miles building. For full data address Young Men's Business League, Texarkana, Ark.-Texas.

**PET STOCK.**

**BELGIAN HARES, ALL VARIETIES.** Pheasant eggs, goldfish, fancy pigeons. Good farm. J. W. Wampler, Garden City, Kan.

**RUFUS RED AND GOLDEN FAWN BELGIAN** hares for sale. J. R. Hathaway, Garden City, Kansas, Route 1.

**WANTED**

**WANTED—TO HEAR FROM OWNER OF** good farm for sale. Send description and cash price. R. G. List, Minneapolis, Minn.

**TREES, SEEDS AND PLANTS.**

**NANCY HALL, DOOLY, YAM AND** Pumpkin Yam potato slips, any amount, from assorted seed, \$1.75 per thousand f. o. b. McLoud. Satisfaction guaranteed. Orders and correspondence solicited. L. M. Baker, McLoud, Okla.

**PURE NANCY HALL POTATO PLANTS** free from disease, shipped day order received. Millions ready. Two hundred, 50c; five hundred, 80c; per thousand, \$1.25. Everything shipped prepaid, either parcel post or express as wanted. J. S. Norman, Bentonville, Ark.

**KODAK FINISHING.**

**SEND FOR PRICE LIST. PAUL HAR-** rison, 813 Kansas Ave., Topeka, Kan.

**THE STRAY LIST.**

**TAKEN UP—BY CALVIN PRIEST IN** South Brown Township, Edwards County, Kansas, on the first day of April, 1916, one 2-year-old steer, color black; two dim bars above marks unknown on right hip. Appraised at \$40. Florence Erwin, County Clerk, Kinsley, Kan.

**STATE OF KANSAS**

COUNTY OF GRANT } ss.  
I, THE UNDERSIGNED, A JUSTICE OF THE peace within and for Lincoln Township, in the county and state aforesaid, do hereby certify that the following is a true and correct copy of the description and value of an estray taken up by R. W. Hennigh, of Grant County, Kansas, as shown by the affidavit of said taker-up, and the valuation of appraisers, now on file in my office: One bay horse with star in forehead, left hind foot white, no marks or brands except a few gray hairs over jaw bone, weight about 850, age about 7 years; value, \$40.00. The appraisers allowed \$12.00 as the proper sum for keeping such animal. In witness whereof, I have hereunto set my hand at my office in said township, this 12th day of June, 1916. S. A. Davis, Justice of the Peace in and for Lincoln Township, Grant County, Kansas.

**SILOS.**

**MONOLITHIC SILO BUILDER. BUILDS** a reinforced concrete silo on your ground. Manufactures every detail from chute to window. Any farmer can operate it. Only ten days to have complete silo set up and in use. Is absolutely a great money saver. Details, photographs and experiences of others sent you for the asking. Address E. H. Euler, 114 Kansas Ave., Topeka, Kan.

If on the market for pure-bred stock, read KANSAS FARMER live stock advertisements. You will find what you want.

**HORSES AND MULES.**

**The Champion Breeder --- Missouri Chief 8385**

Sire of the World's Grand Champion Jack, Kansas Chief 8743  
In public service at our ranch south of Ellinwood. Excellent facilities for handling any number of healthy Jennets.

Write Us for List of Winnings of His Get.

Most liberal terms and other information about this sire possessing excellent size, quality, bone, finish, and unexcelled style and action. Winner first as sire at Kansas State Fair, Hutchinson, 1915.

**M. E. RICHARDSON - STERLING, KANSAS**

**HORSES AND MULES.**

**DEIERLING STOCK FARMS**



Have fifteen large, heavy boned, black, registered jacks, 15 to 18 hands high, good heads and ears, good style, good breeders. I have a number of jacks sired by the champion, Pride of Missouri, also several other good herd prospects. In my 1914 sale I sold the champion of Kansas State Fair, 1915, Eastern Lightning, also Demonstrator, first prize aged Jack Missouri State Fair. Reference, Peoples Bank. Written guarantee with each animal. Have a number of Percheron stallions for sale, also saddle stallions. Barn in town. Wabash Railroad. **WM. DEIERLING, QUEEN CITY, MISSOURI.**

**PERCHERON STALLIONS FOR SALE**

A pair of coming fours and a coming three-year-old, two blacks and the other a bay, sired by the herd stallion Sirocco (51358), which we sold to Northern Nebraska. They have the size, bone and quality, and are priced to sell.

**A. M. DULL & SONS - WASHINGTON, KANSAS**

**POLAND CHINAS**

**POLAND CHINAS.**

**100 - BRED SOWS AND GILTS - 100**

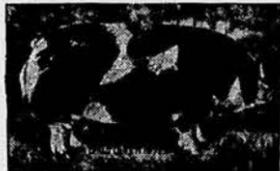
ALL IMMUNE, BIG-TYPE POLAND CHINAS

FOR SALE—Sows and gilts bred for July and September litters. A few Receiver gilts bred to The Wonder by Long Wonder. A few gilts sired by First Metal and bred to Receiver Wonder. These are big stretchy gilts and will please anyone. Also a few October and November gilts and a few choice October boars. Can ship pairs or trios, not related. Prices reasonable. Come and see our herd. Over 700 registered hogs on the farm.

**THE DEMING RANCH, OSWEGO, KANSAS**

Two Miles from Town.

H. O. Sheldon, Herdsman.



**FAULKNER'S Famous Spotted Polands**

We are not the ORIGINATOR, but the PRESERVER of the OLD ORIGINAL BIG-BONED SPOTTED POLANDS.

The oldest and largest herd on earth. Every hog recorded in the recognized records. MID-SUMMER SALE AUGUST 9. If interested in the world's greatest pork hog, ask for catalog. **H. L. FAULKNER, BOX K, JAMESPORT, MO.**

**Poland China Boars**

For Sale—Seven fall boars by Iowa King, the first prize aged boar at Missouri State Fair last year. Price \$30. First check gets choice. All immune.

**P. M. ANDERSON, Lathrop, Mo.**

**HENRY'S BIG-TYPE POLANDS**

Fall boars, also gilts bred or open, sired by Mammoth Orange. Spring pigs by Mammoth Orange and Big Bob Wonder.

**JOHN D. HENRY, Route 1, Leocompton, Kan.**

**POLAND CHINAS**

For Sale—A few large type bred gilts; all vaccinated by the double process. Price reasonable for quick sale.

**A. J. SWINGLE - Leonardville, Kansas.**

**LANGFORD'S SPOTTED POLANDS.**

Mr. Farmer, look this way. Pigs ready to ship. **T. T. Langford & Sons, Jamesport, Mo.**

**GALLOWAY CATTLE.**

**GALLOWAY BULLS**

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

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

**SHORTHORN CATTLE.**

**VAIL HERD SHORTHORNS**

For Sale—Four Scotch-topped bulls, eight months old, all reds. They are extra good. Priced at \$100. First check gets choice.

**W. H. VAIL - HUME, MISSOURI**

**HILL'S SHORTHORNS**

One red Shorthorn bull 11 months old, sired by Bettie's Albion 399451, pure Scotch well built, weight between 600 and 700 pounds. Ready for service. Priced to sell.

**O. E. HILL - TORONTO, KANSAS**

**Sycamore Springs Shorthorns**

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

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

**RIVERSIDE SHORTHORNS**

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

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

**LOWEMONT SHORTHORNS.**

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

**OHIO IMPROVED CHESTERS**

**IMMUNE O. I. C. PIGS**

**ALVEY BROS. - MERIDEN, KANSAS**

**Choice August and September Pigs**

Weight 125 pounds, \$25. Booking orders for spring pigs, \$15 each; pair, \$25; trio, \$35. Registered. Express prepaid anywhere in Kansas. **F. C. Gookin, Route 1, Russell, Kan.**

**CHESTER WHITE PIGS.** Write for breeding and prices. **E. E. Smiley, Perth, Kansas.**

**WHEN WRITING TO ADVERTISERS** When Writing to Advertisers,

**OLD ORIGINAL SPOTTED POLANDS**

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

**OSCAR BOW STOCK FARM**

**A. S. Alexander, Prop. Burlington, Kansas**

**GUERNSEY CATTLE**

**THE GUERNSEY**

stands for Economical production. More profit from every pound of feed. Do you want cows that will improve your Dairy?

Write for free literature.

**Guernsey Cattle Club, Box K, Peterboro, N.H.**

**SHROPSHIRE SHEEP**



REGISTERED SHROPSHIRE RAMS Yearlings and twos, square built, rugged, hardy bucks with weight, bone and heavy fleece. Quick shipping facilities and priced cheap. 412 head. Above Kansas City. **HOWARD CHANDLER, Chariton, Iowa**

**BERKSHIRE HOGS.**

**BERKSHIRE BRED SOWS**

Seventy choice bred Berkshire sows, to farrow every week from March 1 until June. Bred to as good boars as the breed has. Cholera immune.

**E. D. KING - BURLINGTON, KANSAS**

**DUROC JERSEYS.**

**Duroc Bred Sows**

For Sale—Ten Duroc sows bred for June and July litters. Price, \$30 to \$50. Also ten fall boars, all registered, price \$20 to \$30. First order gets choice. Don't wait. These are real bargains.

**J. R. SMITH, Newton, Kansas**

**BOARS! BOARS! BRED GILTS!**

Eighteen big husky boars, thirty bred gilts, a few tried sows. Crimson Wonder, Illustrator II, Colonel, Good Enuff, Defender breeding. Either by or bred to sons of the greatest champions of the breed. Priced for quick sale. Immune.

**G. M. SHEPHERD - LYONS, KANSAS**

**HEREFORD CATTLE.**

**Herefords and Percherons**

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

**M. E. GIDEON - EMMETT, KANSAS**

**WILLIAMS & SONS HEREFORDS**

For Sale—Seven cows bred to drop calves in summer. Sixty bulls from 8 to 10 months old. Priced reasonable. Come and see us.

**PAUL E. WILLIAMS, MARION, KANSAS**

**SOUTHARD'S MONARCH HEREFORDS**

For Sale—Choice cows and heifers bred to Monarch No. 449994 and Repeater 66th. A few extra good herd bull prospects. Annual sale October 7, 1916. Send for catalog.

**J. O. SOUTHARD - COMISKEY, KAN.**

**You Will Find Many Uses for the Speedy Stitcher Awl**

—and KANSAS FARMER Will Give You One FREE With One Years' Subscription

The SPEEDY STITCHER AWL is the latest and most effective Automatic Sewing Awl ever offered. How often have you thrown away a tug, a pair of shoes, a grain sack, just because the trouble and expense of taking them to town for repairs was too great. The SPEEDY STITCHER WILL SAVE ITS COST IN REPAIRS MANY TIMES OVER EVERY YEAR.



With this Awl one can mend harness, shoes, tents, awnings and pulley belts, carpets, saddles, suit cases, or any heavy material.

THE SPEEDY STITCHER is provided with a set of diamond-pointed grooved needles, including special needle for tapping shoes. It also contains a large bobbin from which thread feeds, all of which are inclosed inside the handle out of the way. Finished in the best possible manner—highly polished rock maple handle and nicked metal parts, with nickel-plated needles that will not rust.

**HOW TO GET THE AWL FREE**

Send us only \$1.00 for one year's subscription to Kansas Farmer and 10 cents extra to cover packing and postage—\$1.10 in all—and we will send you this useful, dependable Awl, FREE.

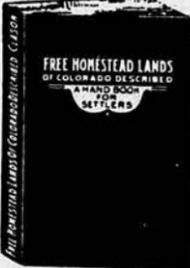
**KANSAS FARMER, Topeka, Kansas**

**FREE GOVERNMENT LAND**

Endorsed by Professor Cottrell, Agricultural Expert of the Rock Island System.

Professor Cottrell says: "A conservative publication of unquestionable value to all seeking the free homestead lands. I am especially pleased with the careful appraisal of the cash value of these raw lands. A copy occupies a prominent place in the library which accompanies me on my travels over the Rock Island System."

Every citizen has a homestead right and is entitled to file on 160 or 320 acres. Thousands and thousands of acres of the most valuable lands in Kansas were secured in this way a few years ago. At this time eighteen million acres are still vacant in the state of Colorado. Why not use your privilege as an American citizen and secure a valuable tract of land free in Colorado?



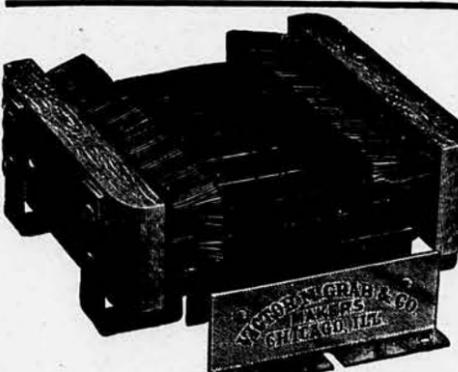
**This Book Describes The Lands**

A new book, "Free Homestead Lands of Colorado Described," has just been published, and KANSAS FARMER has made arrangements to distribute copies of this book in connection with yearly subscriptions to KANSAS FARMER, new or renewal.

The character of this land varies in different localities. Considerable of it is especially good, other portions only of fair quality, and some is poor, broken, and of little value. It is most important for a settler to locate in the right district and at the least possible expense. With this end in view, this book has been published, classifying the lands open for entry and giving accurate detailed description and location of the land in every township containing vacant land in Colorado, describing the surface, soil, timber, distance from railroad, etc.

This is the same book for which many have been glad to pay \$2. However, for a limited time we will send a copy of this book and a year's subscription to KANSAS FARMER to anyone sending only \$1, our regular subscription price, and 10 cents extra for mailing—\$1.10 in all. The book is complete—320 pages, same as the higher-priced book, only this is in a strong paper binding instead of cloth. Send all orders to

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Breeders' Directory

- PERCHERON HORSES. M. E. Gideon, Emmett, Kan. ANGUS CATTLE. Geo. J. Deitrich, Carbondale, Kan. D. J. White, Clements, Kan. SHORTHORNS. C. H. White, Burlington, Kan. HOLSTEINS. C. E. Bean, Garnett, Kansas. DORSET-HORN SHEEP. H. C. LaTourrette, Route 2, Oberlin, Kan. JERSEY CATTLE. J. B. Porter & Son, Mayetta, Kan.

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Bargains in Bred Sows, Fall Boars and Pigs at any time. Pair no akin. History free. Smith's Mulefoot Ranch, Alexandria, Neb.

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YORKSHIRE SWINE. Cholera-immuned young stock of the best type and breeding for sale. Prices always reasonable. DONALD R. ACKLIN, Ferrysburg, Oh.

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CLAIM SALE DATES.

Herefords. Oct. 7—J. O. Southard, Comiskey, Kan. Oct. 24-25—W. I. Bowman & Co., Ness City, Kan.

Shorthorn Cattle. Nov. 22—Tomson Bros., Carbondale and Dover, Kan.

Poland Chinas. Oct. 10—Sigel Brown, Reeds, Mo. Oct. 13—Dr. J. H. Lomax, St. Joseph, Mo.; sale at farm near Leona, Kan.

Oct. 14—T. J. Dawe, Troy, Kan. Oct. 16—Walter B. Brown, Perry, Kan. Oct. 19—H. B. Walter, Effingham, Kan. Oct. 24—Leonard & Russell, St. Joseph, Mo. Oct. 25—U. S. Byrne, Saxton, Mo. Oct. 26—Walter W. Head, St. Joseph, Mo. Oct. 20—James Arkell, Junction City, Kan. Oct. 21—P. M. Anderson, Lathrop, Mo. Oct. 23—Forest Rose, Hemple, Mo. Oct. 27—T. E. Durbin, King City, Mo. Oct. 28—H. H. Foster, King City, Mo. Oct. 31—Harry Wale, Peculiar, Mo. Nov. 1—Fred B. Caldwell, Howard, Kan. Nov. 4—L. R. Wiley, Sr., Eldorado, Kan. Nov. 6—A. R. Enos, Ramona, Kan.

Spotted Polands. Aug. 9—H. L. Faulkner, Jamesport, Mo. Oct. 12—Andrews Stock Farm, Lawson, Mo.

Durocs. Nov. 2—Lant Bros., Dennis, Kan.

W. F. Phelps of Aurora, Mo., who is building up one of the best Holstein herds in that state, writes that his herd is doing fine. Mr. Phelps spared neither time nor expense in securing foundation stock for his herd. He selected only animals of choice breeding and individuality with special care as to good records. The result is a very high class herd of heavy producers. A feature of the herd at this time is the very high class of young stock, including some young bulls that are excellent prospects.

E. E. Heacock & Son of Hartford, Kan., who have succeeded in building up a Shorthorn herd that for breeding and individuality is among the best in existence, report their herd doing well this year. Their herd is headed by Brawwith Heir, one of the outstanding sires of the breed.

C. E. Hill of Toronto, Kansas, reports his Shorthorn herd doing fine. Mr. Hill owns one of the richly-bred herds of Shorthorns in this state. He has the type that are profitable and at this time has a very fine lot of young stock in his herd.

H. M. Hill of Lafontaine, Kan., is one of the successful Shorthorn breeders in Kansas. He has a richly bred herd headed by Master of Dale by the great sire Avondale. Master of Dale is one of the good Shorthorn sires now in service. A feature of this herd at this time is the choice lot of young stock.

John D. Henry of Leocompton, Kan., who is succeeding as a breeder of big-type Poland Chinas, reports his herd doing well. This year he has the best lot of spring pigs in the history of his herd. They were sired by such boars as Mammoth Orange and Big Bob Wonder.

F. J. Searle of Oskaloosa, Kan., owner of Sunflower herd of Holsteins, has just made additions to his herd by purchase, bringing the number up to fifty head. This purchase includes a number of young cows due to calve this summer and fall by such bulls as Woodcrest Pletje Clyde (a 33-pound bull) and Pabst Segis Pontiac Champion, by the 30-pound sire, King Pontiac Champion, who is by King of the Pontiacs, his dam a 29-pound daughter of King Segis Pontiac. Also a number of young cows by a 29-pound bull in calf to a 33-pound bull. All are excellent individuals. This lot was chosen with great care as to blood lines and special attention was given to procuring individuals in line with the Sunflower herd's previous reputation as the home of choice individuals and heavy producers. Also included in this purchase are a few young bulls of extra choice breeding. Every animal in Sunflower herd is registered. No grades are handled on this farm.

Forest Rose of Hemple, Mo., is claiming October 23 for his annual fall sale of large Poland Chinas. Mr. Rose has one of the good herds in Missouri. They are the big, medium, easy-feeding type of Polands. The herd is headed by Smooth Bob by Big Bob Wonder. His dam was Expansive and out of Wonder. This hog is a very promising yearling. This hog is a mate to Caldwell's Big Bob, only six months younger. Both these hogs were bred and raised by the veteran breeder, H. E. Walters. Mr. Rose has a valuable two-year-old boar in his herd, Forest King by King of All by Long King's Equal, and his dam was the Big Jumbo Wonder 3d sow owned by U. S. Byrne of Saxton, Mo. This hog is a splendid show prospect for an aged boar if fitted. Mr. Rose has about 100 spring pigs that are doing nicely.

W. I. Bowman & Co. of Ness City, Kan., have on hand 700 registered Hereford cattle. This is the largest Hereford breeding farm in Kansas. There has probably been more high class breeding cattle sold from this farm to start herds than from any one Hereford breeding plant in the West. They announce that on October 24 and 25 a public sale will be held at the farm, offering 100 head of bulls and 100 cows and heifers. These cattle have been raised out in the open under ordinary range conditions and will be profitable with ordinary care.

F. J. Scherman of Route 8, Topeka, owner of one of the richly-bred and heavy-producing herds in Kansas, reports his herd mak-

HOLSTEIN CATTLE.

CHOICE HOLSTEIN COWS

Two hundred registered and high grade Holstein cows, heifers and bulls for sale, singly or carload lots. Included are ten registered bulls, all out of A. R. O. dams; thirty-five registered females of all ages; several good A. R. O. cows; forty high grade cows; sixty two-year-olds, and seventy-five heifers, one to two years old. All tested by state or federal authorities and priced to sell. Write or come at once. HENRY C. GLISSMAN - STATION B - OMAHA, NEBRASKA

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Pure-bred and high grade Holsteins, all ages. Largest pure-bred herd in the Southwest, headed by Oak De Kol Bessie Ormsby 158789, a show bull with royal breeding. Pure-bred bulls, serviceable age, from A. R. O. dams and sires. A grand lot of pure-bred heifers, some with official records. Choice, extra high grade cows and heifers, well marked, heavy springers, in calf to pure-bred bulls, constantly on hand. High grade heifer calves 6 to 10 weeks old, \$25. Bargains. Send draft for number wanted. All prices f. o. b. cars here. Inspect our herd before purchasing. Write, wire or phone us. GIROD & ROBISON.

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

HOLSTEINS

If you want to buy Holstein calves, heifers or cows, at reasonable prices, write to the Whitewater Stock Farm, Whitewater, Wis. Alb. M. Hanson, Prop.

HOLSTEIN BULLS, "REGISTERED"

Two ready for service. Smith & Hughes, Breeders, Route 2, Topeka, Kansas.

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ing a fine record this year. This herd was built up from foundation stock of the best breeding and backed by records for heavy production. Mr. Scherman has always made it a rule to use only the best sires he could obtain and from time to time has added to his choice herd of cows individuals from the best families of the breed. The result is that he now has one of the richly-bred and very profitable herds in the state.

T. J. Dawe of Troy, Kan., has announced October 14 as the date of his Poland China sale. He has one of the select herds and will select only the tops of his large herd for this offering, and they will be the type that are profitable feeders.

The Tomson Brothers of Carbondale and Dover, Kan., report that their fine herd of Shorthorn cattle is doing well. They have made a number of sales to farmers and small breeders wanting to start herds. In the past fifteen years there probably has been more real breeding cattle sold from the Tomson herds to start new herds than from any other breeding farm in our state. They have used the best females in the herd they could collect together and have always bought the best sires of the pure Scotch type they could find, and by careful mating they have today a very desirable lot of useful Shorthorn cattle. On November 22 they expect to hold a public sale at the farm near Wakarusa, Kan., and will sell a draft of breeding cattle.

T. E. Durbin of King City, Mo., is one of the veteran breeders of the real big kind of Poland Chinas. Mr. Durbin is a stickler for size combined with quality and probably has more real big sows in his herd than most breeders. He now has 125 pigs, early March and April farrow. Some of them will weigh 100 pounds. The herd boar used is old Trusty King by the King of All. This hog will weigh 825 to 850 pounds and has all the quality one would want. He is a real show hog. Trusty King is assisted by Model Big Bone by Long Big Bone out of a Big Bob dam. The herd sows with litters are one A Wonder sow with six pigs by Big Bone Model; two Big Bob sows with twenty fine pigs by Trusty King; one Big Orange sow with five pigs by Model Big Bone; one Ott's Big Orange sow with nine pigs by Trusty King; Big Nellie by Big Joe with eight pigs by Grand Master; one Big Wonder sow, a mate to the dam of Smooth Big Bone, the grand champion of Iowa State Fair, 1914. Mr. Durbin is claiming October 27 as date of his sale and will sell a draft of these Poland Chinas. They are the largest and among the best we have seen. They have been well cared for and well fed, and Mr. Durbin expects to select the choice tops for his annual fall sale.

HOLSTEIN CATTLE.

IN MISSOURI

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

HOLSTEIN BULLS

For Sale—A number of very fine bull calves, sired by Wauseona King Korndyke and out of cows that produce 80 pounds of milk per day. Price reasonable. T. M. EWING, INDEPENDENCE, KANSAS

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Offers young cows due this summer and fall by 29 and 33-pound sires. Several EXTRA young bulls both in breeding and individuality. They are bound to please. F. J. SEARLE, Oskaloosa, Kan.

23 - HOLSTEIN-FRIESIAN BULLS - 23

Best of sires. A. R. O. dams, fourteen over 20 pounds. Seven of the others from heifers with records of 14.89 to 19.23 pounds. The kind you want. We have only two cows in the herd with mature records less than 20 pounds. Breeders for Thirty Years. McKAY BROS., Waterloo, Iowa

Golden Belt Holstein Herd

Canary Butter Boy King No. 70508 In Service. Herd has won more prizes from Holstein-Friesian Association for yearly production than any herd in Kansas. Young bulls for sale from heavy producing cows. W. E. BENTLEY, MANHATTAN, KANSAS

HOLSTEIN BULL CALVES

Registered. From A. R. O. dams. Strong records both sides. Low prices. Ask us about them. PHELPS STOCK FARM, Aurora, Mo.

Regier's Holsteins

Holstein-Friesian A. R. O. bulls ready for service. World's record blood flows in their veins. G. REGIER & SONS, WHITEWATER, KAN.

BUTTER BRED HOLSTEINS

Buy your next bull calf from a herd that won the butter test over all breeds. J. P. MAST - SCRANTON, KANSAS

REGISTERED HOLSTEINS

We want to cut down our herd. Will sell ten or twelve choice cows, most of them young, also a few heifers. M. E. MOORE & CO. - CAMERON, MO.

CHOICE HOLSTEIN BULLS

Five registered bulls, out of A. R. O. cows. From 1 month to 2 years. Best breeding. Choice individuals. Price reasonable. BEN SCHNEIDER, NORTONVILLE, KAN.

CORYDALE FARM HERD

Jewel Paul Butter Boy No. 94245 One of the best bred bulls in the state. We offer three bulls ready for service out of good producing dams. L. F. CORY & SON, Belleville, Kansas.

IOWANA DE COLA WALKER heads herd

has nine half-sisters with yearly tests ranging from 407.53 pounds to 626.21 pounds of 80% butter, the latter a senior two-year record; in fact seven were senior two-year and two were senior three-year-olds. TREDICO FARM, Route 2, Kingman, Kan.

RED POLLED CATTLE.

RED POLLED BULLS

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

RED POLLED CATTLE

FOR SALE—1915 bull calves by Rose's Grand Champion 17998, a 2,400-pound bull; also a few good cows and heifers. AULD BROTHERS, FRANKFORT, KAN.

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