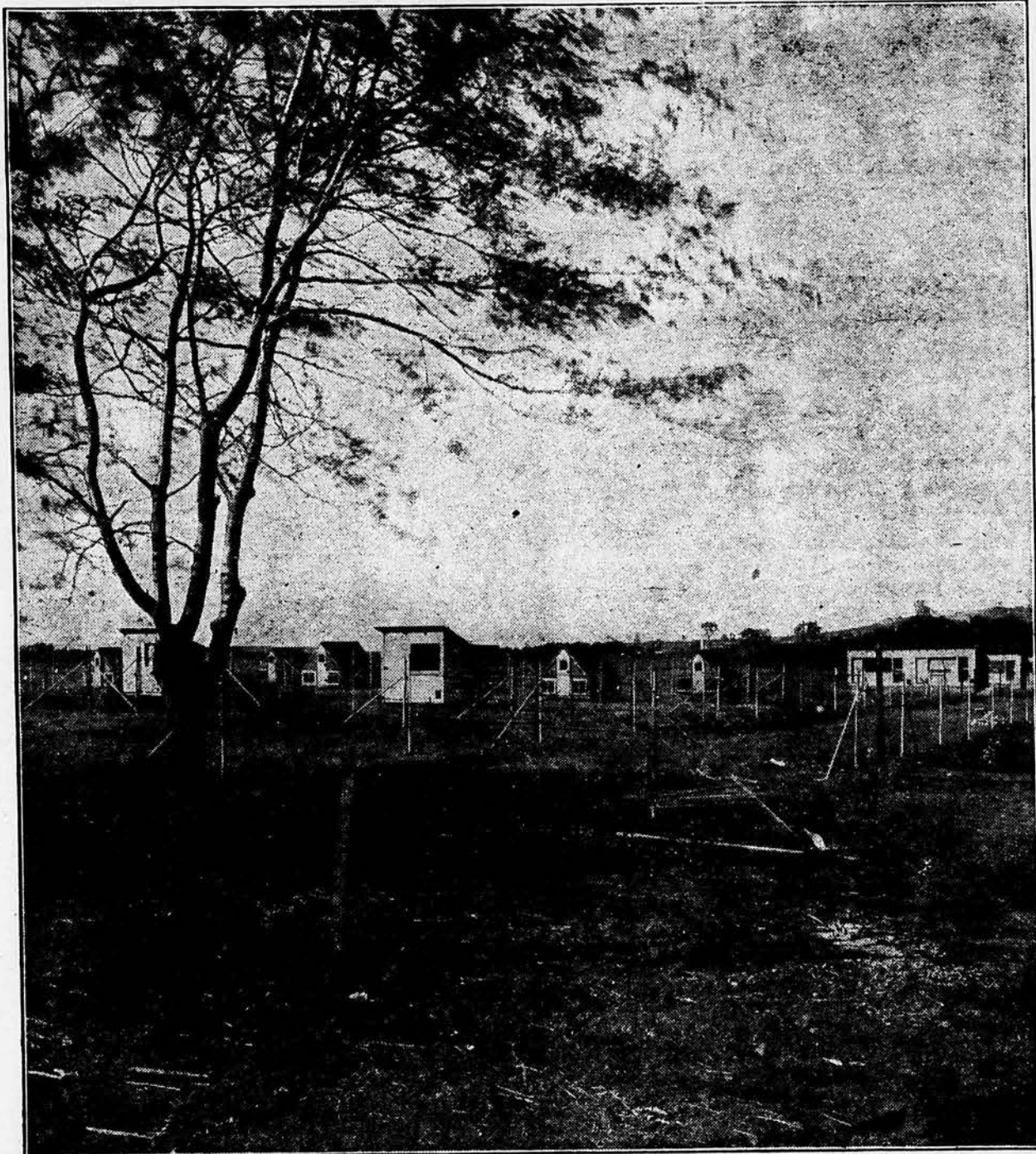


KANSAS FARMER

For the improvement  of the Farm and Home

Volume 55, Number 5. TOPEKA, KANSAS, FEBRUARY 3, 1917. Established 1863. \$1 a Year



*A Portion of the Kansas Agricultural College Poultry Plant is Here Shown.
Valuable Work in Poultry Production is Being Done by This Institution*

THE NEW DE LAVAL

A Bigger and Better Cream Separator for the Same Money



THE FARMER who buys a De Laval this year will get bigger and better value for his money than ever before.

Not only will he get a better machine, a simpler machine, a machine that will skim even closer than any previous De Laval, but he will get a machine of larger capacity.

And the price has not been increased one cent.

Just think what that means to cow owners in the face of rising prices on almost everything else the farmer has to buy, including other cream separators.

Only the tremendous volume of De Laval sales makes it possible to give the farmer more for his money when others are giving less.

The NEW De Laval is the culmination of nearly forty years of experience and development by the largest and oldest cream separator concern in the world. It represents

The greatest improvement in separator construction in the last thirty years

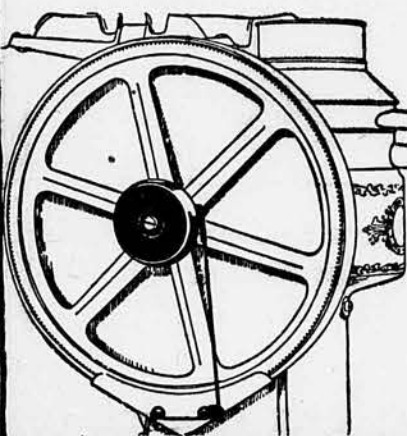
If you are trying to get along without a cream separator, or with a half-worn-out or unreliable machine, why not get a NEW De Laval NOW and stop your cream waste? You don't need to count the cost, because the De Laval will soon pay for itself.

There is a De Laval agent near you who will be glad to explain all the improvements and advantages of the NEW De Laval, and who will set and start a machine for you on your farm and let you try it for yourself.

If you haven't the spare cash right now, that need not stand in the way of your having the use of a NEW De Laval the rest of the winter. We have an arrangement with De Laval agents which makes it possible for any reputable farmer to secure a De Laval on the partial payment plan—a small payment at the time of purchase and the balance in several installments—so that your De Laval will actually pay for itself while you are using it and getting the benefit from it.

Why not see the nearest De Laval agent at once? If you do not know him, write to the nearest office for any desired information.

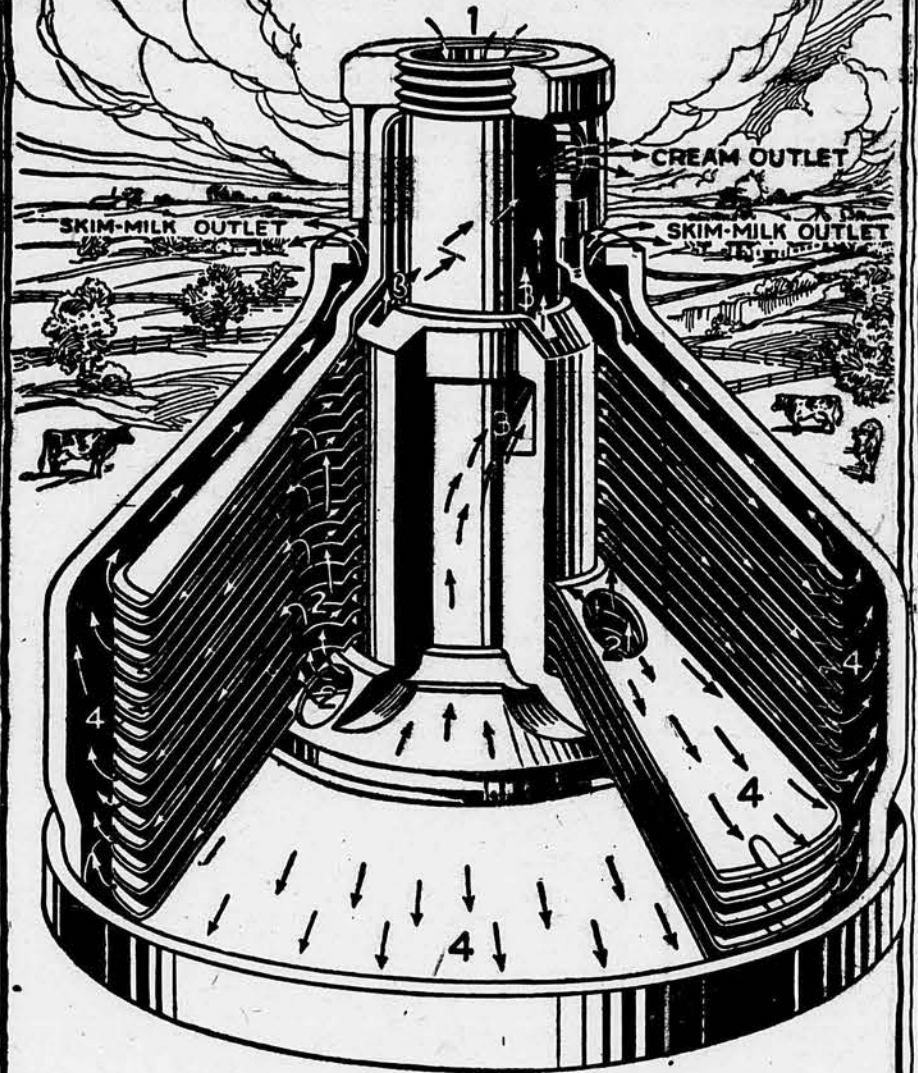
Every NEW DE LAVAL is now equipped with a Bell Speed-Indicator



The "Warning Signal" which insures proper speed and uniform cream

Because nine people out of ten turn the separator handle too slowly and because this always means loss of cream and cream of uneven thickness, every cream separator should be equipped with a reliable speed indicator.

Every NEW De Laval is now so equipped. The De Laval Bell Speed-Indicator is simple. It is accurate. It is reliable. There is nothing to wear out or get out of order. No matter who runs your De Laval, the "warning signal" will tell you when the speed is not right. You hear it and do not need to see it.



THE NEW SELF CENTERING DE LAVAL BOWL

Some of the points of superiority of the NEW DE LAVAL

The New De Laval bowl design and the new method of delivering the milk into the discs give increased capacity without increasing the weight or size of the bowl or increasing its speed. The incoming whole milk is delivered beyond the cream wall, and this, in conjunction with the improved design of the bowl, makes possible closer skimming than ever before, especially under the more difficult conditions of separation, such as skimming a very heavy cream or separating milk below usual temperature.

The much lower speed of the De Laval than other cream separators (in most cases from one-half to one-third less) insures minimum wear of gears and much longer life of the machine.

The New De Laval concave-bottom, self-centering bowl is so designed and so supported by the detached spindle that it will run true and do perfect work even after long wear, the great

importance of which every separator user will appreciate.

There are fewer discs in the New De Laval bowl, and all discs are unnumbered and are interchangeable.

By reason of its simpler construction and the fewer number of discs, the New De Laval bowl is more easily washed and cleansed.

All New De Laval are automatically oiled, every moving part of the machine being bathed in a constant film of oil. There are no oil holes anywhere on the machine, and the sight feed oil cup on the top of the frame provides for a constant supply of fresh oil.

The gears, pinions and other moving parts of the De Laval are exceedingly simple in arrangement, substantial in dimensions and always interchangeable. The De Laval timewear is sturdy and heavily tinned, well suited for long and hard wear, and easy to clean.

The low speed of the De Laval bowl, in combination with greater capacity for a given size and weight of bowl than is found in other separators, and the automatic De Laval oiling system, make the De Laval the easiest cream separator to turn.

New Catalog will be mailed upon request

THE DE LAVAL SEPARATOR COMPANY

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WHY NOT TORRENS SYSTEM?

Under our present system of recording land titles in Kansas, it is impossible to go through any sort of a real estate transaction without being annoyed and aggravated almost to the limit by our cumbersome, antiquated method of recording and transferring titles. By the Torrens System a title to land may be investigated once for all, and if sound, registered and guaranteed by the state. It does away absolutely with the necessity of paying fees for having the same ancient records searched over and over again. This system of title registration has so many advantages that it, or a modified form of it, at least, is almost sure to be ultimately adopted by all the states. The State Grange of Kansas went on record last fall as favoring the adoption of the Torrens System.

A simple method of guaranteeing land titles would be a big step in making it easier to liquidate farm securities. The Federal Farm Loan Board has placed its official approval on the Torrens method. Eugene S. Massey of Richmond, Virginia, who has long championed the Torrens System of land title registration and who has written a book on the subject, took the matter up with the Federal Farm Loan Board, and writes as follows: "As matters now stand, every farmer must show to the board, or the Federal land bank, that he has a good title, which can only be done by having his title examined at his expense by the attorneys of the bank; and this must be done every time a loan is desired. But any farmer who once has his title registered under the Torrens System will have his certificate of title accepted for every loan desired in future without further examination of title."

This system is bitterly attacked by those who make their living by performing the unnecessary and complicated work of the present method of guaranteeing titles, but abstractors and guarantee companies cannot stand out against a principle that has so much of merit and justice back of it.

PURE-BRED PIGS WIN

In the 1916 pig-feeding contest conducted by Otis E. Hall, State Leader of Boys' and Girls' Club Work, it is a significant fact that the winners all fed pure-bred pigs. The boys enrolling in the pig club were not required by the rules to feed pure-bred pigs, but the results show the folly of trying to compete with anything but a pure-bred.

Walter E. Delfelder of Atchison County, who won first prize in the state contest, fed a Poland China, the pig weighing eighty pounds at twelve weeks of age. He fed it for 132 days, the final weight being 355 pounds, thus making a gain of 2.08 pounds daily. Every pound of feed, even house slop, is charged to the pigs in this contest, and the gain made by Walter's pig cost at the rate of \$5.60 a hundred pounds. With present high prices of feed, this is a record of which any hog might be proud. Walter made a net gain of \$11.89, this being based on uniform feed prices and a price of 10 cents a pound on the pig at the beginning of the contest and the same price at the end.

The second prize was won on a pure-bred Duroc Jersey, the third on a Poland China, and the fourth, fifth and sixth on Duroc Jerseys.

Two of the boys showed their Duroc Jersey pigs at the Hutchinson fair and sold them for breeding purposes, one receiving \$50 and the other \$45.

The detailed figures of these prize-winners are given on another page of this issue.

It requires special skill in pig-feeding to produce pork as successfully and as profitably as these boys have done, and we wish to commend them for their work. The point we would like to emphasize just now is the great advantage

of feeding pure-breds instead of "scrubs" or grades. In this contest the pure-breds easily outstripped the grades. But there is another reason why boys who join next year's pig club should feed pure-breds. Mr. Hall says that a considerable sum of prize money could not be claimed because so few pure-bred pigs were fed last year. Four of the national hog record associations offered \$50 each, but with a proviso that at least seven pigs of the respective breeds should finish. This requirement was not met and as a result the money could not be claimed.

Mr. Hall is urging all the boys to get into the game this year with pure-bred pigs. It is just as easy to feed a pure-bred as it is to feed a grade or a "scrub." Not only are the pure-breds more profitable and more apt to win, but there will be more prize money if enough of the boys feed pure-breds. "We want our whole family of pig club boys back," said Mr. Hall, "and let's all choose pure-bred pigs and see that no prize money goes unclaimed next fall."

FRUIT ON THE FARM

Farmers ought to plant orchards for the production of fruit for their own use. There is also a place for the commercial orchard, for there will always be a wide demand for fruit. This demand is increasing and even in our own state where fruit production could be greatly increased, we ship in vast quantities of apples and other fruit that could be grown at home. Kansas should not be classed as one of the great fruit-consuming states. We could easily produce much more fruit in commercial or-

chards, and there is a place on nearly every farm for a small fruit plantation.

The argument is frequently made that fruit can be bought cheaper than it can be grown, but as a matter of fact even well-to-do farmers use less fruit than they should because it is not grown at home. The farm orchard may not always be practical, but in very few instances is this the case. It of course requires more knowledge now to succeed with fruit than in the early days, but with the store of information being accumulated by our experiment station and freely given out through the extension division, the farm press, and in other ways, this is not a legitimate excuse for failing to grow at least a portion of the fruit needed in the farm home.

If you do not already have a farm orchard, plan for one this year. The stock should be ordered at once. Nursery advertisers in KANSAS FARMER will be glad to furnish advice as to varieties best adapted to various local conditions. Do not plan to put out more fruit than can be cared for properly. The small orchard given real orchard care will be a source of profit on the general farm, whereas a larger orchard that must of necessity be neglected might result in loss and discouragement.

The extension division of the agricultural college keeps a trained orchard man traveling all the time. He will gladly make suggestions relative to planting and caring for fruit. If you desire to avail yourself of this help, write George O. Greene, Extension Division, Kansas Agricultural College, Manhattan.

More Profits From Poultry

EGGS and other poultry products have gone up in price like everything else. Poultry has always been a profitable side line on the farm, but with present conditions, giving the farm flock reasonable care and attention is more certain than ever to bring big returns for the effort put forth. In 1900 federal statistics showed that the per capita consumption of eggs in the United States was 207, the cost being \$1.86. In 1910, ten years later, the average consumption was 200 eggs per person and the cost \$3.40. We have no similar statistics to show present conditions, but we know eggs and poultry are higher now than they have ever been before. With such market conditions, poultry will be profitable even though in many cases the chickens are looked upon as beneath the notice of the owner or manager of the farm.

For the money invested the hens return a larger income, even, than does the dairy cow. They are affected even less than the cow by dry weather and crop failures. In the dry-land sections the hens have often paid the grocery bills following a crop failure and thus enabled the family to "hang on" and become permanently and prosperously established.

If poultry can yield such profitable returns as the statistics show when cared for in the haphazard manner so common on many farms, it is reasonable to expect that placing it on an equality with other farm animals in the matter of care and attention will make it return far greater profits.

In this we are not advocating or urging that the farm poultry business should be enlarged beyond the ability of the farm workers to care for the hens and chickens properly. We print in this issue and in other issues, figures showing unusual profits from small flocks of hens given the best of care. It is not to be expected that what can be done with a dozen hens can be duplicated with a thousand. The farm flock of a size that permits its being given the right kind of care is the profitable flock.

There is nothing like keeping some accounts for putting an enterprise on a business basis. As long as no records are kept of the returns from the poultry it is not likely to be credited with what it is doing. If you do not believe this, try keeping a strict business account with your flock and see if it does not reveal some surprises. As a result of keeping a record, better equipment will in all probability be provided for the poultry.

A farm woman tells in this issue of her first efforts with poultry and how she kept strict account of the eggs produced and sold. It was a very ordinary record, but it resulted in the poultry being given a good house and as the business has grown she has been able to greatly increase the profits until now it is one of the most profitable enterprises of the farm.

To succeed with poultry it is necessary to have good stock, give it the right kind of feed, and provide suitable quarters. It is not necessary to house poultry expensively, but it will pay good returns for the money put into comfortable well-planned shelter. There are a good many details connected with the care of poultry that must be observed, but with a little encouragement in the way of proper equipment, the farm woman can be trusted to work out the details of poultry care and management and make it pay many an item of family expense.

STARTING A PURE-BRED FLOCK

There are many reasons why pure-bred chickens are more profitable than those of mixed or mongrel breeding. We have never heard of any striking results being secured with mongrel stock. Some of our fanciers perhaps have overestimated the feathers at the expense of utility qualities, but in the main every breed of poultry that has endured has done so because of its utility qualities. J. E. Rice, poultryman at Cornell University, summarizes the advantages of pure-bred stock as follows:

"Pure-bred fowls lay eggs that are more uniform in size, shape, color, and texture of shell. Uniform eggs sell for a higher price.

"They are more likely to breed true, that is, the chickens will grow up to be like their parents.

"They are more uniform in shape and size of body and in color of skin and shanks, therefore more attractive and more profitable when placed on sale.

"They are more attractive as a flock, because they are similar in appearance. It is worth while to keep poultry that looks well.

"They furnish a larger income because eggs for hatching and stock for breeding can be sold at prices considerably higher than for market purposes.

"They are more satisfactory, because, other things being equal, they may be expected to give better results in feeding, hatching, and rearing, due to the fact that they are more nearly alike as to rate of growth, size, temperament, activity, and the like."

It is so easy to get started with pure-bred stock that there is little excuse for clinging to the mongrels. A cockerel and a few hens can be purchased from some one who has a good strain of the breed desired. The cheapest way to start is by getting some eggs from a flock of known standing. Some breeders now offer day-old chicks. These can be shipped as easily and as safely as can eggs, and in some ways it is better to get the chicks than to buy eggs for hatching. Then there is the grading-up system so profitably followed with cattle and other farm live stock. By putting some good pure-bred males of the chosen breed with the mixed flock, the poultry raised will have half the blood of the pure-bred and in appearance will seem to have even more. The old hens can be sold in the fall and breeding stock for the next year selected from the half-bloods.

The initial expense of getting some eggs, baby chicks, or a pen of pure-breds, is so small that few will find it necessary to practice this slow grading-up method of improving the farm flock.

We have just received a letter from the Animal Husbandry Department of the Kansas Agricultural College in which they extend a most cordial invitation to live stock breeders to make Professor Cochel's office, Room 10 Agricultural Building, their headquarters during Farm and Home Week. Facilities will be provided for holding conferences or transacting any business that may be necessary during their stay. The program this year is unusually strong in its live stock features and we hope nothing will prevent the live stock men among our readers from spending at least a part of the week in attending these live stock meetings.

So far, the legislature seems to be going about its work in a most business-like manner. These seems to be a disposition to get down to the real business of legislation and we trust this will continue through the whole session. This is as it should be, and the people of the state will appreciate a continuation of this serious effort on the part of the legislators to do their work in the most efficient and expeditious manner possible.

PROFIT FROM FARM POULTRY

Income of \$1800 From Flock of 365 Hens on This Missouri Farm

By MRS. G. L. RUSSELL

ON MOST of the six million farms of the United States the women care for the poultry along with the household duties. A farm poultry flock well cared for will be the best paying "crop" on the farm and yet they are often greatly neglected because the women are furnished such poor equipment.

My mother-in-law gave me some two hundred hens when I was married. I was delighted with them and tried in every conceivable manner to make them lay the first winter. I fed them hot mash, read all the poultry articles I could find and tried to follow all instructions. The hens didn't lay. I soon found out that if I wanted to get winter eggs I must expect them from my pullets. Now I knew well enough that not one of those pullets would lay until spring—they were not well enough matured. However, they laid well enough when spring came, (it is a poor hen, indeed, that won't lay then) and I raised several hundred chicks. We were living with my father-in-law at that time and he thought I was doing wonderfully well with the flock. At the end of the year I had sold a little over \$100 worth of produce. He declared it was more eggs than they had sold in forty years. I am sure he must have been mistaken, but it showed to me the value of keeping record of what the hens were paying me.

Our hen house was a worn out leaky affair and in the fall my husband built me another; for had not the hens earned it? That one hundred dollars that they had paid in made the whole family have more respect for them.

Every farmer's wife should keep account of what her chickens are paying her, for in no other way can she get her husband sufficiently interested to build suitable houses and coops as they are needed.

I am sure I would never have made much of a success with my chickens if I had not had Mr. Russell's co-operation. When new houses have been needed the hens have supplied the money and he the labor.

I worked with my flock for several years and still I could not get winter eggs, although in the meantime I had bought an incubator, so as to hatch chicks early enough for the pullets to lay in fall. Some way I just couldn't get my farm flock of big chickens laying in the fall and winter. I wonder if many farmers are not troubled the same way? They surely must be or else egg prices would not be soaring so now, and in fact every winter. I know I don't hear of any of my neighbors selling eggs in large quantities now, while we are sending a thirty-dozen case to New York City every week and receiving 52 cents a dozen for them.

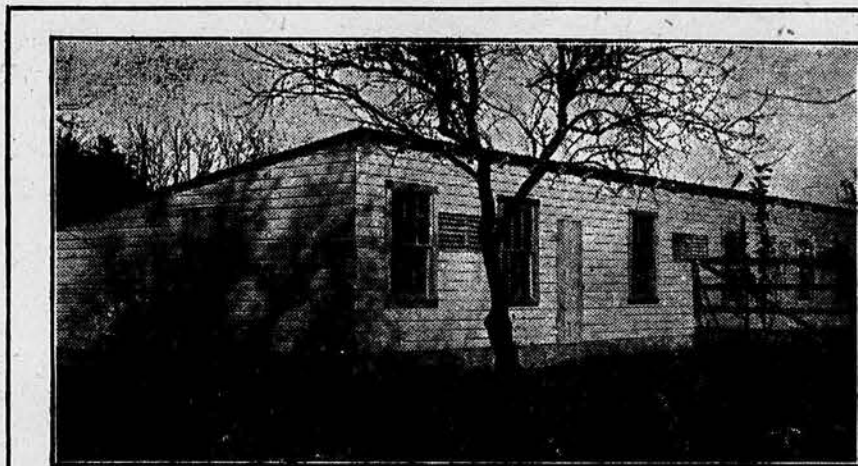
I am a long ways ahead of my story though—almost seven years. To go back. After I found out I could not get the chickens to lay in winter I bought five Brown Leghorn hens and a rooster. These did so well for me I decided I wanted these only, so raised nothing but Brown Leghorns and gradually sold off my other flock.

For six years now we have had only this breed, and we like them better each year. They are money makers for us. The pullets if hatched in March or April will, if fed well commence laying in the fall and winter, keep it up all spring, summer and fall, and then we let them rest their second winter. You see we have another crop of pullets ready for the laying house then, and the yearling hens after their rest in winter are ready by spring to lay again. We never keep hens over three years old.

The cut on this page shows our new laying house. It is 20x60 feet and is divided into two rooms, so I do not need to feed the whole flock for egg production.

Our method of feeding for eggs is as follows. In the morning they are given a feed of small grain, a pint to every ten hens. Oats, wheat or barley are good, or better still a combination of the three. At night they are given a pint and one half of shelled corn to every ten hens. All grain is fed in a deep litter, thus compelling them to work and not be lazy, but who ever heard of a lazy Leghorn hen?

In addition to their grain feed they have a dry mash before them all the



FIVE HUNDRED HENS KEPT IN THIS LAYING HOUSE ON THE RUSSELL FARM, CHILHOWEE, MISSOURI

time, which is composed of two parts bran, one part shorts, one part corn meal and two-fifths part meat scraps. A little salt and fine charcoal is added to this and the whole is thoroughly mixed and then put in self feeders. The laying hens have access to this the year round.

They also have some kind of green feed. Personally, I like sprouted oats best, as it is easy to prepare and makes an abundance of crisp green feed in a very short while. One square inch per hen per day is required of this. The water is an important factor all day long. So many farmers will supply all these materials and then forget to give the hens anything to make an egg shell with. Oyster shell should be purchased by the 100 pounds on every farm and kept before the hens all the time.

A house that is well ventilated and free from draught is not such a problem as many consider. You will note from the picture that the house is supplied with shutter-like ventilators. These are excellent as fresh air is admitted day and night and still there is no draught. There is also a ventilator over the roosts that ventilates without a draft.

Such a house as this is well supplied with sunshine. Ours has a dry concrete floor. A concrete floor is certainly a success if built right, but it must have a good foundation of fine rock, gravel or cinders for drainage, so it will not become damp.

The two factors that so many farmers neglect when trying to feed for winter eggs are the meat scraps and green feed. Meat scraps may be purchased in any city from a packing firm at a cost of about \$3.25 per 100 pounds, while the green feed may be supplied in various ways: cabbage, beets, silage, steamed clover leaves, all are good. I do not like them as well as sprouted oats, but have had fairly good results feeding them.

For several years we have been selling eggs for hatching. This greatly increases the profit. I don't see why more farmers wives do not do this. In a few years time one can have a nice flock of all purebreds and sell off all the culls, and sell hatching eggs. It is necessary to advertise, though for you can't expect to sell many eggs around home. A few

dollars spent with a good farm paper with a large circulation will sell a surprisingly number of eggs. In a short time quite a business can be built up if good business methods are used, and good stock is sold.

If you do not care to go to the trouble of selling hatching eggs, you can, with a flock of purebred chickens, that lay a uniform color of eggs secure a fresh egg market in some near by city. Last summer when eggs were selling for ten and twelve cents per dozen on our home market we were shipping our eggs to Kansas City to Union Station restaurant and receiving from twenty to twenty-two cents per dozen.

As proof of the industry of my 365 Brown Leghorn hens, I will append the following report of egg sales for the year 1916.

January, \$56.54; February, \$125.19; March, \$290.94; April, \$501.07; May, \$222.70; June, \$112.26; July, \$108.93; August, \$39.00; September, \$48.38; October, \$70.32; November, \$134.42; December, \$73.06; Total, \$1,782.91.

Incubator on the Farm

As a rule, the absence of facilities for hatching the chicks early when they are wanted is the greatest drawback to poultry profit on the farm. Yet these facilities may be readily provided and at a cost that can be very easily and quickly made up from the increased profits from the poultry when these methods are applied.

It is stated in the Poultry Tribune that thousands of farm poultry raisers have not as yet come to realize the increase in revenue from this branch of the farm operations which may be had by adopting up-to-date methods.

Every farm where poultry is raised should be provided with at least one incubator and brooder of a capacity according to the size of the flock kept on the farm. There is nothing mysterious nor difficult about hatching chicks with the incubator and properly raising them in brooders. Dozens of good machines are now offered to the public which in the hands of any fairly intelligent operator will do good and satisfactory work.

In order to derive the best return from the farm flock at least a goodly portion of the chicks should be hatched

during late February and March. Then the cockerels may be sold in May at around two pounds weight at 25 to 35 cents a pound, actually bringing in as much real money as they would if held and fed for three or four months longer and then sold at a much lower price per pound. When the male chicks are thus disposed of early in the summer, more space and attention may be given to the pullets of these early hatches and they may be brought to the laying age early in the fall and will with fair care and attention produce high priced eggs during the winter.

Then there is real economy also in the use of an incubator to do the hatching. A 200-egg machine will take the place of at least fifteen hens during the hatching period of three weeks. It will also take at least three or four weeks to get the fifteen hens back to laying form which means that in order to hatch 200 eggs, the time of fifteen hens must be lost for seven weeks of the heaviest laying season. During this period each hen should and no doubt would produce at a low estimate two dozen eggs each, or a total of thirty dozen for the fifteen hens. Even at low prices usually prevailing during the spring months these eggs would sell for at least \$6. On the average farm and to keep up the supply of layers for the average farm flock, three such hatches would be made each season. Hence it is not difficult to figure that a good incubator will pay for itself each season in the saving of "hen time" alone, to say nothing of the advantage of being able to hatch at any time desired and thus get out the chicks early enough to obtain high prices for the cockerels and have early-hatched pullets to lay the high-priced fall and winter eggs.

Now is the time to think it over. Get the literature issued by the manufacturers of incubators and brooders now advertising in KANSAS FARMER, and decide which machines will suit you best. For early-hatched chicks the machines should be running soon.

Eggs and poultry are higher than they have been for years. Every indication points toward the greatest demand for all kinds of produce that is food for man or beast the coming season that has been known for a long time. Already great quantities of eggs have been exported, and this demand is bound to continue.

The poultry business is not a small business. According to our State Board of Agriculture figures, the return from poultry in Kansas last year amounted to almost twelve and a half million dollars.

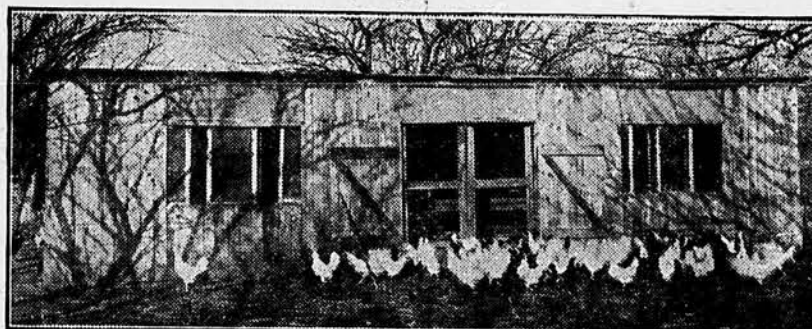
Hatch Early for Winter Layers

A high water mark has been reached this winter in price of poultry products, especially eggs. This phenomenal price has caused hundreds of poultrymen to put forth an extra effort to increase their egg production. In the majority of cases this effort has not brought the desired result, and here is the one big reason—the pullets being forced did not have the maturity and age necessary for winter laying. Their feed, care and housing may have been above question, but their handicap of being hatched late could not be overcome.

The spring is the normal season of the year for hens to lay, and if they lay liberally, then they cannot be forced to heavy production in the winter. The fall and winter is Nature's natural resting period. For this reason world-breaking records can never be expected from yearling hens.

Pullets will always be the main force in producing winter eggs. As in the case of the hen, however, winter laying is not natural, and their tendency toward spring laying must be offset by hatching them early enough to reach the degree of growth and maturity necessary for egg production in the fall. Pullets that have not sufficient development to begin laying before the severe winter weather starts will almost invariably not lay before February or March.

Many of the puzzling problems that confronted the poultrymen this winter will be avoided next year if the hatching is done three weeks to a month earlier. It should be remembered that the time of the year the eggs are laid is far more important than the number laid.—C. S. ANDERSON, Colorado Agricultural College.



THIS LAYING HOUSE IS ON A SHAWNEE COUNTY FARM WHERE EIGHTEEN HUNDRED HENS ARE KEPT

13
24
32

GENERAL FARM INQUIRIES

Something For Every Farm—Overflow Items From Other Departments

WE ARE frequently asked to give rules for measuring hay. A recent circular entitled, "Measuring Hay in Ricks and Stacks", by the Federal Department of Agriculture, will be found most helpful to those having hay to measure. The rules given are the result of considerable careful field work covering a period of several years. The authors believe that the methods suggested for determining the number of cubic feet in a rick of hay, are quite accurate. To secure a copy of this circular, address Division of Publications, Department of Agriculture, Washington, D. C.

Silo Capacity Problem

C. P. T., Osage County, asks for information that will help him in settling with the man who filled his silo for him last fall. The filling was to be paid for at the rate of thirty cents a ton. The man who filled the silo furnished the power and the cutter. It is a 12x28 silo and they filled it within two feet of the top in eight hours time. Two men were inside handling the distributor and tramping. With the extra foot at the bottom below the top of the foundation, it contained twenty-seven tons of silage when they stopped work at night. The actual inside diameter is eleven feet eight inches, and it settled four feet before it was opened for feeding.

Our correspondent said he figured that it held fifty-eight tons, using a table giving the capacity of a 12x28 silo as sixty-one tons. He wants to pay for what is right and asks our advice as to the proper table for figuring the amount of silage put into this silo.

The only figures on silo capacity we have based on actual investigations, are those of the late Professor F. H. King of Wisconsin University. These figures give the mean weight for a cubic foot of well matured corn silage in a silo containing twenty-three feet of settled silage, as 35.3 pounds. The greater the depth of the settled silage the greater will be its mean weight. For thirty-six feet of settled silage it is given as 42.8 pounds per cubic foot; thirty-two feet, 40.7 pounds; thirty-one feet, 40.1; thirty feet, 39.6; twenty-nine feet, 39; twenty-eight feet, 38.4; twenty-seven, 37.8; twenty-six, 37.2; twenty-five, 36.5; twenty-four, 35.9 pounds. Because of this great variation in the mean weight of silage in silos containing different depths of silage, it is impossible to have a general rule that will apply to all conditions. The character of the crop also affects the weight of the silage. A poor crop of corn containing little or no grain, will weigh less than a crop containing a large amount of corn.

In coming to agreements on filling work, it is necessary to take into consideration the possible variations.

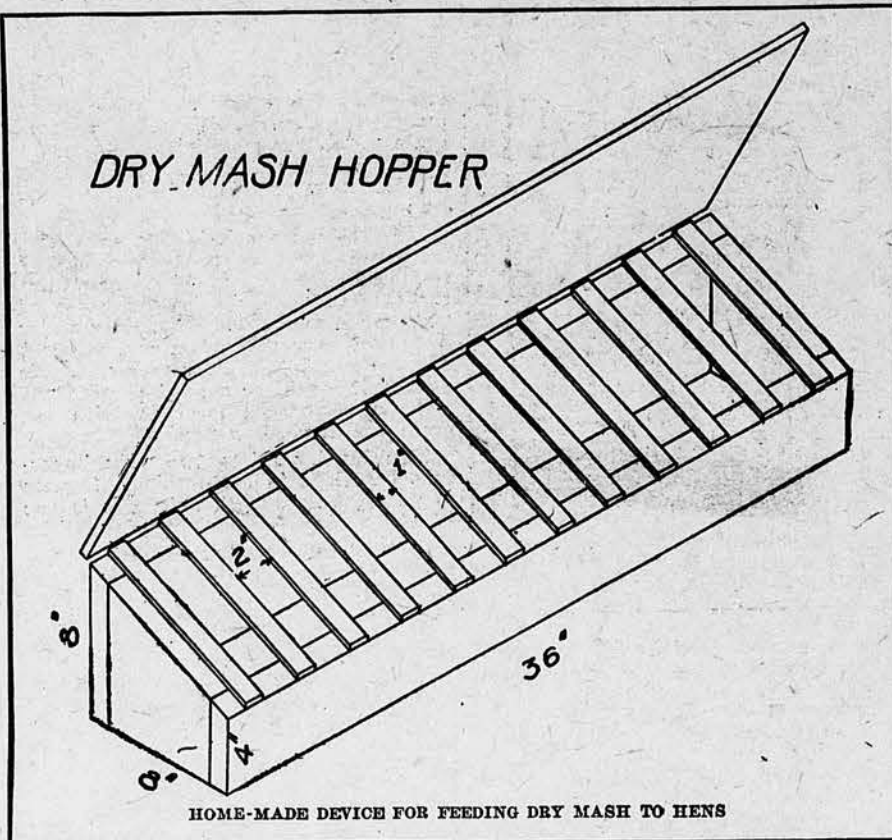
Figuring the cubical contents is purely a matter of arithmetic. The inside diameter of the silo should be used. The rule is to square this diameter, multiply the result by .7854 and multiply this by the height or depth of the silage in feet. In this particular instance the diameter is 11-2/3 feet and the square of this is 136-1/9. Multiplying this by .7854, gives 106.9, which is the number of square feet in a circle 11 feet 8 inches in diameter.

After settling, this silo contained twenty-three feet of silage, and multiplying 106-9/10 square feet by 23, gives 2457.7 cubic feet. According to Professor King's figures, which are generally accepted in figuring the capacity of silos, the mean weight of a cubic foot of silage in a silo containing 23 feet of settled silage from well matured corn, is 35.3 pounds. Multiplying the cubical contents, 2457.7, by 35.3, gives 86,792.11 pounds, or 43.4 tons.

The capacity of silos is almost invariably given on a basis of their being filled to the top with settled silage. Figured in this way, a 12x28 foot silo would hold 61 tons. Of course all users of silos know it is almost impossible to get the full capacity of a silo because after the silage has settled it will lack from four to six feet of coming to the top.

Wet or Dry Feed for Hogs

A. J. L., Finney County, asks which is the better way to feed shorts to hogs, wet or dry. If wet, how much better?



HOME-MADE DEVICE FOR FEEDING DRY MASH TO HENS

He says they have a lot of stock to feed, including steers, hogs and mules, and want to keep the labor of feeding down to a minimum.

In Bulletin 192 Kansas Experiment Station, is reported a comparison between wet and dry feed. The ration fed was as follows: Six parts corn meal, three parts shorts, one part meat meal. There were seven shoats in each lot. They were fed forty-two days. At the beginning the average weight per hog was 117 pounds. In one lot the grain mixture was fed dry in troughs. In the other enough water was added at feeding time to form a thick slop.

During this test the hogs fed the dry feed gained at the rate of 1.05 pounds daily, and the grain consumed for each pound of gain they made was 3.6 pounds. The hogs in the other lot gained at the rate of 2.31 pounds daily, and the grain consumed for each pound of gain made was 3.61 pounds.

Almost the only noticeable difference in the results was that the hogs getting the wet feed consumed more feed daily and made larger daily gains. As much pork had been made from a given amount of feed in one lot as in the other. The hogs fed the wet feed had simply converted a larger amount of feed into pork in a given time because more had been eaten.

Labor is frequently a very important item in feeding stock and in many cases it would be impractical to wet feed because of the extra amount of labor required.

The self-feeder is coming into favor for hog feeding wherever it is important to keep the labor of feeding down to a minimum. In our issue of September 2 we gave a detailed plan for making self-feeders such as are used very successfully at the Iowa Experiment

Station. The Kansas Experiment Station conducted a comprehensive experiment in hog feeding last summer and fall, in which several lots were fed by the use of self-feeders. A very satisfactory type of self-feeder was used.

Treatment for Pink Eye

J. M. S., Ottawa County, asks how to treat his calves for pink eye. He says they have it almost as soon as they are born.

As this subscriber needed this information promptly, we answered him by return mail. This disease often gets into herds and causes considerable trouble. Occasionally it is so severe as to result in the total loss of sight. The case described is without doubt the contagious form. Local irritations caused by chaff or dust sometimes produce the same general symptoms, but when it goes from animal to animal in a herd it is safe to assume that it is contagious pink eye.

The calves affected should be put into clean, dark stalls, and their eyes should be washed with a wash consisting of one dram of boracic acid dissolved by pouring four ounces of boiling water over it. Use this wash frequently, applying it with a small syringe or a medicine dropper. In the absence of these the wash may be dashed in the eye by using the palm of the hand. In most cases there will be quite an improvement noticed after this treatment and in the course of ten days or two weeks the eyes will usually clear up and be free from any inflammation.

Since it is contagious the affected animals should be separated from the rest of the stock. Put them in a shed or barn entirely apart from where the other animals are kept. Disinfect all

the stalls and sheds by spraying with some good disinfectant dip.

The disease has a debilitating effect on the animals and they should be given the best of care during the treatment.

Stacking Kafir and Cane Green

Last fall we published a letter from V. V. Akin of Riley County, in which he advocated stacking cane and kafir green, and gave some of his experiences along this line. The method in reality is nothing more or less than making silage without using a silo.

S. S. K., Sedgewick County, asks if anyone else has tried it. He wants to know at what stage rye should be cut for stacking green to feed to horses and milk cows. Also whether or not stock will eat cane and kafir stacked green as clean as when stored as silage.

Mr. Akin has been asked this winter as to the condition of the cane and kafir when it came out of the stack. His answer was follows: "If cane or kafir is stacked while it is sappy and green, the sides of the stack built perpendicular, and the top covered with anything to exclude the air, the bundles will come out of the stack just like silage. The extreme outside of the stack is cured out dry and right next to that is a small space of bundles that are moldy and spoiled. I have not tried stacking mowed cane in this way, but believe it would be all right. My objection to stacking alfalfa green is that it is hard to get out of the stack as it packs so solidly. The objection to stacking oats green is that they seem to develop a highly acid condition although they are relished by stock. The oats we stacked green in 1915 came out almost as green as they were the day they were put into the stack. Last year it was so dry that we were afraid to attempt the green stacks. Some that we stacked in 1915 in an over-ripe and half-dry condition did not keep well, but wherever it was green and sappy it made fine feed. We handle nothing but steers, so that is our viewpoint."

While we feel sure Mr. Akin has successfully practiced this method of stacking feed green, we would hesitate to recommend the method for general adoption. It is never safe to feed horses moldy feed of any kind. We would not expect rye stacked green to be a very good feed. It is difficult to make good silage of rye or oats even when they are carefully tramped in the silo.

It is our opinion that as a general proposition it is safer to depend on a good silo for making good silage.

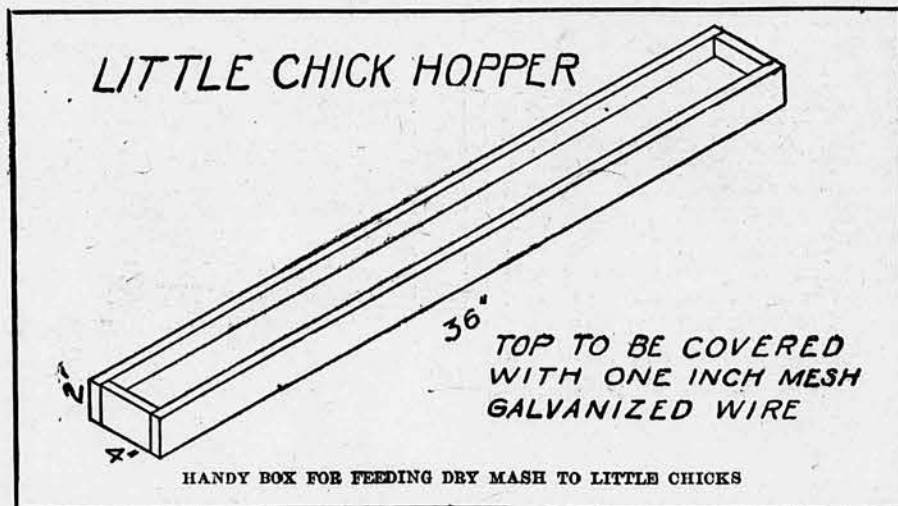
Rural Lecture Course

As Chaplain of the Kansas State Grange, I wish to say a few words in behalf of the rural lecture course. I believe it is one of the best things we can do for community welfare. We all know that our young people must have amusement and entertainment. If we do not provide it for them, they will find it for themselves.

If we can develop in them a taste for the clean, pure, and moral forms of entertainment, we have done a great deal towards moulding their characters, so that they may develop into good citizens.

In these days of automobiles, if we do not have some form of entertainment in the country our young people will go to the towns for it. And, too often the kind of entertainments they attend there are not the best. In the cities, on account of the large numbers of people, it is possible to have both the good and the bad forms of entertainment. In the country, on account of the small number of people, it is possible to have only one kind of entertainment, which shall it be? The good or the evil. It is up to you, brothers and sisters to decide this question.

I wish that every rural community might have a lecture course. Let the grange or the Sunday School take this matter under consideration. Or, in communities where both organization exist, they might unite and call it a community lecture course. Our boys and girls are the most important crop we raise. Let us do all in our power to develop them into happy, good and useful citizens.—MRS. MABEL POMEROY, Chaplain, Kansas State Grange.



HANDY BOX FOR FEEDING DRY MASH TO LITTLE CHICKS

Kansas Farmer Dairy Club

Cottonseed Meal Not Good For Calf

MAX HOLLISTER of Harvey County, writes that he has been feeding his cow a little cottonseed meal for a few days and she is giving more milk than she did. He feeds alfalfa hay and silage for roughage and for grain has been feeding ground wheat and oats, the wheat and oats having grown together. This makes a good grain ration but we advised him to try a little cottonseed meal so as to supply his cow more protein and in this letter he reports the result.

He asks some calf-feeding questions, the answers to which will interest every member of the club. On his father's farm the calves are now being fed some of the ground wheat and oats. Hot water is poured over this grain and a quart of skimmilk is added for each calf. He asks if it would be a good plan to put a little cottonseed meal in with the grain, and if so, how much?

This inquiry raises two very important questions in calf-feeding. Success in raising calves with skimmilk is one of the tests of a dairyman's ability. Unless he can so feed and manage the calves as to grow them out into big, strong, thrifty cows, he cannot successfully build up his dairy herd. For this reason you should study very carefully the feeding of your calves.

The father of one of the club members told us last fall that his boy had been more successful in feeding the calf from his cow than they had ever been in feeding calves in the past. The reason was that he had studied very carefully how to feed his calf according to the most approved methods.

One of the important points in feeding skimmilk to calves is to make farm-grown grains take the place of butterfat. Grain at two cents a pound is cheaper than butterfat at thirty-five or forty cents a pound. Starch is the part of grain that takes the place of the fat which is taken out of the milk in the cream. In order to be used in this way the starch must go through a more complicated process of digestion than does the fat in the milk. Part of this digestion takes place in the mouth. There are some juices in the mouth that must be mixed with the grain before it is swallowed or the starch will be very poorly digested and may even cause serious digestive trouble.

In order to be sure and have the grain well mixed with these juices of the mouth, it should be fed dry so the calf will have to chew it before he can swallow it. Finely ground grain mixed with milk will be swallowed and go direct to the stomach without getting any of these juices of the mouth mixed with it and therefore will be poorly digested and will not do the things in the body that the fat of the milk would do.

This is point No. 1—teach your calf to eat dry grain and give the skimmilk separately. Ordinarily the best order of feeding is to give the milk and as soon as the calf gets through drinking it, give him his grain in the same bucket

or in a box. This helps to break up the bad habit calves sometimes form of sucking each other's ears after drinking their milk.

The second point has to do with balancing the ration. Milk as it comes from the cow is balanced perfectly for the needs of the calf. It contains the protein, the mineral matter, and the fat in the right proportions. Because butter fat is the product that makes dairying profitable, we separate the cream and feed the calves the skimmilk. This contains all the protein or growing material of the milk, but is lacking in that part which furnishes heat and energy to the body. To correct this we do not need a feed rich in protein, but one that has starch and fat. Feeds that contain a lot of protein like cottonseed meal or linseed oil meal are always expensive, and since the calf does not need extra protein while being fed skimmilk, it is wasteful to feed either cottonseed meal or linseed oil meal. Of course, as the calf gets older and is fed less of the skimmilk or weaned from it entirely, it will need protein for making growth. But on farms where there is alfalfa, the cheapest way to supply this needed protein is to give the calf plenty of alfalfa hay. This is also rich in mineral matter. Keep giving the calf some grain rich in starch, like corn, kafir, milo, oats or wheat.

This is a long preachment on calf feeding, but these are two points in calf-feeding that every member of the club should understand.

Dairy Club Prizes

The following is a partial list of the prizes that have been offered to encourage the members of the Dairy Club in their work. We have had letters from quite a number of other firms stating that they are interested in this club and will probably offer prizes later.

Beatrice Creamery Company offers a Hinge-Door, one-piece stove, Oregon fir silo.

R. J. Linscott, Holton, Kansas, offers a purebred Jersey bull calf from his Register of Merit herd. This calf is sired by his chief herd bull, Gamboa's Knight, a bull that now has forty-two officially tested daughters in the Register of Merit. Gamboa's Knight's dam is a Register of Merit cow, granddaughter of the famous Flying Fox, the sire of thirty-nine tested cows and forty-four sons that have sired Register of Merit cows.

Empire Cream Separator Company, one cream separator.

Beatrice Creamery Company, one cream separator.

Hunt-Helm-Ferris & Company, Harvard, Ill., a complete cow stall.

N. A. Kennedy Supply Company, Kansas City, Mo., one 12-bottle Facile Babcock milk tester, complete with glassware.

Additional prizes will be announced in this department later.



Settle the Spreader Question

THE farmer who uses a Low Cloverleaf, Low Corn King or Low 20th Century spreader these days is the man who makes the most money. His land increases in value when regularly fertilized. His crops grow better in quality and larger in yield when supplied with available plant food. Of all the spreaders on the market, the Low Cloverleaf, Low Corn King and Low 20th Century come nearest to doing this work as it should be done.

It is a long jump from the ordinary machine to the modern low spreader with its double beater and wide spread. Every farmer who knows the value of good spreading is buying one of these wide spread machines. As a matter of fact, no farmer can afford to buy any other kind, because the saving of time and labor and the better job of spreading done by a Low Cloverleaf, Low Corn King or Low 20th Century makes them worth more than ordinary spreaders.

Complete information about these machines is worth money to you. Drop us a line at the address below and we will show you very plainly why it will pay you to buy a Low Cloverleaf, Low Corn King or Low 20th Century spreader.

International Harvester Company of America

CHICAGO U S A
Champion Deering McCormick Milwaukee Oskema Plano

160 ACRE FARMS IN WESTERN CANADA FREE

Canadian Farmers Profit From Wheat

The war's devastation of European crops has caused an unusual demand for grain from the American Continent. The people of the world must be fed and wheat near \$2 a bushel offers great profit to the farmer. Canada's invitation is therefore especially attractive. She wants settlers to make money and happy, prosperous homes for themselves by helping her raise immense wheat crops.

You can get a Homestead of 160 acres FREE and other lands at remarkably low prices. During many years Canadian wheat fields have averaged 20 bushels to the acre—many yields as high as 45 bushels to acre. Wonderful crops also of Oats, Barley and Flax. Mixed farming as profitable an industry as grain raising. The excellent grasses full of nutrition are the only food required for beef or dairy purposes. Good schools, churches, markets convenient, climate excellent.

Military service is not compulsory in Canada, but there is an extra demand for farm labor to replace the many young men who have volunteered for the war. The Government is urging farmers to put extra acreage into grain. Write for literature and particulars as to reduced railway rates to Supt. of Immigration, Ottawa, Canada, or

GEO. A. COOK

2012 Main St., Kansas City, Mo. Canadian Gov't Agt.

Write for Book Today



FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Steel or wood wheels to fit any running gear. Wagon parts of all kinds. Write today for free catalog illustrated in colors.

ELECTRIC WHEEL CO., 34 Elm Street, Quincy, Ill.

MILO MAIZE

The sure drought-resisting crop that produces bountiful fodder. Ross Brothers Milo is a heavy yielder. Absolutely fresh, clean and reconditioned. Produced heads of nearly a pound in weight. No farmer can afford to be without Milo Maize. No farmer can secure better Milo than Ross Bros. sure yielding. We know it's right. Wouldn't handle any other kind.

Get Our Prices and Samples Before Ordering.

FREE SEED BOOK—filled with quotations, full ideas. Sent postpaid to all who want better seeds, better service and better crops.

ROSS BROTHERS SEED CO., 505 Douglas Ave., Wichita, Kansas.

In cool weather 10 to 13 chicks are sufficient for one hen, while in warmer weather 15 to 20 can be cared for successfully. Never mix chicks of different ages.

Start the brooder a day or two before putting in the chicks, to see that the heating apparatus is working properly.

16 95 ON TRIAL American FULLY GUARANTEED CREAM SEPARATOR

A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for \$16.95. Closely skims warm or cold milk. Makes heavy or light cream. Different from picture, which illustrates larger capacity machines. See our easy plan of

Monthly Payments

Bowl a sanitary marvel, easily cleaned. Whether dairy is large or small, write for free catalog and monthly payment plan.

Western orders filled from Western points.

AMERICAN SEPARATOR CO. Box 3091 Bainbridge, N. Y.

Given the same care and feed, pure-bred fowls will make a greater profit than mongrels.

Can You Meet Us At Manhattan?

YOU know February 5 to 10 will be Farm and Home Week at the Kansas Agricultural College at Manhattan. This is the annual state-wide farmers' meeting and a good program has been arranged for every day. There will be meetings for men, women, boys and girls, and general meetings for all together.

We have just received a letter from one of our Dairy Club members, Harvey Russell of Scott County, saying he will be in Manhattan during Farm and Home Week and that he hopes to see us there.

We are wondering if others of you will be there. If so, we would like to meet you, too. We will be in Manhattan Thursday and Friday and we invite all of our Dairy Club members who will be there, to be our guests at supper Thursday evening. Meet us at Prof. O. E. Reed's office in the Dairy Building of the agricultural college, at fifteen minutes before four—3:45—Thursday afternoon. We will go together to see the big live stock parade at four o'clock and after that is over we will see some other interesting things about the college until supper time. Then we will have supper at the college cafeteria and a little talk together about the Dairy Club work.

We wish all of you might attend these meetings, for the programs arranged for the boys and girls by Otis E. Hall, State Club Leader, will be full of good things for you and you would learn many helpful things by visiting the state's agricultural institution.

If you do go, be sure to meet us at Prof. O. E. Reed's office in the Dairy Building at 3:45 Thursday afternoon, February 8. Ask for G. C. Wheeler, associate editor of KANSAS FARMER.

Cut out this article and take it with you so you will not forget where to meet us.

Are You Living on the Chickens?

By H. H. Johnson



H. H. Johnson
"The Incubator Man"

AN odd confession came to light the other day. One of our nearby customers came into the office and among other things said, "Do you know it just dawned on me that during the five years we lived in Texas the wife kept me and the children? She raised chickens and always seemed to have money. The children were never without good clothes, and grocery and meat bills were always paid. I cannot recall of having taken care of these things, and I really believe that her poultry kept us while I kept myself busy farming." I wouldn't doubt this. I have received many letters from farmers who admitted that their wives made more dollars from poultry than they made dimes farming. This is no reflection on grain and stock raising but it shows what poultry can do when put to the test.

Of late years, more farmers are taking to poultry raising. Instead of leaving it all to the women folks and cussing every time the hens roost on the buggy or farm machinery, they are providing for poultry houses and giving the chickens a place to stay. They find that it pays. Maybe the chickens require a little grain. But so do the hogs. And what farmer couldn't raise a few hundred chickens for the time and expense put in on raising half a dozen hogs?

The old order of things is changing. The poultry farmer has found it profitable to look at his chickens in the same light that the dairy farmer looks at his



You Can Live Well on Poultry Profits

cows. That is so far as the money-making possibilities are concerned. But instead of having to buy feed for his poultry, the chickens can be fed the scraps from the table, and the waste from the feed bins and feeding that cattle and hogs tramp into the mud.

No one is too poor to raise poultry profitably. And it takes less expense, less work, and less management to make farm poultry pay than any other kind of poultry. By farm poultry I do not necessarily mean mongrels. I am of the opinion that most poultry is now pure or cross breeds of two pure varieties which should not be classed as mongrels.

There is not much capital needed for starting. Some unused shed can do for the chicken house, hence no expense in that direction. About the only equipment needed is a good incubator, a brooder and the eggs. If the incubator is built right, no special room or cave is needed for it. It supplies its own protection from the weather. The same can be said for the brooder, although it is always well to set the brooder in a big box, such as a piano box, so that the little chicks can run around with comfort.

The best farm incubator is the one that runs itself and that can be depended upon to hold the heat even in cold weather. Lots of times argument is made on one or two special advantages. Usually these are real advantages but they are played up to make the reader overlook defects in some vital point which cannot be corrected because others hold exclusive patents, as for example our Old Trusty heating system. We have exclusive patents on this system.

This year as eggs and poultry are high, there is a tendency on the part of small town folks to get into the business. We make an Old Trusty in 100 to 120 size with a California redwood case that is adaptable for such folks. Also it's less expensive. With 120 eggs and this little Old Trusty "Special" you can start in the poultry business and in seven months

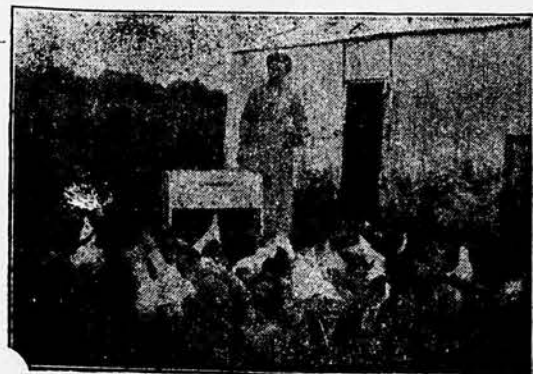


Table Scraps Make Good Feed

time have a good sized flock of layers. The cost would be about \$16 to \$17 for pure bred eggs and the incubator.

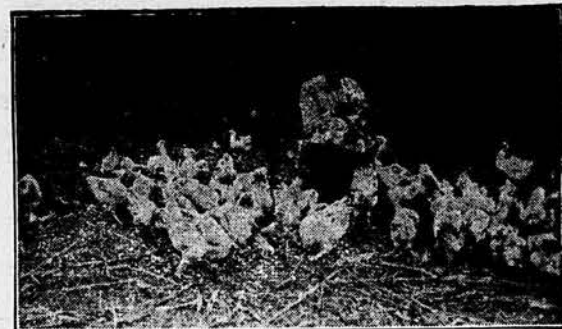
A flock of only 50 laying pullets this fall should be worth \$50.00 at \$1.00 each, or if kept for layers should bring twice the amount in income. In most families, some member makes the incubator their special care and it does not interfere with the work. The spring frites are welcome to the family table or bring big market prices.

It has been our experience that an investment of a few dollars to start early hatching means 200 to 400% profit. On a bigger scale it wouldn't do it, of course. In fact the money in poultry is in carrying it on in a small way. I am not, you see, offering you a proposition that means a fortune or bankruptcy, but just a plain business proposition and it makes me less than \$1.00 and you from \$40.00 up according to the attention you want to give it.

At this writing we have a little over 700,000 customers. We have dealt with more poultry raisers and sold three or four times as many incubators as any other concern that I know of. I believe this success is due, first to our practical common sense incubators and brooders; second to our knowledge of poultry raising as 95 per cent of the people have to raise it; third to our plan of facing the proposition fairly, striking the average without playing head lines of sensational and unusual successes, of which we have our share; and fourth to our settling down to business here in Clay Center, Neb., among the people who bought our first machines.

We built from the ground up, and have grown year by year. We stuck hard and fast to making incubators and brooders, built with a construction that was right in the first place and that did not call for changes every year, or new faddish frills to help them sell.

We have always tried to give a well-rounded value, a proposition with meat on the bone, so to speak. Yet we do not sell anything for less than it costs. Our profit is a fair one, about seven per cent, so that it is not necessary to ask two profits to make up losses somewhere else.



Are You Selling Eggs or Buying Them?

Now, Reader, it would not be good business for me to urge you to take up something that you could not make money on. So whether you decide to do business with us or not, let me give you this one point. There's good money to be made in poultry raising. This year is a year of opportunity—meat prices are high and it looks as though they will be higher. With the increasing cost of living everywhere, poultry could prove more than handy to help square off the table expenses.

Our new annual catalog deals with profitable poultry raising and we are always glad to send a copy free. Also we like to write letters. If you have any poultry troubles, tell us and maybe we can offer a suggestion or two that would fit. Write for our book anyway and let's get acquainted.



No incubator is better than its heating system, H. H. Johnson, "the Incubator Man."



M. M. Johnson
Inventor of "Old Trusty"



Only \$9.60 Buys this redwood cover Old Trusty—freight paid east of Rocky Mountains—a trifle more farther west.

Quick shipment from factory at Clay Center or warehouse at St. Joseph, Mo., or Seattle, Wash.

Here's the money-saving sensation of 1917. It's Old Trusty through and through—same as we sold in 1908, which machines are still in good service. This is 120 egg size.

The M. M. Johnson Company
Clay Center, Neb.

1917 Conveniences

Make Big Hatches Easier Than Ever

Old Trusty

EASIER hatches, but not bigger hatches, because no feature could improve Old Trusty's present record for higher average hatches year in and out, even in coldest winter weather. I call these new conveniences work savers. And they are big work savers, too.

Note the big oil drawer. It slides away in under the case—big enough to hold five or six quarts. Saves filling the lamp bowl every day.

Next, note the handy thermometer holder on the door. I don't want to be accused of saying this would make bigger hatches, but if easier watching means better watching and correct temperature then this device helps for bigger hatches. Open the door and the thermometer comes out. Instantly in view. No fumbling over the eggs—saves stooping and delay.

Write for Catalog

Of course these new work savers are not the big things to look at in Old Trusty. No one part of Old Trusty is any more important than another. We make each part of Old Trusty as though your entire hatch depended on that one part.

For example, note the heating system, the part I am holding in my hand. I won't attempt to describe it, except to say that it's all copper and lock jointed and built on a plan that puts even heat all over the eggs. Note the shape of the discharge pipe in center and return pipes on the outside. Allows no cold corners nor hot centers.

Quick Shipment—Mail the Coupon

In spite of OLD TRUSTY'S unbeatable construction it is not expensive. It's made in the largest exclusive incubator and brooder factory in the world. That's why we can give you such a big value for your dollar in OLD TRUSTY incubators and brooders. Write for our catalog telling all about them and giving you the "know how" on poultry raising.

Have fat broilers to sell at high prices in June and July and laying pullets in October and November. It's easy—thousands are doing it—let me show you how. Write today for our book if convenient, and tell us your poultry troubles. Yours truly, H. H. Johnson.



The M. M. Johnson Company
Clay Center, Neb.

Please send me copy of your 1917 OLD TRUSTY Book.

Name _____

Address _____

Town _____ State _____

Write a letter if convenient and tell us your poultry troubles. Mention how many chickens you keep, whether hens lay in fall and winter, whether you have used an incubator and have been successful.

FARM POWER

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

"THE best advice I can give to you farmers is to stop working so hard, and do some plaything. Buy an automobile, and use it for a plaything, not merely for farm work."

This was the advice that came unexpectedly in the course of an address before the Missouri farmers in the farmers' week conferences of the University of Missouri, from R. S. Kellogg, secretary of the National Lumber Manufacturers' Association, in his talk on farm structures. In prefacing his subject he said that the farmer was the greatest user of building material in the United States, the total value of all farm buildings being in excess of four billion dollars.

His argument in favor of the automobile as a farmer's plaything was:

"A prominent physician says that notwithstanding the supposed healthiness of farm life, a very large proportion of the farmers have together too high blood pressure, and are easily subject to diseases which men in a normal condition can resist. He says that this is due chiefly to the fact that the farmer's life has been all work and no play, and for this reason the advent of the automobile has been the greatest health-producing factor in farm life. Since the plaything is rather an expensive one, it demands good care. An automobile should have a house of its own, and not simply be run into the barn wherever handy, or put under a shed. Garage construction is so simple that the farmer and his boys can build a garage themselves, if so disposed, and the total outlay need not be more than that required to purchase 2,000 or 3,000 feet of lumber and a few shingles."

electricity can sometimes be used to advantage in heating farm homes.

One of the cheapest and most popular labor-saving machines is the gasoline engine, which not only does the plowing, hauling, feed grinding, and separating for the farmer, but also furnishes a motive power for washing and churning for his wife. The gasoline engine, which does practically all laborious work on the farm, is one of the most important contributions to the back-to-the-farm movement.

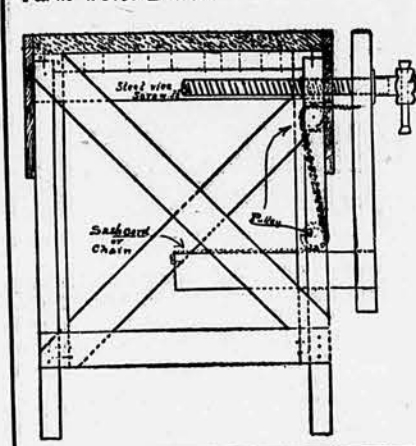
By means of the compression water system, drawing, pumping, and carrying water can be eliminated. Scrubbing and washing windows can be done by the hose, which also makes possible an attractive lawn and fresh vegetables from a well watered garden. The inaccessibility to town is overcome by good roads and slow transportation by the automobile and the gasoline truck. The daily paper is brought to the farmer's door by the rural mail carrier, and the telephone keeps him in touch with news, business, and professional services.

As a result of these city devices and comfort being taken to the rural districts, a social center is made possible where the members of the farm home receive practically all the culture and enjoyments of the city family.—E. V. FLOYD, K. S. A. C.

Handy Bench Device

The device here illustrated is a simple one requiring twenty or thirty minutes' extra time to install. It will save many times its cost. Cut out a slot under the vise screw on the inner jaw or bench leg and attach a sash cord or

Farm Work Bench



chain as shown in the drawing. The operation of the vise screw makes the lower end of the jaw travel in and out just as the upper part of the jaw travels. Being always parallel, it requires no reaching down to adjust by putting a pin through the traveler.—CLARENCE J. SMITH, Hays Normal School.

At this time of year much damage is done to automobile engines, and other engines as well, by the pistons seizing the cylinder. This causes the cylinder walls to be scored, and in many cases they are practically ruined. The reason for this is that in cold weather cylinders and water jackets warm slowly, while pistons and rings get hot and expand with the first few explosions. Therefore, if the engine is allowed to run at a high rate of speed before the whole engine is warmed up, damage is apt to occur, especially with comparatively new cases which have pistons fitted very tightly. This condition is aggravated because oil does not run freely in cold weather. There is nothing to be gained by allowing the engine to race, while there is considerable to lose. There is no harm in allowing it to run idle at a fair rate of speed until it is warmed.

The work of the storage battery is harder in winter than in summer, as the engine is cold and hard to start. You can save the energy of the battery by priming the cylinders so the motor will start more easily. The battery is much more apt to freeze when its gravity is low.

Electric Light Improvements

With scarcely an exception, the cost of production and distribution of every commodity has markedly increased, in recent years, save in the case of the electric light. This has as steadily decreased. It is now entirely possible to obtain electric lighting, as for instance, with an ordinary 60-watt Mazda lamp, at the cost of one watt of energy consumption per candle power. Besides this remarkable increase in the efficiency of the lamp, the cost of the electricity supplied shows a similar reduction. In fact, it seems very probable that the latter trend will continue rather than the former, inasmuch as further improvements in the lamp itself become increasingly difficult to put into commercial use.

For the automobile driver this means enhanced pleasure and greater safety. His old-style 9-volt headlights, for example, if replaced by the new Mazda B and Mazda C lamps, will give approximately 18 and 27 candle power, respectively. That is an increase of about 20 per cent in candle power, at the same usual rating of two amperes of current and nine volts. Some clear idea of the lighting effects may also be had by comparing with the illumination from an old style carbon filament lamp, of 16 candle power consumption from 56 to 60 watts. In point of expense this is at a cost of three and one-half watts per candle power, compared to the watt per candle power of the above Mazda automobile lamp.—W. S. ALDRICH, Colorado Agricultural College.

Conveniences on Farm

One of the chief factors working against the back-to-the-farm movement is the drudgery usually connected with farm life and the tendency of people to seek city employment because of the conveniences and labor-saving devices there enjoyed.

In contemplation of a move to the country it is possible to count on having practically all of these conveniences. In many cases the lighting, heating, water supply, and rapid transportation of the city are being introduced on the farm.

The old kerosene lamp is being displaced by the modern acetylene lamp or other improved type for each individual room, or in many instances the acetylene plant which lights all the farm buildings. A farm electric light plant is another possibility. Central heating plants, artificial gas plants, and even

Get a Powerful Tractor at a Popular Price

HERE is the tractor that any farmer can afford to own. Low in price, yet built right up to the highest ideals in powerful construction. A wonderful motor—and mounted so that it gives the fullest measure of its power in pull at the draw bar or on belt work. Simple construction—has only two-thirds of the parts used in most other tractors. Self-guiding in furrow. Low in upkeep cost, easy to operate. Backed by many years of manufacturing experience.

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Two models—Model "A" has won its way into popular favor by its really remarkable performance in the field and for general farm power purposes. "Seeing is believing" and doubters have been converted by seeing the tractor at work in their neighbors' fields, and then purchased La Crosse HAPPY FARMER Tractors in preference to other makes and types. From the hard, dry, tough virgin sod of Montana to the "squashy" rice fields of Arkansas, the La Crosse HAPPY FARMER Model "A" has made good. And it costs only \$585.00 f. o. b. factory at La Crosse, Wis.

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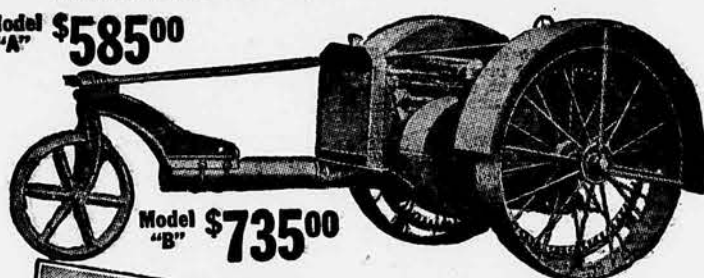
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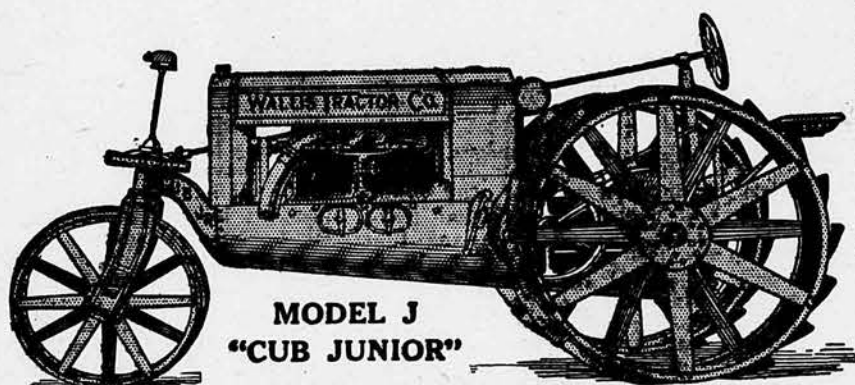
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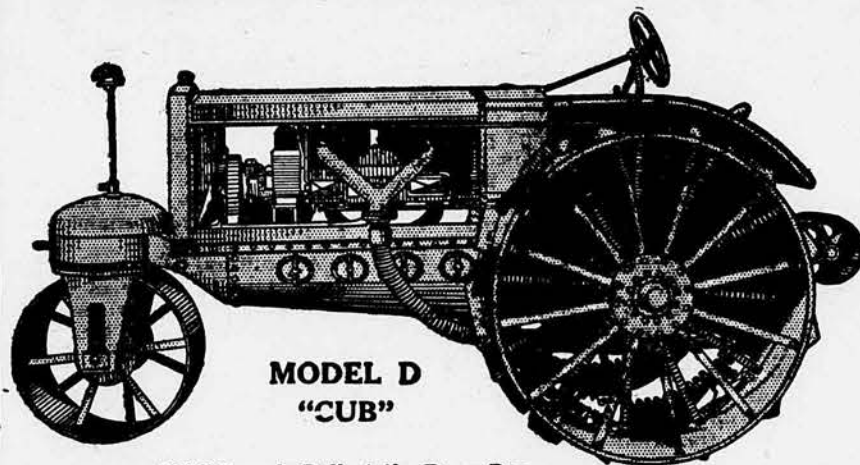
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2,600 Pounds Pull at the Draw Bar.



5,000 Pounds Pull at the Draw Bar.

—are made for the discriminating farmer who makes his purchase, not on the basis of first cost, but upon the continual daily service the equipment will render over a period of years. The first essential of our machinery is Quality. We make good in our slogan "Quality goes in before the name goes on," by trained designers, engineers, workmen and countless tests and inspections under the most rigid supervision.

A Strong Combination

Five years ago we said we would build the best Tractor made, regardless of price—and the now famous "Cub" was the sensation of the Tractor world when it first came out. Since then its past daily performances, world's plowing records, 1,000 mile durability runs and hundreds of enthusiastic owners are constant testimonials of its supremacy.

We now announce its little brother the "Cub, Jr.", which we are placing on the market only after having built and tried out three different small Tractors of various designs and types. It marks an epoch in Tractor building. Engineers the world over have ever striven to produce a Tractor developing a draw bar pull equal to its weight. The "Cub, Jr.", weighs 3,000 pounds and has a guaranteed D.B.P. of 2,600 pounds.

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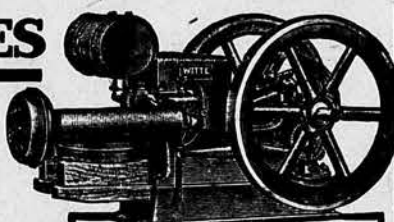
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Cities, Counties, States, the U.S. Government, and thousands of individuals in every state in the union are using my engines on farm and in shop—pumping—grinding—sawing and operating machinery. My factory capacity is 12,000 perfect engines yearly, and I am able to ship at once, any size wanted—no delay or waiting. Select Your Own Terms.

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Write for my book, Mailed Free, "How to Judge Engines," if you are interested in dependable, low-cost power, direct from the man who designs his own engines, and has made and sold nothing but engines for over 30 years.
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FOR HOG HOUSES AND ALL FARM BUILDINGS

The right windows for your farm buildings. Made of permanent material—heavy galvanized steel. Embody all the new improvements that mean service and satisfaction. Pay for themselves over and over in saving repairs and replacements. Don't rot out or rust out—cannot warp, shrink or swell. Get a lifetime for satisfactory service.

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Chief Sunshine Windows are found in every community. Look for the man who makes a big success of hog raising—he'll be a Chief Sunshine Window enthusiast and will attribute his success to the fact that his winter pigs had sunshine in their pens and plenty of it. On request we will send you pictures of the finest hog houses in this country—all Chief equipped. We'll show you sample letters from thousands of users.

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

State Pig Club Winners

THE third annual Kansas Pig Club promoted by the Kansas Agricultural College and the Federal Department of Agriculture, closed with December, 1916.

Since the judges could not see the pigs but had to depend entirely upon the papers sent in by the contestants, a credit of 40 per cent was allowed for records and story, including accuracy, neatness, completeness, and certified statements as to the important weights and figures submitted.

Standard prices for all feeds were agreed upon by the judges so that all contestants would be given an equal chance as to the items of cost. The first cost and the selling price of each pig were both figured at 10 cents per pound.

The five winners in this pig-feeding contest and the figures showing the different points upon which the awards were based, are as follows:

Walter Earl Delfelder, Atchison County, first prize: Pig's age in days when contest began, 84; pig's weight when contest began, 80 pounds; total cost of all feeds, pasture, etc., \$15.61; total cost of all feeds and first cost of pig at 10



WALTER AND HAROLD DELFELDER,
ATCHISON COUNTY, AND THE FOUR
PIGS WITH WHICH THEY STARTED

cents per pound, \$23.61; weight of pig at close of contest, 355 pounds; final value of pig at 10 cents per pound, \$35.50; net profit, \$11.89; number of days pig was fed, 132; average daily gain, 2.08 pounds; total gain, 275 pounds; cost per pound of gain, .0567 cents; grade given for records and story, 38; final grade given by judges, 92.

Melvin Jung, Rice County, second: Pig's age in days at start, 60; weight at start, 29 pounds; total cost all feeds, \$15.33; total cost all feeds and first cost of pig at 10 cents per pound, \$18.23; weight of pig at close of contest, 330 pounds; final value of pig at 10 cents per pound, \$33; net profit, \$14.77; number of days fed, 168; average daily gain, 1.79 pounds; total gain, 301 pounds; cost per pound gain, .0509 cents; grade for records and story, 37; final grade of judges, 88.3.

George Harold Delfelder, Atchison County, third: Pig's age in days at start, 84; weight at start, 70 pounds; total cost all feeds, \$15.61; total cost all feeds and first cost of pig at 10 cents per pound, \$22.61; weight of pig at close of contest, 321 pounds; final value of pig at 10 cents per pound, \$32.10; net profit, \$8.49; number of days fed, 132; average daily gain, 1.9 pounds; total gain, 251 pounds; cost per pound gain, .0621 cents; grade for records and story, 38; final grade by judges, 85.2.

John W. Reed, Rice County, fourth: Pig's age in days at start, 56; weight at start, 45 pounds; total cost all feeds, 12.56; total cost all feeds and first cost of pig at 10 cents per pound, \$17.06; weight of pig at close of contest, 275 pounds; final value of pig at 10 cents per pound, \$27.50; net profit, \$10.44; number of days fed, 163; average daily gain, 1.41 pounds; total gain, 230 pounds; cost per pound gain, .0546 cents; grade for records and story, 36.5; final grade of judges, 84.2.

Orville Caldwell, Lyon County, fifth: Pig's age in days at start, 84; weight at start, 46; total cost all feeds, \$12.81; total cost all feeds and first cost of pig at 10 cents per pound, \$17.41; weight of pig at close of contest, 295 pounds; final value of pig at 10 cents per pound, \$29.50; net profit, \$12.09; number of days fed, 153; average daily gain, 1.63 pounds; total gain, 249 pounds; cost per pound gain, .0514 cents; grade for records and story, 32; final grade of judges, 84.

The same problems confront these young feeders as must be overcome by their fathers in their pig-feeding operations. To be successful they must keep the cost of the feeding operations as low as possible, yet the pig must be kept in a thrifty, growing condition, and must have all the feed he will use in making a steady daily gain.

The following letter written by Walter Earl Delfelder, who won the state championship honors in the above contest, gives some of the details of his work in feeding his pig:

"To be a successful pig feeder you must have the right type of hog, or at least the one that I had my success with is the long smooth kind, called the large type Poland China. I became interested in this contest because I had read where boys and girls had raised pigs and I could not see why I could not do just as well.

"I weaned my pig at ten weeks old and began feeding him. At the age of twelve weeks I vaccinated my pig. I used double vaccination because single vaccination lasts only six weeks and I wanted mine vaccinated for life. For fourteen days after vaccination I gave him all the fresh water he wanted. I gave him some skim milk and some corn, but not very much was fed.

"I fed my pig corn, shorts, and skim milk. Corn was fed to make him fat; shorts and skim milk were fed to make him grow. When he did not eat all of his feed out of his trough, I knew I was feeding him too much and I did not give him so much next time. I fed him twice a day.

"The shed I gave my pig was open on the south to admit sunlight and to let in fresh air. I kept the lice from him, because lice stunt a pig's growth.

"I have enjoyed this contest very much and have learned how to feed hogs and care for them.

"In 5 months and three days the total amount of corn fed my pig was 596 pounds; shorts, 220 pounds; skim milk, 1,360 pounds. The value of corn was \$8.20; of shorts, \$3.25; of milk, \$3.40; of pasture, \$1.69, making a total of \$16.54. I won \$10.00 premiums at the Atchison County Fair. My hog was sold for \$35.00.

"I began feeding my pig for the contest when he weighed 80 pounds; at closing time he weighed 355 pounds, making a total gain of 275 pounds. The cost I have estimated here is not the total cost but only the cost of feed and pasture; interest, risk, vaccination, and labor are not included."

While a large number of the pigs entered in this contest were grades, it may be of interest to know that the five champions were all purebred pigs and all but one registered—a strong recommendation for purebred stock.

A comparison of Walter's cost figures and those shown in the detailed statement of his results given at the beginning of this article, will show a difference. As stated in the second paragraph, standard prices for all feeds were agreed upon by the judges, as this is the only fair way to do in a contest, and this explains the difference between the two sets of figures. Walter gave his actual cost figures, while the other figures are based on the uniform feed prices used in determining each boy's profit.

Agricultural club work for boys and girls is well worthy of encouragement. It not only provides remunerative employment for the idle hours, but through this work the children learn valuable lessons. They learn to apply themselves and to work intelligently, which is a good business experience for them.

It is usually best to separate the ram from the pregnant ewes during the winter. If he is allowed to remain, he will greatly annoy them. He will also fret more and become run down in condition. A mixture of oats and bran, as a grain ration, and clover or alfalfa as roughage, will keep the ram in splendid shape throughout the winter. It may be well to feed him sparingly on corn silage of good quality, if available.

B. Needham of Rantoul is the newly elected State Master of the Grange. Secretary A. E. Wedd was re-elected. The usual committees were elected and are at work to make a good year.

When wet mashers are fed, be sure they are crumbly and not sticky.

The Only Way to Buy Trees Direct From Grower to Planter

Why pay three or four profits to wholesaler, retail dealer, and agent when you can order trees, vines and plants DIRECT FROM MY BIG NURSERY at lowest grower's prices? I deal with you instead of through three or four other people who must have their share before the stock reaches you—the planter.

Just suppose you give an agent \$20.00 for trees. He turns \$12 over to the retailer who in turn counts off \$5 for himself and hands over \$7 to the wholesaler. The wholesaler has sticky fingers, too, so he hangs onto \$2 and passes on exactly \$5 to the grower. In other words—the grower gets \$5 to fill your \$20 order and you simply donate \$15 in hard cash to three strangers. That's the OLD way—the money wasting way of buying nursery stock.

Now, my way is entirely different. You simply order from this page or my complete 1917 Catalog and you send me just

enough to cover my low grower's prices—not a red cent more. You save all middlemen's profits and expenses—you are sure of getting fresh stock.

Look where you will, you can't get better bargains in trees than I offer you right here. Compare my 'way down prices—compare the quality I offer and absolutely guarantee and remember that I save you all middle profits and I'm sure and certain that you'll say "Dunbar has the right idea—he gets my orders from now on."

Trees By the Million From Nursery to You—Saving All Middle Profits

APPLES				
	Each	10	100	1,000
2 yr. 5-6 ft.	\$0.20	\$1.80	\$17.00	\$160.00
2 yr. 4-5 ft.	.15	1.40	13.00	120.00
1 yr. 3-5 ft.	.16	1.40	18.00	110.00
1 yr. 2-3 ft.	.12	1.00	9.00	80.00

Yellow Transparent, Grimes Golden, Delicious, Winesap, Liveland Raspberry, Early Harvest, Cooper's Early White, Jonathan, Rome Beauty, Gano, many others.

PEARS				
	Each	10	100	1,000
2 yr. 5-6 ft.	\$0.30	\$2.40	\$20.00	\$160.00
2 yr. 4-5 ft.	.24	2.00	17.00	140.00

PEARS—15 LEADING VARIETIES				
	Each	10	100	1,000
2 yr. 5-6 ft.	\$0.32	\$3.00	\$25.00	\$210.00
2 yr. 4-5 ft.	.25	2.25	20.00	170.00

CHERRY				
	Each	10	100	1,000
2 yr. 5-6 ft.	\$0.40	\$3.75	\$33.00	\$280.00
2 yr. 4-5 ft.	.35	3.25	27.00	226.00
Extra 1 yr 4-5 ft.	.36	3.50	28.00	230.00
Large 1 yr 3-5 ft.	.34	3.30	26.00	220.00
Med. 1 yr 2-3 ft.	.25	2.20	19.00	170.00

Early Richmond, English Morello, Montmorency, Wragg, and other standard sorts.

COMPASS CHERRY PLUM				
	Each	10	100	1,000
4-5 ft.	\$0.25	\$2.30	\$22.00
3-4 ft.	.20	1.90	18.00

PEACH				
	Each	10	100	1,000
1st class 4-5 ft.	\$0.30	\$1.80	\$15.00	\$140.00
1st class 3-4 ft.	.23	1.20	11.00	90.00
1st class 2-3 ft.	.10	.90	8.00	75.00

Mamie Ross, Alton, Elberta, Crawford's Late, Krummell's October, Red Bird Cling, Carman, Champion, Chinese Cling, Heath Cling, Belle of Georgia, Elberta Cling, Late Elberta, and many others.

EARLY WONDER PEACH				
	Each	10	100	1,000
3-4 ft.	\$0.40	\$3.50	\$30.00
2-3 ft.	.35	3.00	25.00

PLUMS				
	Each	10	100	1,000
Extra 5-6 ft.	\$0.32	\$3.00	\$24.00	\$200.00
Large 4-5 ft.	.27	2.50	20.00	170.00
Medium 3-4 ft.	.21	1.90	17.00	130.00
Stocky 2-3 ft.	.15	1.40	13.00	110.00

Red June, Abundance, Burbank, Wickson, Wild Goose, German Prune, Lombard, Damsen, Gold, and other standard sorts.

Note These Wonderful Bargains

10 Select Apple Trees—2 yr. 5 to 6 ft. trees. 1 Delicious, 2 Stayman, 1 Black Ben, 2 King David, 1 Jonathan, 3 Winesap. Agents ask \$5.00. Collection No. 1. **\$1.50**

20 Select Apple Trees, extra size—2 year, 5 to 6 foot, Stayman, Black Ben, Winesap and other best varieties. Fine, big, extra heavy trees. Agents ask \$8.00. Collection No. 2. **\$2.50**

10 Select Peach Trees—4 to 5 foot trees. 5 Elberta, 1 Chinese Cling, 1 Belle of Georgia, 2 Champion, 1 Carman. Agents ask at least \$3.00. Collection No. 3. **\$1.25**

20 Select Peach Trees—3 to 4 foot. 10 Elberta, 3 Champion, 2 Mamie Ross, 5 Belle of Georgia, the cream of good varieties. Agents ask \$5.00. Collection No. 4. **\$2.00**

20 Peach Complete Family Orchard 2 to 3 foot stock, well rooted. 2 Early Wonder, 2 Mamie Ross, 2 Champion, 7 Elberta, 3 Belle of Georgia, 2 Heath Cling, 2 Late Elberta. Covers all season latest to earliest. Agents ask \$4.50. Collection No. 5. **\$1.60**

5 Apricot Trees—3 to 4 foot. 5 Moorpark or 5 Royal. Hardest and best. Agents ask \$2.50. Collection No. 6. **\$1.10**

10 Select Pear Trees—2 yr. 5 to 6 ft. 8 Keiffer, 2 Garber, biggest money-makers for middle west. Agts. ask \$5.00. Collection No. 7. **\$1.60**

10 Select Plum Trees—4 to 6 foot. Burbank, Abundance, Red June and Wickson, all fine, quick bearing varieties. Agents ask \$5.00. Collection No. 8. **\$2.00**

10 Select Cherry Trees—4 to 5 foot. 4 Montmorency, 4 Early Richmond, 1 English Morello, 1 Wragg. Agents ask \$6.50. Collection No. 9. **\$2.90**

10 Choice Grape Vines—2 year. 1 Catawba, red; 3 Concord, black; 2 Niagara, white; 1 Moore's Early, black; 3 Worden, black. Agents ask \$2.00. Collection No. 10. **\$.75**

25 Concord Grape Big Vines—Most widely planted black grape. Easily cultivated. Agents ask \$2.50. Collection No. 11. **\$.90**

100 Everbearing Strawberries—Best variety Progressive. Bear till snow flies. Hardy, vigorous. Agts. get \$5. Col. 12. **\$2.00**

300 Everbearing Strawberries—200 Progressive, 100 Superb. Bear till frost. A wonderful bargain. Agents ask \$15.00. Collection No. 13. **\$4.50**

RASPBERRIES

	Each	25	100	1,000
Cumberland and Plum Farmer	\$0.07	\$0.80	\$2.50	\$18.00
Kansas and Cuthbert	.06	.70	2.10	15.00
St. Regis Everbearing	.10	1.00	3.00	20.00

STRAWBERRY PLANTS

	By mail postpaid.	By express, charges collect, f.o.b. Ark.
Excelsior	25 50 100 250 500 1,000	25 50 100 250 500 1,000
Klondyke\$0.30 \$0.65 \$0.80 \$1.50 \$2.25 \$4.00\$0.30 \$0.65 \$0.80 \$1.50 \$2.25 \$4.00
Senator Dunlap\$0.30 \$0.65 \$0.80 \$1.50 \$2.25 \$4.00\$0.30 \$0.65 \$0.80 \$1.50 \$2.25 \$4.00
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Gandy\$0.30 \$0.65 \$0.80 \$1.50 \$2.25 \$4.00\$0.30 \$0.65 \$0.80 \$1.50 \$2.25 \$4.00

3,000 to 5,000 plants 5% discount.
5,000 to 10,000 plants 10% discount.
10,000 to 25,000 plants 15% discount.
25,000 to 50,000 plants 20% discount.

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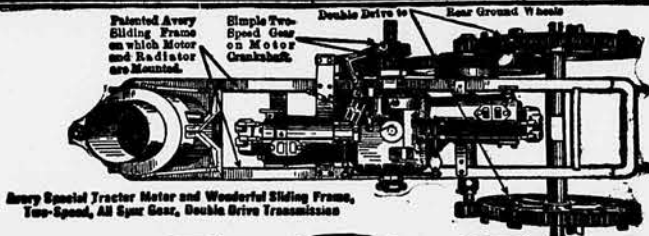
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WE MAKE a better profit from pure-bred poultry with quicker returns than from anything else raised on the farm. This last year we sold poultry as breeders, eggs for hatching, and fries and broilers, and counting what we have on hand and that consumed at home, we made \$800 from our poultry business in 1916.

We have built up our poultry business largely through farm paper advertising. Two-thirds of our sales were the result of using the classified columns of general farm papers. Every successful farmer or poultryman must use plenty of advertising space in order to sell his product to the best advantage. There is no other way to let the public know that we have surplus poultry and eggs for sale. Advertising has done a great deal to advance the poultry industry.

We have always had better results from the farm papers than from special poultry papers or journals. It is farmers that do the buying of stock we have to offer, and they watch closely the advertising columns of their farm papers during the season when they need stock or eggs. I have had some unpleasant experiences in dealing with some of the large display advertisers in poultry journals. Some of them advertise and describe high class stock, which is in reality low grade stock. Last November I saw a large advertisement in a poultry journal of high class, show-winning cockerels. I was needing a good male to head one of my pens of Single Comb White Leghorns. I wrote to this advertiser, giving description in full of the kind of bird I wanted. He answered that he had exactly what I wanted in a ten-dollar cockerel that had won first at a certain state show. I sent my check for the bird and when he came I considered him only fit for the dinner pot, worth perhaps about fifty cents. I looked up the show records of the show where it was claimed he had won first, and found this prize had gone to another person. I immediately sent this bird back to his owner and got my money back. I then ordered a cockerel from the classified columns of a farm paper and got a bird worth at least twice what I paid for it.

We are in the poultry business to stay and patronize the farm papers because they furnish the best means of disposing of our surplus stock and eggs. We have been breeding the Single Comb White Leghorns for four years and have been very successful in the show room, but we consider their laying qualities worth far more to us than their winnings in the show room.—Mrs. S. A. HEFNER, Grady County, Okla.

Strongest Chicks Hatch First

The baby chick season is at hand. It will be but a few days until many poultrymen will begin to make preparations to hatch baby chicks to renew at least a portion of their flocks. The purpose of this article is to call their attention to some things which should be given some consideration, especially when the price of feed is as high as at present. Unprofitable drones that are hatched are a source of considerable loss to the average poultryman, and incubators are a necessity and must be used if chicks are to be hatched in large numbers and if you expect to succeed.

From what experience I have had, from what tests I have made and from what experiments I have conducted, I feel safe in saying that the first half of the chickens which hatch in an incubator contain 90 per cent of the profit makers in that hatch. Ninety per cent of the last half of the chicks hatched will lose you money if kept to maturity. Our experience has been that the first ones hatched mature quicker, grow more rapidly; lay first; lay most eggs; make the best use of their food; and are more robust and healthy. The last half hatched contains most of the chicks lowest in vitality and those which are a menace to your flock. You will find most of the unprofitable ones in the last half of the eggs which hatch in any setting. A very small per cent of the last half of any hatch will ever pay you to keep beyond the broiler or frying age. If you can mark them and thus dispose

of the tailenders, you will be breeding from the best in your flock and will soon have a flock that is full of pep, vitality and profit making ability.

The fact that a chick grows rapidly in the shell and makes good use of the food which nature has placed there for its use during the first 20 days of its growth and development, and then hatches and beats another chick out of the shell from six to twenty-four hours is an almost sure sign that the first will beat the last in the race of life and at every stage of its existence. There are exceptions, but this is the rule. Mark the first one-third or one-half of your chicks that hatch and try this out. It is an almost certain indicator of the profitable and unprofitable chicks. If you have to raise and carry half of your flock at a loss, you can readily see what a saving could be made by this plan.

If you don't own a good incubator, you had better purchase one at once. It is utterly impossible to hatch and rear a large number of chicks by the hen method. You can hatch just as large a percentage in a good machine as you can under hens, in fact larger in most cases. The chicks are just as strong and healthy if you use any judgment in operating the incubator. Many people imagine that you have to sit up with them at night, which is not a fact. The largest and best farms use them, and they are in the business for the money that there is in it, and if any other method paid better, they would use it.

By using incubators you are able to hatch early chickens and hatch them when you want them. You can keep your best hens busy laying. You do not need so much surplus stock and thus save enough feed in one year to pay for a good incubator. You can pedigree some of the chickens from your best stock. You are saved the trouble with fussy hens, broken eggs, lice, and many other disagreeable features of the hatching business. Clean up your machine and if it is out of repair so that it is not safe to use it, buy a new one. Get it now, so that it will be ready when you need it.—T. E. QUISENBERRY, Leavenworth.

Frozen Combs and Wattles

We have been asked how to treat frozen combs and wattles.

Freezing of the combs and wattles of poultry greatly reduces egg production, decreases their show qualities and may injure them for breeding purposes.

The large upright-combed birds are most susceptible. The wattles are likely to freeze first, since they are apt to dip in the water when the birds are drinking, and freeze while wet. This can be partially prevented by anointing the wattles with vaseline, thus keeping the water from adhering.

The following is a treatment for frozen parts, recommended by C. S. Anderson of the Colorado Agricultural College: Place the bird in a cool but not cold room. Immerse the frozen parts in snow or cold water for ten minutes. This will take out the frost. To restore complete circulation, the parts should be manipulated twice a day with a mixture of five parts vaseline, two parts of glycerine and one part of turpentine.

Breeding Early Layers

The first thing to consider in getting chickens to lay early is the selection of

The man or woman who gets the right start in the poultry business, will make money. This year will be a record breaker.

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Is not raised one cent! Uses only one gallon oil (one filling) to produce hatch—has X-Ray Automatic Trip that regulates flame and prevents both cold corners, and overheated sides.

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the stock. Select those chickens that have breeding back of them. High egg-producing qualities in the parent stock, early hatching, careful and considerate feeding, and proper housing are all factors which tend to produce early layers.

In an experiment at the Kansas Experiment Station two pens of April-hatched pullets were used. In one of these the pullets had been bred to lay while the others were common pullets. Ten eggs were gathered from the first pen in November, 337 in December, 296 in January, and 176 in February. In the pen of common pullets no eggs were laid in November, 66 in December, 190 in January, and 132 in February. The value of getting the hens to lay early is seen readily, as this is the time of the year when the eggs are of the greatest value.—ROSS M. SHERWOOD, Kansas Agricultural College.

Eggs Are Scarce—Why?

We have asked this question many times as we have met farmers. The men have not explained it. But, several farm women have told me that the reason their hens are not laying now is because of the scarcity of grain on the farms.

These women say that the chickens usually pick up enough feed to keep them in good condition. Now there is no grain on the farm for the hens.

As nearly all the eggs produced in the country come from farms where hens are kept only to pick up the waste, the hens which are kept by people who make a business of poultry raising cannot supply the market fully when the country hen goes on a "strike" because she cannot produce eggs without feed.—J. E. PAYNE, Oklahoma.

Seasonable Poultry Hints

This should not be a dull month for progressive poultrymen. Now that the surplus breeding and market stock have been disposed of, the pens of the coming season can be made up. Matings should be made at least two weeks previous to saving eggs for hatching.

Only the strongest pullets or yearling hens should be selected and mated with a male bird of equal vitality and thrift. If egg-production has been backward through the early winter, a slight stimulant can be given. If sprouted oats, alfalfa leaves, or vegetables are available, they will make valuable feed. Too much concentrated protein feed, such as meat meal, should be avoided, as it is likely to impair fertility.

Before the matings are made, all the houses and pens should be cleaned and well disinfected. No matter how strong individuals they are, hens cannot do their best when infested with parasites. The brooders and incubators should be cleaned and repaired. It may be advisable to build additional runs or another house.

Why not install a few trap nests and next year at this time know the actual production of each hen in your breeding pens? It is the one certain way of eliminating the low producer and building up the flock.

Have you considered any addition to your poultry yard? Poultry of all kinds has been paying this year, and is bound to be more so in the future. Perhaps a small trial with turkeys, ducks, geese, pigeons or capons will prove profitable.

If you intend to have hatching eggs, or day-old chicks for sale in the season, start now with a good ad in some real live poultry paper.—C. S. ANDERSON, Colorado Agricultural College.

J. P. Farnsworth of Shawnee Co., furnishes accurate records of a pen of eleven Barred Plymouth Rock hens kept on a city lot. During the year 1916 they laid 1,927 eggs. During the hatching season he sold several hundred for hatching. He received for eggs during the year \$62.34, from sale of cockerels, \$44; pullets, \$46.00; or a total of \$152.34. Feed and other expenses amounted to \$55.79 leaving a net profit of \$96.55. Of course this is exceptional from the standpoint of the farmer but shows how profitable a few hens can be.

For the first three days chicks may be fed a mixture of equal parts hard-boiled eggs and stale bread, or stale bread soaked in milk. When bread and milk are used, care should be exercised to squeeze all milk out of the bread. From the third or fourth day until the chicks can eat wheat and cracked corn, commercial chick feed is a good ration.

Bran or middlings and beef scraps should be kept in receptacles to which the fowls have access at all times.

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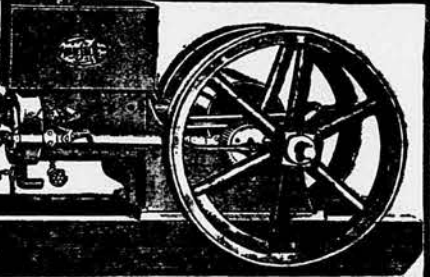
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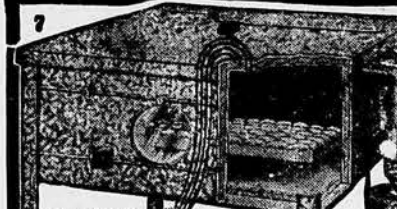
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My \$1000 in Cash Prizes Conditions so easy you can make big extra money the first season you own my Hatching Outfit. And you are perfectly safe in ordering direct from the Advertiser—the earlier you start, the better your chance to share in the Gold.—Anyway write for my big Free Book today. Jim Roban, Pres.

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My Free Incubator Plan Book tells you exactly how to build the best incubator that can be built. You can build any capacity incubator, single 150-egg size, or Multidek up to 1200 egg capacity—hot air or hot water heated. You can't go wrong and it means a big cash saving to you. I'll supply all the necessary mechanical parts, not easily made by you, at low cost. They insure you a troubleproof machine of highest efficiency at lowest operating expense.

My Sol-Hot Wickless Lamp makes a clear blue flame: smokeless, sootless, odorless—intensely hot. Easily attached to any incubator.

My Peerless, all-metal, 60 egg hatcher is inexpensive and insures big hatches.

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Get More EGGS WITH KNUDSON LICE-PROOF NESTS—Galvanized Steel

Customers report 10 to 100% egg increase. Sanitary & comfortable. Cheaper than wood. No. 1 Best. Special Low Prices This Month—6-Nest, 6ft.

Write Knudson Mfg. Co., Box 524, St. Joseph, Mo. Get our descriptive literature FREE

WHY CHICKS DIE IN THE SHELL

We want to tell you how to prevent chicks from dying in the shell just at hatching time, how to save them from White Diarrhoea or Bowel Trouble; how to build the best Home Made Brooder in the world from an ordinary box or change your old one.

Above information absolutely free, for names of five to eight of your friends that use Incubators. Send names today.

RAISALL REMEDY COMPANY, - BLACKWELL, OKLAHOMA

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PARTS For Kansas REPAIRING
SHAWNEE CYCLE CO. TOPEKA KANSAS

A well-ventilated cellar is the best place to operate the incubator. The machine should be operated according to the manufacturer's directions.

J. W. Anders, Liberal, Kansas, raises

about 100 head of turkeys each year. He says: "Turkeys do exceptionally well on these western prairies. Kafir, milo and wheat are the best feeds and turkeys get the advantage of grasshoppers each season."

Home Circle

Industry is in itself, and when properly chosen, delightful and profitable to the worker; and when your toil has been a pleasure you have not earned money merely, but money, health, delight and moral profit all in one.—ROBERT LOUIS STEVENSON.

Are You Going to Manhattan?

The annual Farm and Home Week at the Kansas Agricultural College, which will this year be held February 5 to 10, offers a Home Economics program which will be of practical value to every homemaker and housekeeper who attends. It is a full four-days program and some of the vital questions which will be discussed are as follows:

Tuesday, February 6: "The Business of Being a Homemaker"; "The Ideals of the Home"; "Standardized Household Operations"; "Scheduling of Household Tasks"; "What the Government and State are Doing to Help the Housekeeper"; "Desirability of a System of Keeping Reliable Household Records"; "Laundry Hints and Helps."

Wednesday: "The Principles of Human Nutrition"; "The War and the Food Question"; "Diet for Children"; "The Housewife as a Purchasing Agent"; "Uses of Paper in the Home"; "A Woman and Her Clothing"; "Clothing for the Children"; "My Greatest Aid in Sewing"; "The Development of Judgment in Buying of Clothing Materials"; "The Place of Domestic Art in a Girl's Education"; "The Essentials of Success in Homemaking."

Thursday: "Child Life in Relation to Community Life"; "The House of Moderate Cost"; "The Glenwood Canning Club"; Canning demonstration by two Mother-Daughter teams from the Glenwood Club.

Friday: "Safety and Beauty for the Family"; "Sanitation as Applied to Living Conditions"; "The Home Nurse"; "Principles of Color and Design Applied to Clothing and House Furnishings"; "The Home as a Social and Civic Factor"; "The Home as a Social Center"; "Woman's Responsibility Towards Civic Affairs"; "Training the Child for Citizenship"; "How Far is Home Responsible for the School?"

All these subjects will be handled by capable people and there will be opportunity for discussion at each session.

In addition to the above program designed specially for the women, there will be interesting general sessions and sessions for the state club boys and girls, at any of which all will be welcome.

'17 Boys' and Girls' Clubs

The 1916 boys' and girls' agricultural club work conducted by the Kansas Agricultural College and the U. S. Department of Agriculture, closed with many good records in all lines. Each year shows increased interest in the club work and better results. There are corn clubs, pig clubs, poultry clubs, square-rod garden clubs, sewing clubs, canning clubs, and a number of other kinds. The details of the club work are supervised by Otis E. Hall, State Club Leader, and his county and community leaders.

It is now time to enroll for the 1917 clubs and boys and girls should be encouraged to select the club the work of which they think they would like best, and send in their names to Mr. Hall or the county club leader. In counties having agricultural agents, these men can answer all questions about the different clubs. If your county does not have an agricultural agent and you do not know who the county agricultural club leader is, a card of inquiry addressed to Otis E. Hall, State Club Leader, Kansas Agricultural College, Manhattan, will bring full particulars regarding the club work.

Last week we told of the poultry club winners, and other club winnings will be reported. There could be no better recommendation for the club work than the members' own stories about it, each of which shows a development possible to bring about in few other ways. The more boys and girls we can interest in these clubs, the more contented, happy children will there be in our state.

Federal Bird Poster

The Federal Department has recently issued a poster headed "Feed the Birds This Winter." The following are extracts from this poster:

"Every local bird you keep from starving, when cold weather, snow, and

FERTILE KANSAS LAND CHEAP

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

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

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

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

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

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

E. T. Carlidge,
Santa Fe Land Improvement Co.,
1892 Santa Fe Bldg., Topeka, Kansas.

Alfalfa Clover Oats Get our prices on hardy seeds of all kinds. Western alfalfa, timothy, clover, etc. Also Potatoes, Garden and Flower Seeds, Trees, etc. Apple Trees 7c. Seed and Nursery Book mailed free. German Nurseries and Seed House 60 Court St., Beatrice, Neb.

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GOOD SEEDS

GOOD AS CAN BE GROWN Prices Below All Others

I will give a lot of new sorts free with every order I fill. Buy and test. Return if not O. K.—money refunded.

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Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.
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Such Beautiful Flowers!

Asters, Calliopsis, Calia, Clematis, Chrysanthemum—all these beauties and hundreds more pictured, described and attractively priced in Barteldes' Big New 1917 Catalog of Field and Garden Seeds—just off the press. Drop post card for free copy. Plant Barteldes' luxuriant flowers—the kind that grow, bloom and delight. Write Today.

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and Save Agents' and Dealers' Profits.

Apple trees \$7.00 per 100; Peach \$7.00 per 100; Cherries \$11.00 per 100; Concord Grapes \$2.00 per 100; Dunlap Strawberries \$2.25 per 100; Everbearing Strawberries \$2.50 per 100. Everything in Fruit trees, Plants and Ornamentals at money saving prices. Send for our FREE CATALOG.

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Barteldes' Milo Maize is a great drought resistant. Yields as high as 50 bushel per acre. Several varieties. Dwarf Straight-neck Milo, White Milo, Yellow Milo, etc. Get the best—our seed is pure and high in germination. 50 years of success back every item in our catalog. FREE CATALOG. Send for it at once—filled to overflowing with descriptions and quotations of field and garden seeds. Get our special pink price list giving lowest price on field seeds in quantities.

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POTATOES SEED Potatoes Seed Corn

Onion sets and all kinds of field and garden seed. Send for our catalog. It is free.
HAYES SEED HOUSE, TOPEKA, KANSAS.



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on the farm with the
best and most
economical light
in the world, the

Coleman GAS LANTERN

Gives strong, 300 candle power light without flicker. No Dirt, No Smoke, No Grease, No Soot. No wicks to trim—no globes to wash. Nothing to get out of order. More powerful than 20 ordinary lanterns, and only a tenth the cost of kerosene lighting.

A Fool Proof Light
Can't be filled while burning. Can't spill—Can't explode. Absolutely safe anywhere. No danger if rolled around in straw. Won't blow out. Can't be jarred out. Nothing to break or get out of order.

Makes and Burns Its Own Gas
Guaranteed Five Years Lasts a lifetime. Awarded The Gold Medal at San Francisco. Ask your dealer, or if not for sale in your town, write for new catalog.

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Gold Mine and Other Varieties

Come to headquarters for your seed corn. Take your choice of any of the best leading western grown varieties. Get seed that is tested for 90 per cent or better fertility. Get seed that is carefully hand picked, tipped, butted and cleaned, so that you pay for only the perfect kernels and not a lot of rubbish and trash. That's the kind of seed you want and that's the kind we sell you. It pays to buy the right kind at the start, so buy the Lincoln Brand.

Write for Our New 1917 Annual
A postal will bring it free, postpaid. It's a chuck full of Garden and Field Seed bargains. A book worth having. This year we list some splendid new varieties, such as our Shrock's Kaffir Corn, White Kherson Oats, White Wonder Millet, Marquis Spring Wheat, etc. We are headquarters also for Alfalfa, as we are the largest alfalfa seed dealers in the country. Our Corn Saver Beet for feeders of dairy cattle, our Hog Pasture Mixture and many other specialties in the seed line are worth investigating. We want you to get better acquainted with Lincoln Brand Seeds, the new trade name for well-known Griswold Quality Seeds. So, write for our new Seed Book today. Get our Special Bee Supply Catalog if you are interested in bees.

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SUPERLATIVE TOMATO
Best flavored, most productive, large sized, beautiful purple color, solid meat, strong grower. The supreme test of seven years' selection. It is being distributed free to our customers this year, and you can try it at our expense.

Let Us Send You A packet of 100 seeds of "Superlative" Tomato. Send only 10 cents for cost of mailing and we'll forward a regular 25c size packet together with a copy of our 130-page illustrated catalog containing hundreds of seed and plant bargains and a cash coupon worth 25 cents in part payment of your first order.

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PRIZE COLLECTION Radish, 17 worth 10c; Lettuce, 12 kinds, worth 15c; Tomatoes, 11 the finest, worth 20c; Turnip, 7 splendid, worth 10c; Onion, 8 best varieties, worth 15c; 10 Spring Flowering Bulbs, worth 25c—65 varieties in all; worth \$1.00.

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SEND 10 CENTS
to cover postage and packing and receive this valuable selection of seeds postpaid, together with my big instructive, beautiful Seed and Plant Book, tells all about Buckbee's "Full of Life" Seeds, Plants, etc.

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Ask now! This beautiful 96-page four-color book describes 1917 varieties vegetables and flowers; handsomely illustrated; beautiful home grounds, flower and vegetable gardens, landscaping, shrubbery, orchards, farms. A dictionary on gardening. Flower lover's delight! Berry grower's book! An orchard-er's manual! Most wonderful gardening guide catalog ever published. Better than our famous 1916 book. Don't miss it. Ask today. A postal gets it.

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ice shut off its natural food supply, will repay you by destroying hundreds of caterpillars, grubs, borers, beetles, and insects that would prey on your flowers, vegetables, fruit, foliage, or field crops. Birds more than pay for their keep. It is better to feed birds a little now than to grow crops for insects later."

"Every destructive insect is on the bill of fare of one or more of our native birds."

Encourage all kinds of birds, as the various species prey on different kinds of insects. For example, the hairy and downy woodpeckers render a special service in the protection of trees. They glean pests from beneath the bark and from within the wood. They account yearly for many a scale insect, bark beetle, borer, caterpillar, and ant. The bobwhite, one of the most important of our game birds, renders particular service in cultivated fields by destroying large numbers of potato beetles, wireworms, clover weevils, bollworms, cutworms, army worms, and other crop pests. The bobwhite suffers particularly from hard winters. A little suet or a little cracked corn and grain will keep these valuable feathered servants in your employ."

Cleaning Silver

An easy and effective method of cleaning tarnished silverware has been worked out by the Federal Department of Agriculture. The necessary materials for this work are a graniteware pan deep enough to allow the silverware to be covered by the solution, a clean piece of aluminum or zinc—preferably aluminum—and baking or washing soda. The solution, consisting of a teaspoonful of baking or washing soda and a like amount of table salt to each quart of water, should be brought to a boil in a graniteware or enameled pan. A piece of aluminum or zinc should then be dropped in. Immerse the tarnished silverware in this solution so that it is in contact with the aluminum or zinc. The tarnish should disappear in a few seconds. Then remove the silver from the solution, rinse, and dry with a soft cloth.

Aluminum is much more satisfactory than is zinc for this purpose since it does not become coated with a layer of carbonates which would interfere with the chemical reaction. Zinc does form carbonates and if used must be cleaned frequently in dilute hydrochloric acid.

Sheet aluminum can be purchased at some hardware stores. A piece of a worn-out aluminum pan may be used, but should first be well cleaned. Do not use for this process of cleaning silver, aluminum utensils which will later be used for cooking.

If very large pieces of silver are to be cleaned and a container larger than can be placed conveniently on the stove, is required, the hot solution may be poured into this vessel and the silver object then immersed. The method is most effective, however, when the solution boils during the cleaning process, and efficiency is rapidly lowered as the temperature of the solution falls below the boiling point.

The above method of cleaning gives the silver a satiny finish after several cleanings. If a burnished surface is desired, the silver must from time to time be cleaned lightly with a polish such as powdered whiting. In the study made, it was found that when whiting paste was used for cleaning, spoons lost almost one-hundredth of a gram of silver each, or about twenty-five times as much as when the above method was used for cleaning them.

"Pon House"—Meat Pudding

Since the butchering season is at hand it may be well to call to mind an old-fashioned recipe for "Pon House."

All meat not used for sausage—hams, shoulders and side meat—may be placed in a kettle to be cooked for "meat pudding." This includes the head, with tongue, heart, liver and all clean skins after lard has been stripped from them. To these trimmings add water and cook slowly until very done. Remove bones and largest pieces of meat, cut the meat into small pieces and place again in the kettle. Add water and thicken with corn meal and buckwheat flour, about equal portions. Cook slowly, stirring constantly, season to taste with salt, pepper and sage. When done pour in dripping pans. When firm, slice down. Serve cold or fry as mush.—"News Notes," Colorado Agricultural College.



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Before the Spring rush comes, let us work with you on the details of your new home. From our Home Books you can pick plan suggestions of convenience and comfort. In them you will find the latest designs of

1866 CURTIS WOODWORK

"The Permanent Furniture For Your Home"

Now, too, you have time to consult your lumber dealer. Get him to show you some CURTIS Woodwork. Notice the quality of wood, the niceties of workmanship.

Look for CURTIS

That mark is backed by fifty years' endeavor to put faultless woodwork into the homes of careful builders.

At your dealer's, you can see the big Curtis catalog filled with hundreds of designs—correct in proportion, taste and workmanship.

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They are "Better Built Homes," Vol. II—\$2700 and under; Vol. III—\$2700 to \$4500.

They show floor plans and exterior and interior views. They embody the best in construction that we've run across in thousands of homes. The coupon brings your choice.

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New Crop Grown—Guaranteed to grow—sold at lowest living prices. 33 years in Seed Business. BIG ILLUSTRATED CATALOG FREE—gives full descriptions of every farm and garden seed worth planting. A postal card will bring it to your door. SEND for it today. It will save you money on your seeds.

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38 Hardy Tested Varieties

Best for windbreaks, hedges and lawn planting. Protect buildings, crops, stock, gardens and orchards. Hill's Evergreens are Nursery grown and hardy everywhere. From \$4 to \$10 per hundred. Hill's Evergreen book and 50 Great Bargain sheet sent free. Write today. World's largest growers. Est. 1865.

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51st YEAR. Over 28,000 former Students. Our modern Building has 15 elegant Rooms, including FREE GYMNASIUM and Auditorium, 22 experienced Teachers and Lecturers. Day and Night Schools all Year. Free Employment Bureau. Shorthand, Typewriting, Book-keeping and English Branches. Catalogue "K" Free. J. F. Spalding, A. M., Pres.

Pumping Water to Reservoir

C. E. B., Nemaha County, asks the following questions: "Is it practical to pump water 500 feet with about 40 feet elevation to the reservoir, using an ordinary windmill? I plan a single pipe line from mill to reservoir and will tap this at right angles with laterals for distributing water to tanks."

These inquiries are answered as follows by H. B. Walker, drainage and irrigation engineer at the Kansas Agricultural College:

"It is logical to pump water 500 feet with a total elevation of 40 feet. I take it from your inquiry that the lift of 40 feet is the difference in elevation of the water in your well and the elevation of the water in the reservoir. A 500-foot pipe line would add considerably to your pumping head due to friction in the pipe line. The amount of this friction will depend upon the quantity of water pumped and the size of the pipe. For a 1-inch pipe, which I would recommend you to use, you would have 10 feet of friction in the 500-foot pipe line when pumping 5 gallons per minute. If you should use a 3-4 inch pipe you would have nearly 40 feet of friction."

"By using the 1-inch pipe line your total lift would thus be equivalent to 50 to 60 feet, and the ordinary 8-foot back geared windmill operating a 2-12 inch cylinder should be able to pump the water into your reservoir."

"By using lateral lines 3-4 inch or less in diameter and arranging so that you can have a gravity flow from your reservoir you should have no difficulty in the operation of your plant. However it would be best to have an air chamber in the pipe line near the pump in order to overcome the water hammer in the pipe line."

Farm and Home Week

We have just received a copy of the complete program for Farm and Home Week at the Agricultural College, February 5 to 10. It is the strongest in the history of this annual event, which brings hundreds of persons to Manhattan, both young and old, and gives them a chance to attend college for a week. The boy or girl of 16 and the man or woman of 60 are equally welcome. An attendance of between 1,600 and 2,000 persons from the farms of the state is expected.

Lectures and demonstrations in agriculture, farm engineering, and home economics will be given throughout the entire week, while such entertainment features as music, readings, get-together meetings and receptions will serve as a means of relaxation.

Charles E. Lobdell, of the Federal Farm Loan Board, will be present to discuss "The Federal Farm Loan Act and Its Application," and Dr. Henry J. Waters, president of the Kansas Agricultural College, will speak on "The Landlord and His Tenant."

Special conferences for county agents, farm bureau officers, county commissioners, institute officers, and other groups will be held. A Percheron sale will be conducted Friday afternoon, February 9. The State Apple Show, the Glenwood Mother-Daughter Canning Club exhibit, boys' and girls' exhibits of farm and home products, and the exhibition of the Kansas Crop Improvement Association will be features of the week. At all the general assemblies and for the evening meetings music will be provided by the college band, the college orchestra, the Apollo Club, and members of the department of music.

A copy of the program can be obtained by addressing Edw. C. Johnson, Dean of Extension Division, Kansas Agricultural College, Manhattan, Kansas.

Chicks Dying in the Shell

Mrs. Frank Bain, an Idaho reader of KANSAS FARMER, writes of her experience in hatching eggs both with incubators and with hens. She says:

"I hear many people complain of chicks dying in the shell. I have hatched twice a day when the chicks in my incubator in addit. I have a moisture pan. The air is very dry here and I find by hygrometer test that we seldom have any moisture to spare. By supplying moisture in this way I always succeed in hatching every hatchable egg and I have big, fluffy, lively chicks. Some of my neighbors claimed they could always tell an incubator chick from a hen-hatched chick and they came over to show me. I had hens come off with

chicks at the same time the incubator hatch came off, and had divided the chicks into four coops. They tried to guess which were the incubator chicks but were unable to do so.

"When I set hens I also test the eggs on the seventh and the fourteenth days. I can then take out the infertile eggs and by setting several hens at once I can quite often re-set a hen or two and save the time of the hen besides making a better showing of chicks at hatching

time. In this hot, dry climate I always sprinkle the eggs under the hens and the chicks come out more easily."

J. A. Denslow, Meade, Kansas, keeps from 150 to 200 chickens on a 320-acre farm. Averaged \$10 worth of eggs per week, besides what they keep for their own use.

"Keep as many hens as you can take care of," is the advice which the Colo-

rade Experiment Station gives to new settlers. Investment in poultry yields quick results, and the new settler who follows this advice finds his poultry is one of the biggest items in helping to tide him over until his other live stock and his crops begin to bring in returns.

Feed the chickens about five times daily and only what they will eat up clean in a few minutes, except at night, when they should receive all they want.

Pratts

Positive Proof Offer

\$1.85 Value For 50¢

Not a "bargain sale," but the most remarkable offer ever made by any reliable manufacturer of Poultry and Stock Regulators and Remedies. We are making it now—at tremendous cost to ourselves—in order to give you positive, practical proof of the real merit of our goods.

We want you to give Pratts Preparations a rigid, working test, right on your own farm with your own poultry and live stock. Thus we can prove to you, finally and conclusively, that it will pay YOU to use them regularly. If we did not have full confidence in our preparations, did not know that they would give satisfactory results IN YOUR HANDS, we would not dare make this offer.

Run a comparative test if possible. Handle some fowls and stock the Pratt way—the rest in the same manner as before. Then note the difference in results. When you see that your fowls and live stock are healthier and more vigorous, do better work, are more productive, pay bigger profits when you use

Pratts Standard Preparations For Poultry and Live Stock

you will be convinced because you will have the evidence right before you. The results of the test will carry conviction better than all the arguments or promises we might present. If you really wish to know how to increase your profits, just try this plan now.

Take the signed coupon and 50c to any Pratt dealer—there is one near you—and he will give you your choice of either assortment of Pratts Preparations as stated in the coupon. Each assortment has a retail value of \$1.85, but now costs you but 50c. We stand the greater part of the cost, since we credit the dealer with \$1.35 for each coupon returned to us.

This Offer Good Only During February 1917

and each household is entitled to use but one coupon. Good only in the United States and Canada. The goods you will receive are standard packages taken directly from the dealer's stock.

We have been in business nearly fifty years and have never before made such an offer. It may never be made again. Your big opportunity is NOW! See your dealer at once.

PRATT FOOD COMPANY, Philadelphia Chicago Los Angeles Toronto
America's Pioneer Manufacturers of Guaranteed Poultry and Stock Regulators and Remedies

THIS COUPON IS WORTH \$1.35 TO YOU

Assortment No. 1	Assortment No. 2
Poultry Regulator 50c	Animal Regulator 50c
Disinfectant 35c	Poultry Regulator 50c
Powdered Lice Killer 50c	Disinfectant 35c
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Total retail value \$1.85	Total retail value \$1.85

NOTE: Pratts Preparations are put up in packages of many different sizes. The larger are more economical. The "best buy" in Poultry and Animal Regulators is 25 lb. pails or 100 lb. bags.

To Any Dealer in Pratt Food Co. Products— 35

This is your authority to deliver to bearer, upon receipt of this coupon properly signed and 50c in cash, Pratts Preparations—either assortment No. 1 or No. 2 as listed herewith—to the value of \$1.85. This offer is good only during February, 1917, and but one assortment is to be furnished each household. Forward the signed coupon to our Philadelphia office and we will credit you \$1.35. Good only in the United States and Canada.

Assortment No. _____ Goods received (date) _____

Buyer's Name _____

Address _____

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DEAM'S MEAT SMOKER



Takes the place of the Smoke House. No fire, no danger. Imparts the fine smoky flavor, protects meat from skippers and mould. Sold for 18 years, guaranteed satisfactory or money back. Put up in quart bottles and sells for 75 cents. Ask your dealer for Deam's Meat Smoker. If he should not have it, write us.

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BLUFFTON, INDIANA

RELIABLE POULTRY BREEDERS

PLYMOUTH ROCKS.

BARRED ROCK COCKERELS AND PULLETS. Nat A. Owens, Traer, Iowa.

BARRED ROCK EGGS—WILL PLEASE. \$1 postpaid. Mrs. Geo. Kennedy, Edmond, Okla.

WHITE ROCKS, SIZE AND QUALITY. Prices reasonable. Write G. M. Kretz, Clifton, Kansas.

FOR SALE—BUFF ROCK AND BLACK Langshan roosters, good ones, \$1.50 each. Newton Coffman, Rosendale, Mo.

FOR SALE—BARRED ROCK COCKERELS, \$2 each. Agnes D. Wilson, Phone 400, Grantville, Kansas.

BARRED ROCK COCKERELS, BETTER than ever. Fifteen years breeder. Florence Belle Ziller, Hiawatha, Kansas.

CHOICE BARRED PLYMOUTH ROCK cockerels and pullets, \$2 to \$3 each. E. Leighton, Effingham, Kansas.

BARRED PLYMOUTH ROCKS—FARM-bred beauties. Eggs for hatching, 5c each. Mrs. W. C. Becker, Solomon, Kan.

FINE BARRED ROCK COCKERELS, \$1.50. White Pekin Drakes, \$1. Mrs. Bryant Wells, Belmont, Kan.

FOR SALE—BARRED ROCK EGGS, C. A. Hawk strain, \$1.50 per setting. Mrs. Wm. L. Shelly, Route 1, Atchison, Kansas.

PARTRIDGE ROCK COCKERELS — Nottzger strain. Clarence Hoffman, Preston, Kansas.

BARRED ROCK EGGS, \$1 PER SETTING, \$4 per hundred. Mrs. Lillie Hirt, Parkerville, Kansas.

MASSENGILL'S BARRED PLYMOUTH Rocks. Stock and eggs for sale. L. Massengill, Box 221, Caldwell, Kansas.

RINGLET BARRED ROCKS, BUFF MINORCAS. Stock and eggs. Free catalog. R. A. Ogden, Wichita, Kansas.

BUFF AND WHITE ROCK EGGS—Females scoring high as 96 and 96%. Mating list. W. H. Beaver, St. John, Kansas.

PURE-BRED S. C. BARRED ROCK cockerels for sale and eggs in season. Mrs. Otto Farmer, Farnam, Neb.

BARRED PLYMOUTH ROCKS—FARM-bred beauties. Eggs for hatching, 5c each. Mrs. W. C. Becker, Solomon, Kansas.

NICELY BARRED ROCK COCKERELS, \$1.50, cocks; pullets, \$1.00; eggs, \$1.00. J. T. Hammerli, Oak Hill, Kansas.

WEIGHER-LAYER BARRED ROCKS—Pens, \$3 to \$5 setting; flock, \$5 hundred. Stock for sale. C. F. Pickel, Earlton, Kan.

ARISTOCRAT AND BRADLEY STRAIN Barred Rock cockerels, good size, bone and barring. Mrs. Bert McTaggart, Pawnee, Ill.

HATCHING EGGS FROM BARRED PLYMOUTH Rocks, excellent birds. Two dollars for fifteen. Peter H. Friesen, Route 1, Lehigh, Kansas.

BUFF ROCK COCKERELS — LARGE, early, clear buff to skin, \$5 up. Garlic sets, 20c per pound. Don Chacey, Leavenworth, Kansas.

BLUE RIBBON BARRED ROCKS — Twenty-eight years' experience; 110 premiums. Cockerels, \$3; eggs, fifteen, \$3. Mrs. Chris Bearman, Ottawa, Kansas.

"FISHB" WHITE ROCKS, PURE-BRED. Four hens, three pullets, \$3 each; one extra fine cock, \$5; the pen, \$24. Harper Lake Poultry Farm, Jamestown, Kansas.

WHITE ROCKS—SEVENTEEN RIBBONS this season. Eggs at \$1 and \$2 per fifteen. Also stock. Am booking orders now. Ed Fehr, Marquette, Kansas.

BARRED ROCKS, HENS AVERAGED 175 eggs, 1916. Trap-nest males and their pullets mated with fine cockerels. Eggs, 10c; fifty, \$4. Farnsworth, 224 Tyler St., Topeka.

FOR SALE—EXTRA FINE BARRED Rock cockerels. Cockerel mating. Pure Thompson strain. Sired by \$25 bird. \$3.50 to \$5 each. G. W. Romberg, Red Oak, Iowa.

WHITE PLYMOUTH ROCKS—ILLINOIS state show winners. Stock for sale. Prices reasonable. Circular free. Wm. Goodwin, Route 32, Chillicothe, Illinois.

FORTY FINE BARRED PLYMOUTH Rocks for sale for \$50. Several \$5 birds in this bunch. Colwell Hatchery, Smith Center, Kan.

PARTRIDGE PLYMOUTH ROCKS, FIRST prize winners Greater Omaha Poultry Show. Eggs for sale. Prices reasonable. Jno. W. Norton, Talmage, Neb.

FANCY NARROW BARRED ROCK EGGS from winter layers, \$1.25 setting. Reserve your orders now. Clyde Karel, Clarkson, Neb.

BUFF ROCKS—WILL CLOSE OUT REMAINING utility cockerels from my New York, Chicago and St. Louis winners at \$3 each. Pullets, \$1.50 up. T. H. Lucas, Pattonville, Mo.

BARRED PLYMOUTH ROCKS, RHODE Island Reds. Fine lot of birds now ready for shipment. Prices reasonable. Quality guaranteed. Eggs in season. Tom Leftwich, Winfield, Kansas.

LINDAMOOD'S BARRED ROCKS, BOTH dark and light matings. Prices for eggs from special matings, \$5 per fifteen. Utility eggs, \$5 per hundred. Send for circular. C. C. Lindamood, Walton, Kansas.

BARRED ROCKS—FINE LAYERS, large size, yellow flesh, hardy. Buy the best. Prize winners at Missouri's two big shows. Eggs, fifteen, \$1.50; hundred, \$7. M. E. Lane, Clinton, Mo.

BLUE RIBBON WINNERS, MISSOURI and Kansas state shows. Barred Rocks, Ringlet strain. Eggs and stock for sale. Satisfaction guaranteed. Hartman's, Route 1, Webb City, Missouri.

WYANDOTTES.

WHITE WYANDOTTE COCKERELS. U. A. Gore, Seward, Kansas.

WHITE WYANDOTTE COCKERELS, \$1.50. Mrs. R. T. Wright, Grantville, Kan.

R. C. BUFF WYANDOTTE EGGS, \$1.50 for fifteen. G. G. Wright, Langdon, Kan.

PARTRIDGE WYANDOTTE EGGS, \$3.00 per fifteen; \$5.50 per thirty. Mrs. O. E. Collins, Drexel, Mo.

ROSE COMB SILVER LACED WYANDOTTE cockerels, \$1.50 each. Mrs. H. R. Young, Stella, Neb.

FOR SALE—WHITE WYANDOTTE eggs, \$4 per hundred. Vida Hume, Tecumseh, Kansas.

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

SHUFF'S "BEAUTILITY" SILVER WYANDOTTES. Cockerels, \$2.50; \$3, \$4, \$5; hens, \$1.50, \$2. Mrs. Edwin Shuff, Plevna, Kansas.

ROSE COMB WHITE WYANDOTTES—Pullets, \$1.50 each; eggs, per fifteen, \$2; flock, fifteen, \$1; 100, \$4.75. Mrs. Edie Acheson, Palco, Kansas.

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

EXTRA FINE PURE-BRED PARTRIDGE Wyandotte cockerels, Doolittle-Trolverline strain, for sale, \$2 each. Selected eggs for hatching, \$2 for 24. Orders booked now. R. F. Ayres, Route 5, Box 196, Independence, Missouri.

SILVER LACED WYANDOTTES, WON first, second, third cockerel; first, second, third pullet, first pen, Northwest Missouri Poultry Association. Eggs in season, \$1.25 per fifteen, \$3.50 for fifty, \$6.00 per hundred, postpaid. Mrs. Arthur Wiley, Route 5, Maryville, Mo.

St. John, Kansas, November 24, 1916.

Please stop my ad, as I am sold out of White Rock cockerels. KANSAS FARMER is certainly a good puller.

Jamestown, Kansas, January 19, 1917.

Am having wonderful success from the ad I have been running in KANSAS FARMER the past four weeks. Am sending ad for special issue, to be continued until I notify you.

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TURKEYS.

FOR SALE—MAMMOTH PURE BRONZE turkeys. Some two-year-olds. Nora Holmes, Fredonia, Kansas.

BOURBON RED TURKEYS, LARGE with splendid color and markings. Mrs. Elmer Nicholson, Route 5, Wellington, Kan.

SARVER'S FAMOUS NARRAGANSETT turkeys, large boned stock, unrelated. Sunlight Poultry Farm, Mt. Moriah, Mo.

BOURBON RED TURKEY EGGS, 30c each, two and three-year-old laying stock. Orders booked now, shipped when wanted. W. H. Oliver, Reger, Mo.

FOR SALE—M. B. TURKEYS, BIG, growthy fellows. Buff Rock cockerels and White Indian Runner drakes. No better blood anywhere. G. W. Perkins, Newton, Kansas.

WHITE HOLLAND TURKEYS, SINGLE Comb White Leghorns, Single Comb Buff Orpington eggs. Baby chicks. Mrs. S. A. Warren, Reger, Mo.

BOURBON TOMS, TOULOUSE GANDERS, Partridge Rock cockerels, Buff Orpington cockerels and drakes. Eggs in season. Mrs. Frank Neel, Beverly, Kansas.

FIFTY MAMMOTH BRONZE TURKEYS. Toms, \$7.50; \$10, \$15; pullets, \$5, \$10; hens, \$10, \$15. Eggs—Yard 1, \$1 each; second, 50 cents. Black Langshans, Barred Plymouth Rocks, show record. Order direct from ad. Order early. Jas. W. Anders, Unionville, Mo.

ORPINGTONS.

S. C. BUFF ORPINGTON COCKERELS, \$1, \$2 and \$5. J. W. Falkner, Belvue, Kan.

MY BUFF ORPINGTONS STILL WIN, Omaha, December, 1916. Fine cockerels or pullets. H. T. Farrar, Axtell, Kansas.

EXHIBITION BUFF ORPINGTON EGGS, state, county winners. Bourbon Red turkeys. Prices reasonable. Write for catalog. Mrs. Rees Barton, Amoret, Mo.

A FEW GOOD BUFF ORPINGTON cockerels for sale. Mrs. C. F. Cooper, Nickerson, Kansas.

BUFF ORPINGTON EGGS FROM PRIZE winners, \$1.25 per fifteen. Mrs. Vail, \$610 Ida, Omaha.

GOOD BUFF ORPINGTON DRAKES FOR sale, \$1.25 to \$2.50 each. John A. Huber, La Crosse, Kansas.

SINGLE COMB BUFF ORPINGTON eggs from silver cup winners. Prices reasonable. Mrs. J. N. McDaniel, Arbel, Mo.

EGGS FROM S. C. WHITE ORPINGTONS reasonable. Write me. John Vanamburg, Marysville, Kansas.

BUFF ORPINGTONS, EGGS AND CHICKS Bred for eggs 16 years. Circular free. Will Schadt, Box 1055, Goshen, Indiana.

S. C. BUFF ORPINGTON COCKERELS for sale. No. 1 large utility stock, good color and carriage. Herbert Craven, Pierce, Neb.

SINGLE COMB BUFF ORPINGTON eggs from prize winners. Also some choice cockerels left. Mrs. Earle King, Raymore, Missouri.

BUFF ORPINGTONS—SOME GOOD HENS and pullets yet for sale. Eggs from winners, \$1.50 and \$3 per fifteen. L. S. Weller, Salina, Kansas.

LIMITED NUMBER WHITE ORPINGTON cockerels, bred from Aldrich best 1916 mating. Eggs from three fine pens. Satisfaction guaranteed. H. M. Goodrich, 712 Topeka Ave., Topeka, Kansas.

S. C. BUFF ORPINGTON COCKERELS and pullets whose grand sire was first prize winner at Madison Square Garden, New York. Price, \$2 to \$5. Guaranteed to please. Thos. D. Marshall, Sylvia, Kansas.

SINGLE COMB PRIZE WINNING GOLDEN Buff Orpingtons, fine layers, won first best pair, sweepstakes cockerel, all breeds competing, at Mountain Grove, Mo., 1916. Eggs, \$4.50 per hundred. Mrs. Mary Knottwell, Norwood, Mo.

DAMON'S ORPINGTONS—MY S. C. BUFF and White Orpingtons win in all classes of competition. Five splendid matings in buffs and whites. Imported blood. Write for mating list. Few white cockerels for sale cheap. J. E. Damon, Caldwell, Kansas.

ROYAL BLUE STRAIN ROUEN DUCKS, \$1.75 each. James Cassell, Fremont, Neb.

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

FAWN INDIAN RUNNER DUCKS BY the hundred, 95c; smaller lots, \$1 each. Mrs. E. C. Wagner, Holt, Kansas.

POULTRY WANTED.

PAYING FOR NO. 1 POULTRY—TURkeys, 24c; hens, 17c; capons, 21c; ducks, 14c; guineas, dozen, \$5. Coops free. The Copes, Topeka.

ROSE COMB BROWN LEGHORNS. Mrs. Ida Standiford, Reading, Kansas.

S. C. W. LEGHORN EGGS. STATE WINNER. Mrs. W. R. Hildreth, Oswego, Kansas.

ROSE COMB LEGHORN COCKERELS—Eggs in season. Mrs. John Holzhey, Bendena, Kansas.

PURE-BRED BUFF LEGHORN COCKERELS, \$1; choice, \$1.50. P. A. Wempe, Seneca, Kansas.

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

SINGLE COMB WHITE LEGHORN cockerels. Dave Baker, Conway Springs, Kansas.

PURE-BRED S. C. WHITE LEGHORN cockerels. Mrs. D. Christmann, Oswego, Kansas.

SINGLE COMB WHITE LEGHORNS—Cockerels, \$1. Eggs, chicks. Mrs. C. C. Cole, Levant, Kansas.

281 EGG STRAIN BUFF LEGHORNS—Settings, \$3. Mrs. Charles Hume, Anadarko, Okla.

S. C. B. LEGHORN COCKERELS—FINE birds for sale, \$1.50 and \$2. J. J. Stalder, Meade, Kansas.

FOR SALE—SINGLE COMB BROWN Leghorns, cockerels, \$1.50 each. Hurry, Chas. M. Stell, Scribner, Neb.

SINGLE COMB WHITE LEGHORN eggs, \$4 per hundred. Mrs. H. A. Ketter, Seneca, Kansas.

ENGLISH WHITE LEGHORN EGGS, cheap. Write for prices. I. M. Fisher, El Dorado Springs, Mo.

FOR SALE—S. C. W. LEGHORN COCKERELS, raised from prize winning stock and extra good laying strain, \$1, \$2 and \$3 each. I. H. Gnagy, Pretty Prairie, Kansas.

PRIZE WINNING SINGLE COMB BUFF Leghorns and Single Comb Red. Extra winter layers. Eggs for hatching. C. B. Hinchliff, Hamilton, Mo.

S. C. BUFF LEGHORNS, HATCHING eggs. The quality kind from my winners at Omaha and Lincoln. Otto Timm, Bennington, Neb.

ROSE COMB WHITE LEGHORN COCKERELS, scored birds. Write for prices. Eggs for hatching, \$5 per hundred. Mrs. Joe Streeter, Route 5, Hamilton, Mo.

S. C. BROWN LEGHORN COCKERELS, strictly pure bred, \$1.50 each, \$15 per dozen. Order early before they are gone. Mrs. L. H. Hastings, Thayer, Kansas.

BROWN LEGHORNS—ROSE, SINGLE Comb. Bred to lay strain breeding. Eggs, fifteen, \$2; fifty, \$3; hundred, \$6. Plainview Poultry Farm, Lebo, Kansas.

S. C. BUFF LEGHORN COCKERELS, \$2 to \$5 each. Bred to lay stock. Winners at state show. Eggs in season. Pearl Haines, Rosalia, Kansas.

SINGLE COMB BROWN LEGHORNS—Thirty-one prizes at Kansas State Show, 1917, including eight firsts. W. J. Roof, Malze, Kansas.

SINGLE COMB BROWN LEGHORNS—Pullet line only, forty years with this breed. Eggs, \$1.50 per fifteen, \$7 per 100, pre-paid. Tiff Moore, Osage City, Kan.

POSTPAID, EGGS—PRIZE WINNING stock. Young and Tom Barron strains. Single Comb White Leghorns, \$5 per hundred, \$1 per setting. Maple Hill Farm, Thos. Gaston, Prop., Bosworth, Mo.

RUSSELL'S FAMOUS BROWN LEGHORNS, single comb, prize winners, heavy layers. Write for catalog. Satisfaction guaranteed. Mrs. Geo. Russell, Chilhowee, Missouri.

S. C. WHITE LEGHORNS. I AGAIN have state show prize winners, exhibition and utility cockerels for sale. Eggs. Eggs. Mrs. Terry Jenkins, Osawatimie, Kansas.

PRIZE WINNING S. C. WHITE LEGHORNS at two state shows. Eggs, \$2, \$3 and \$5 per fifteen. Eggs from flock, \$5 per 100. Chicks. Send for free mating list. C. G. Cook, Box F, Lyons, Kansas.

SINGLE COMB WHITE LEGHORNS, Columbian Wyandottes, Muscovy ducks, fancy pigeons. Catalog. Southdown sheep, Berkshire swine. J. A. Leland, Springfield, Illinois.

SINGLE COMB BROWN LEGHORNS—Fine winter laying utility and beauty strain. Eggs from trap nests. Pullets in Leavenworth contest. Eggs, per hundred, \$4.50 and \$6; baby chicks, 12½ cents apiece. Paradise Poultry Farm, Carona, Kansas.

SINGLE COMB WHITE LEGHORN EGGS—Pen, \$10 per hundred; free range, \$5. Japanese Pekin drakes, \$4 each. Toulouse ganders, \$4. Turkeys, bronze toms, \$15, \$8, \$5. Hens, \$5. Mrs. Mabel Sullivan, Route 7, Abilene, Kansas.

S. C. W. LEGHORN COCKERELS FROM hens with records over two hundred eggs; one, two, three dollars each. Baby chicks, 12½c each. Eggs, \$5 per hundred. Hypertion White Leghorn Farm, Route 1, Des Moines, Iowa.

YOU WANT GOOD LAYERS. MOORE'S strain of S. C. Brown Leghorns are prize winners and winter layers. Eggs, \$1 for fifteen and \$4 for 100 postpaid. John W. Moore, R. R. No. 1, Poplar Bluff, Mo., formerly of Hendrickson, Mo.

S. C. W. LEGHORNS, BRED TO LAY. Hens, \$1.50 to \$2 each; pullets, \$1 to \$1.50 each; less by the dozen. A few cockerels for sale. Also White Embden Geese, either sex, \$2.50 to \$3 each. I. P. Myers, Box 26, Haysville, Kan.

(Continued on Next Page)

RHODE ISLAND REDS.

CHOICE ROSE COMB RHODE ISLAND Red cockerels. Mrs. C. H. Jordan, Waka-rusa, Kansas.

QUALITY SINGLE COMB REDS—BAR- gains if ordered soon. Mrs. Elmer Nicholson, Route 5, Wellington, Kansas.

DARK RED ROSE COMB RHODE ISL- and Red cockerels, \$3 and \$4 each. Mrs. F. A. McGuire, Paradise, Kansas.

COCKERELS, S. C. R. I. REDS, GOOD size, good color. Price \$1.50. Mrs. Joseph Greene, Bernard, Iowa.

EGGS FROM PRIZE WINNING ROSE Comb Rhode Island Reds. Catalog free. M. L. Puckett, Puxico, Mo.

ROSE COMB RHODE ISLAND RED cocks and cockerels, \$1.50, \$3 and \$5. Mrs. W. A. Gill, Larned, Kansas.

R. C. RHODE ISLAND RED COCKER- els, extra fine, \$3 each, two for \$5; eggs, \$5 per hundred. Redview, Irving, Kansas.

FINE ROSE COMB RED COCKERELS, \$2. Baby chicks, 10 cents. Order now. Lily Robb, Neal, Kansas.

S. C. R. I. RED MALE BIRDS—WIN- nings for last three years, 12 firsts, 8 seconds, 5 thirds, 4 fourths, and 7 specials. James Sisters, Olathe, Kansas.

ROSE COMB RHODE ISLAND REDS— Eggs, \$2 per setting. Kansas state show winners. Mating list. L. E. Castle, Wichita, Kansas.

S. C. RHODE ISLAND RED COCKERELS and cocks, all excellent breeders. Deep red in color and large. \$5 to \$10 each. H. J. Booth, Park Ridge, Illinois.

S. C. REDS—BLUE RIBBON WINNERS; few choice cockerels and eggs for sale. Price reasonable. Finch's Rhode Island Red Farm, Springfield, Mo.

S. C. REDS—CONTINUOUS WINNERS at the big shows. Eggs now from winter layers. Exhibition matings, settings \$3. Summerwell's Hillside Farm, 3218 North 28th, Kansas City, Kansas.

SINGLE COMB RHODE ISLAND RED cockerels, large husky dark red fellows that will improve your flock, \$3 to \$15 each. Write for price on hatching eggs. Nels W. Peterson, Mason City, Neb.

EGGS FOR SALE—S. C. R. I. REDS. Breeder for twelve years. \$1.50 per setting of fifteen; \$5 a hundred. Mrs. Jno. G. Schmidt, Route 1, Box 135, Edgewood, Lexington, Mo.

ONE HUNDRED ROSE COMB RHODE Island Red cocks and cockerels, sired by roosters costing \$15 to \$35—\$2, \$3.50, \$5 and \$7.50 each. A few higher. Order at once. They will go fast. Our pens mated for 1917 are the best we ever had. W. R. Huston, Red Specialist, Americus, Kansas.

BRAHMAS.

LIGHT BRAHMAS—EGGS FOR HATCH- ing after February 1. Geo. W. Craig, 2031 N. Water St., Wichita, Kansas.

LIGHT BRAHMA COCKERELS—100 good heavy birds, have won prizes at leading shows. Can surely furnish you quality. Schreiber Farm, Sibley, Iowa.

LIGHT BRAHMAS, FELCH STRAIN— Twelve premiums, fourteen entries in Kansas State Show; stock and eggs. Satisfaction or money back. Mrs. J. R. Kenworthy, Wichita, Kansas.

RHODE ISLAND WHITES.

ROSE COMB RHODE ISLAND WHITES, prize winning stock, size of Reds, mature earlier, better layers. Eggs, 100, \$8; 50, \$4; 15, \$1.50; cockerels, \$2, \$3 and \$5. Catalog. Col. Warren Russell, Route 4, Winfield, Kansas.

ANCONAS.

ANCONA EGGS, SIXTEEN, \$1; 100, \$5. W. G. Shaw, Cherokee, Okla.

SINGLE COMB ANCONA COCKERELS for sale, \$1.50 each. Louella Blosser, Route 7, Independence, Kansas.

MOTTLED ANCONA COCKERELS, \$2; three, \$5. Eggs in season. Mrs. Mary Bates, Dighton, Kansas.

SINGLE COMB ANCONAS—EGGS, FIF- teen for \$1.25 or \$5 per hundred delivered. Write for printed matter. C. K. Whitney, Route 9, Wichita, Kan.

ANCONA EGGS FROM HEALTHY FARM range birds. Prices reasonable. A few cockerels left. Mrs. Will Torgeson, White City, Kansas.

ANCONA WINNERS KANSAS CITY shows, 1916 and 1917. Orders taken. Send for photos. Dr. Ferdinand Schreiman & Son, Concordia, Mo.

CORNISH FOWLS

DARK CORNISH CHICKENS. SUNNY- slope Farm, Stillwater, Okla.

PIGEONS.

DARK CORNISH FANTAIL PIGEONS— See them at the shows. Dr. Weed Tibbits & Sons, Richland, Kansas.

FARM AND HERD.

Catalogs are out for Fred B. Caldwell's Poland China bred sow sale to be held at Howard, Kansas. Forty head of choice sows have been catalogued for this sale. Thirty-five of the lot are either sired by or bred to Caldwell's Big Bob, the sensational boar weighing 1,065 pounds at nineteen months of age. Among the lot catalogued are daughters of some of the most noted Poland China boars bred to Caldwell's Big Bob.

W. W. Finney, of Emporia, Kansas, recently purchased ten choice pure-bred cows and heifers from one of the good northern herds. His purchase included six daughters of Leo Altje. One of them recently made a seven-day butter record of 25.76 pounds as a three-year-old. His purchase includes daughters of White Oak Ormsby and Sir

Classified Advertising**HELP WANTED.**

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

FARM HAND FOR THE SUMMER. House, wood and garden. Give wages wanted. F. G. Houghton, Dunlap, Kan.

GOOD MAN TO TAKE ORDERS, GET own clothes free, make big money. Knickerbocker Tailoring Co., Dept. 594, Chicago.

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

FARMERS 18 OR OVER—GET GOVERN- ment jobs, \$75 to \$150 month. Vacations with full pay. Spring examinations everywhere. Education unnecessary. Sample questions free. Write immediately. Franklin Institute, Dept. W-82, Rochester, N. Y.

AGENTS WANTED.

WE PAY \$80 MONTHLY SALARY AND furnish rig and expenses to introduce guaranteed poultry and stock powders. Higler Company, X 671, Springfield, Ill.

REAL ESTATE.

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

CHOICE IMPROVED QUARTER, 100 cultivated. Close to town, church, school. E. Hillier, Republican City, Neb.

GEORGIA, \$7.00 ACRE UP, RICH SOIL, ranches, farms. Investigate. H. Lee Davis, Aiken, S. C.

WANTED—TO HEAR FROM OWNER OF good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

IF YOU WANT TO SELL OR EX- change your property, write me. John J. Black, Desk C, Chippewa Falls, Wis.

FOUR HUNDRED ACRES IMPROVED ranch, Elk County, Kansas; \$800 rent; immediate possession. Write owner, 407 Jackson Ave., Kansas City, Mo.

WANTED—TO RENT A FARM FUR- nished with stock and implements. Will share with landlord as pay or will accept position as manager on share basis. Dairy-ing preferred. References furnished. Address Kansas Farmer or John W. Judah, Hiattville, Kan.

SUCCEED IN FLORIDA. GET BIG prices for winter vegetables, oranges, grapefruit. Staple crops yield enormously. Live stock cheap to raise, brings fine prices. Rich sandy loam, clay subsoil. Delightful year-round climate on our lands. Good community. Close to transportation. Abundant artesian water, ample drainage. Capable men with reasonable funds to start can make big money rapidly. Write for free book. Swope Land Company, Oviedo, Fla.

YOUR CHANCE IS IN CANADA—RICH lands and business opportunities offer you independence. Farm lands, \$11 to \$30 acre; irrigated lands, \$35 to \$50; twenty years to pay; \$2,000 loan in improvements, or ready made farms. Loan of live stock; taxes average under 20 cents an acre; no taxes on improvements, personal property or live stock. Good markets, churches, schools, roads, telephones; excellent climate—crops and live stock prove it. Special homeseekers' fare certificates. Write for free booklets. Allan Cameron, General Superintendent Land Branch, Canadian Pacific Ry., 234 Ninth Ave., Calgary, Alberta.

NEW FARM OPPORTUNITY IN ONE OF the greatest states in the Union. A new line of the Santa Fe is tapping a rich and fertile prairie section of Northwest Texas, where already many farmers have made good in a big way with wheat, hogs and live stock. Here, if you act now, you can get first choice—get in on the ground floor of a great opportunity. You can get in ahead of the railway—ahead of the people whom the railway will bring—ahead of those who act more slowly than you do. This is the chance of a lifetime for a man of moderate means. A certain number of thrifty, far-seeing farmers can acquire good land at an astonishingly low figure and on long, easy terms. If you have confidence that a great railroad, like the Santa Fe, would only recommend what it considers a good thing, and because it wants to see new territory developed and wants newcomers to prosper and produce—then write me today for particulars about this district. Mild climate, social advantages, schools, churches, telephones, good roads. Everything there but enough men with their families. Will you be one of the fortunate first comers to reap the advantages of a section that has been minutely inspected by a Santa Fe agricultural agent and pronounced right? Write me now and let me send you a copy of the special illustrated circular we are getting out. C. L. Seagraves, Industrial Commissioner, A. T. & S. F. Ry., 331 Railway Exchange, Chicago.

Korndyke Hengerveld DeKol.

H. E. Anderson, owner of Clover Valley Holstein farm, Whitewater, Wis., writes that his herd is making a good record this winter and that the demand for choice registered and high grade Holsteins is very heavy. Clover Valley Farm is the home of one of Wisconsin's great Holstein herds. There are now 150 head in the herd, headed by one of the good sires in service. His dam has a record of over 100 pounds milk per day for thirty days, and a seven-day butter record of 35.43 pounds.

S. Y. Thornton, of Blackwater, Mo., reports his great herds of Durocs doing well. This is one of the oldest herds of Durocs in existence. It was founded by A. F. Collins before the American Duroc Record Association was organized, and Mr. Collins was one of the charter members of the association. The herd was purchased by Mr. Thornton in 1887 and he has built up a herd of the popular, easy-feeding and profitable type. He keeps his herd immune at all times and the result is that he always has a healthy lot of hogs. This year he has bred a large number of outstanding spring gilts for March and April farrow.

MISCELLANEOUS.

FOR SALE CHEAP, RUG FACTORY outfit. J. F. Thomas, Webber, Kan.

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

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

WANTED—MEN AND WOMEN, CAN have furnished them brief of the laws of their state, explained in manuscript, compiled by expert attorney, explaining provisions which interest life, business and estate. You may also ask questions. Price \$1.00. Charles Vance, Attorney, 301 Farmers Trust, South Bend, Indiana.

BUSINESS CHANCES

FREE FOR SIX MONTHS—MY SPECIAL offer to introduce my magazine, "Investing for Profit." It is worth \$10 a copy to any one who has not acquired sufficient money to provide necessities and comforts for self and loved ones. It shows how to become richer quickly and honestly. Investing for Profit is the only progressive financial journal and has the largest circulation in America. It shows how \$100 grows to \$2,200. Write now and I'll send it six months free. H. L. Barber, 431.28 W. Jackson Boulevard, Chicago.

TREES, SEEDS AND PLANTS.

SEED CORN—BOONE COUNTY WHITE. Carefully selected. \$2.50 per bushel, shelled. J. W. Taylor, Edwardsville, Kansas.

ALFALFA SEED, CHOICE, RECLEANED new crop at \$8 per bushel. Write for samples. C. Markley, Belle Plaine, Kansas.

DAIRYMEN—WE HAVE SEVERAL CARS No. 1 second cutting alfalfa for sale. Shimer & Son, 1815 Kansas Ave., Topeka.

RHUBARB ROOTS, \$1.75 HUNDRED. Large variety; other plants. Price list. Fayetteville Plant Co., Fayetteville, Ark.

PURE GRADED FETERITA SEED, \$4.00 per 100 pounds. Fred Hothan, Scranton, Kansas.

BLACK-HULLED WHITE KAFIR SEED, \$2.35 for 70 pounds in head. H. W. Chestnut, Kincaid, Kansas.

SWEET CLOVER WANTED. GIVE quality and lowest price. Best propositions accepted. Standard Seed Co., Eureka, Kan.

BOW CREEK FARM SEEDS—ALFALFA, feterita, kafir, Sudan grass, corn. (Sudan, sweet clover wanted.) Logan, Kansas.

TEN ELBERTA AND FIVE CHAMPION peach trees, postpaid, \$1. Send now. Wellington Nurseries, Dept. C, Wellington, Kan.

TIMOTHY SEED—FANCY, NEW CROP, recleaned timothy seed at \$2.50 per bushel. Write today for samples. Watson Bros., Seed Merchants, Milan, Mo.

SEED CORN—DIAMOND JOE WHITE, excellent drouth resister, and Reid's Yellow Dent. Graded, \$2.50 bushel. D. D. Denver, Milford, Kansas.

NO. 1 WHITE SWEET CLOVER SEED for sale. New crop, hulled, recleaned and graded. Forty bushels. Write for samples and prices. J. J. Getz, Atlanta, Kan.

IOWA GOLD MINE AND BOONE CO. White seed corn, selected, shelled, graded, \$2 per. Choice alfalfa seed, \$7.50 per. Samples free. J. F. Feigley, Enterprise, Kan.

REID'S YELLOW DENT, BOONE COUNTY White seed corn. Genuine Red Texas seed oats, clover, timothy and alfalfa seed. E. G. Trent, Hiawatha, Kansas.

SEED CORN—JOHNSON CO. WHITE, Boone County White, Reid's Yellow Dent, Hiawatha Yellow Dent. Won first and sweepstakes at state show. Write George R. Manville, Fayette, Mo.

RED TEXAS RUST-PROOF SEED OATS, recleaned and carefully graded. You buy nothing but oats. Grown here one year. They are fine. Let me send you a sample and price. Warren Watts, Clay Center, Kan.

KAFIR SEED—WE HAVE TWO CARS fine white kafir seed testing over 90 per cent germination, which we will sell while it last in 2-bushel sacks at \$1.85 per bushel. Sacks free. It is going to be hard to find good kafir like this year. If you will need kafir, better order quick. Brooks Wholesale Co., Ft. Scott, Kan.

When Writing to Advertisers, Please Mention Kansas Farmer

DOGS.

FOX, WOLF AND COON HOUNDS; rabbit dogs. Reasonable. J. P. Tindall, Lees Summit, Mo.

FOR SALE—PAIR GUARANTEED COON hounds. Send 2 cents for prices. John Rash, Centerville, Kansas.

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

WISCONSIN LAND FOR SALE

LANDOLOGY, A MAGAZINE GIVING the facts in regard to the land situation. Three months' subscription free. If for a home or as an investment you are thinking of buying good farm lands, simply write me a letter and say, "Mail me Landology and all particulars free." Address Editor Landology, Skidmore Land Co., 301 Skidmore Bldg., Marinette, Wis.

GOATS

FOR SALE—MILCH GOATS. BURR Fleming, Eminence, Kansas.

BEE SUPPLIES.

FORTY-FIVE HIVES BEES—BEST grade Manf hives, well painted, all in good condition. Make offer. Bees are within 20 miles Topeka. Address Box 27, Kansas Farmer, Topeka, Kansas.

HONEY.

PURE ALFALFA HONEY, DELICIOUS flavor; two 60-pound cans, \$12.75. Wesley Foster, Producer, Boulder, Colo.

PURE HONEY—TWO 60-POUND CANS, \$9.50, f. o. b. Las Animas, Colorado. W. P. Morley.

WANTED—TO BUY.

WANTED, A GOOD DOG TO KEEP huns away. O. A. Wiley, Route 1, Florence, Kansas.

SITUATION WANTED.

WANTED—EXPERIENCED MAN WANTS work on farm. Good references. James Wood, 2215 S. 61st ave., Benson, Neb.

MARRIED MAN WANTS JOB ON FARM. House furnished. Small family. R. C. Samuels, Garnett, Kansas.

SITUATIONS WANTED BY TWO YOUNG experienced Germans. General farm hands. If you appreciate a reliable man, address G. care Kansas Farmer.

THE STRAY LIST.

TAKEN UP ON THE 10TH DAY OF May, 1916, by A. L. Jasper, Santa Fe, Haskell County, Kansas, one red heifer calf, no brands. A. R. Henage, County Clerk.

TAKEN UP BY H. R. ERDMAN, NORTH Fifth Street, Kansas City, Kansas, on January 8, 1917, one red steer, weight 809 lbs., cross on hip. Appraised at \$40. William Beggs, County Clerk, Wyandotte County.

TAKEN UP—BY OWEN O'NEIL, OF Windom, McPherson County, Kansas, on the twentieth day of December, 1916, one heifer coming two years old, color deep red, no marks or brands. W. E. Rostine, County Clerk, McPherson, Kansas.

NOTICE IS HEREBY GIVEN THAT ON December 28, 1916, one red steer with horns, three years old, was taken up by W. E. Kimmel in Minnescah Township in Sedgewick County, Kansas. Said animal was appraised December 28, 1916, at \$50. H. M. Barrett, County Clerk, Wichita, Kansas.

TAKEN UP—ON THE 15TH DAY OF March, 1916, by C. S. Heath, whose residence is eight miles north and 3 1/2 miles east of Leoti, East Edwards Township, Wichita County, one mare pony about 4 1/2 feet high, weight 750 pounds, color sorrel, age nine years, brand "U" on left hip, white stripe in face, appraised at \$30. Dean Trueblood, County Clerk, Wichita.

HORSES AND MULES.

FOR SALE CHEAP—TWELVE JENNETS, good breeding. Geo. S. Stullken, Bazine, Kansas.

SALE OR TRADE FOR YOUNG STOCK, 15-18th Belgian stallion 9 years old, weight 2,000 pounds; 65 per cent breeder. W. G. Shelders, Silver Lake, Kansas.

WANTED—TO TRADE 1,000-POUND registered blue ribbon jack, 7 years old, black, for good draft stallion. J. E. Itchner, Box 122, Sayre, Okla.

ONE REGISTERED PERCHERON STAL- lion, 4 years old, weight 1,950 pounds, black with small star, Reg. No. 39169. One road stallion, "Ben Weaver," track record 2:18. One mammoth black jack, 4 years old, heavy boned, 14 hands. All good breeders and colts to show. Emern H. Stedd, County Clerk, Lyons, Kansas.

CATTLE.

FOR SALE—TWO REGISTERED SHORT- horn bulls. Write for breeding. R. C. Watson, Altoona, Kansas.

POLLED JERSEYS—BREEDERS' NAMES of Chas. S. Hatfield, Secy., Box 40, Route 4, Springfield, Ohio.

FOR SALE—REGISTERED GUERNSEY bull, serviceable age; May Rose-Glenwood breeding. For description and price write W. E. Evans, Jewell, Kansas.

300HEAD OF REGISTERED AND HIGH grade cows and heifers for sale, headed by the great 40-pound bull, Johanna King Segis. Neal Houslett, Oxford, Wis.

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

FOR SALE—FOUR REGISTERED JER- sey bull calves. Financial breeding, good enough for any herd. Priced cheap. Must sell. Earl Eager, Beaver Crossing, Neb.

FOR SALE—SIX PURE-BRED SHORT- horn bulls from six to ten months old. Good lustrous calves at the right price. Warren Watts, Clay Center, Kansas.

HOLSTEINS FOR SALE—ONE PURE- bred heifer calf and four grades, nicely marked and colored. Arthur Findlay, Whitewater, Wis.

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

FOR SALE—REGISTERED GUERNSEY females, all ages; also a few males and grade cows, guaranteed right in every particular. Address Cloverbrook Farm, Whitefish Bay, Wis.

FOR SALE—REGISTERED HOLSTEIN male, five months old. His dam produced under official test, 16 1/2 pounds of butter in seven days. Largely black but splendid individual. Price, crated, \$100. Also full-blood male not registered, ten months old, nicely marked and from good producing dam. Large enough for light service. Price, crated, \$50. F. E. Proctor, Oswego, Kan.

PLEASE MENTION KANSAS FARMER WHEN WRITING TO ADVERTISERS

TRACTOR SHOW!

Second Annual Exhibit

Union Station Plaza

Kansas City, February 12th to 17th

Greatest display ever made. Seventy different models of Tractors; Tractor attachments for Automobiles, Power Cultivators, Power-Lift Plows, Special Binder Hitches and all kinds of new power-lift machinery. Beautiful decorations. Fine Orchestra. Show given under direction of the Kansas City Tractor Club.

SAME WEEK AS AUTOMOBILE SHOW
Come and Select Your Tractor During This Show.

THE MILLER HEREFORDS Are Ready for Their THIRD ANNUAL SALE

In the New Sale Pavilion at

Alma, Kansas, February 9-10

SIXTY PROMISING YOUNG FEMALES
THIRTY-FIVE PRIME YOUNG HERD BULLS
Two Carloads Coming Two-Year-Old Range Bulls

Good railway facilities. Outstanding hotel accommodations. Extra large offering of cattle that will give you a pleasant surprise when you see them, and a sale to be held in the new \$4,000 heated sale pavilion at Alma, Kansas, on February 9 and 10, right in the heart of the Hereford community of the world, including Kansas. You are cordially invited. Don't forget the date. Write for catalog today.

CARL MILLER, BELVUE, KANS.

Erhart & Sons' Poland China Sale

Hutchinson State Fair Pavilion

Hutchinson, Kansas, Thursday, February 22

63 Head - The Greatest Lot of Large-Type Hogs I Ever Offered. Every Sow and Gilt Bred to Our Great Herd Boars.

Fifteen tried sows, twenty fall yearling gilts, twenty-five spring gilts, three boars—herd headers. Included will be a large part of our last season's show herd. Five of these fall gilts are the best we ever raised; a number of our best sows also go in this sale.

They are sired by or bred to such sires as the grand champion Big Hadley Jr., Orphan Big Gun, Young Orphan, King Price Wonder, Big Bob Jr., and other sires of like large-type note. If you want larger and better Poland Chinas you cannot afford to miss this sale. Hourly interurban cars Wichita to Hutchinson and return. Write today for catalog. Address

A. J. Erhart & Sons, - Ness City, Kansas

Auctioneers—Snyder, Price, Burger, Groff.
O. W. Devine will represent Kansas Farmer at this sale.

FARM AND HERD.

C. M. Howard, of Hammond, Kansas, is one of the very successful breeders of pure-bred Polled Durham cattle. His herd was established twenty years ago and he has always used the best sires he could buy. He now has a herd of sixty head, headed by Forest Sultan by Sultan's Creed, a noted

bull of the breed which sold for \$2,200 at public auction. A feature of his herd at this time is the choice lot of young stock, including a fine lot of young bulls sired by Milton, one of the big high-class sires of the breed and a great breeder.

PLEASE MENTION KANSAS FARMER WHEN WRITING TO ADVERTISERS

POLAND CHINA BRED SOW SALE



The above are fair samples of the many attractive things to be sold in the J. S. Turner Sale to be held at

FAIRFAX, MISSOURI, SATURDAY, FEB. 10
THIRTY-SIX HEAD

Twelve Tried Sows and Twenty-four Head of Yearlings and Spring Gilts, including daughters of King Alexander, Orange Wonder, Trusty King, B. Wonder, Jumbo Prospect, Big Bob Wonder 2d, and Missouri King.

Aside from the ones mentioned above, breeders will find attractive buys in a spring gilt by Fesey's Timm out of a GIANT WONDER DAM, second dam by BIG JOE. This gilt sold in the Head sale for \$110 and is selling as an attraction in this auction. A fine yearling daughter of TRUSTY KING, one of the top sows in the W. B. WALLACE August sale, sells bred to KING ALEXANDER and is worthy of consideration.

OFFERING IS IMMUNE AND IS BRED AND SAFE TO

King Alexander

By King's Equal out of an Expansion-Tecumseh bred dam. Senior boar in this herd and a proven sire.

Model Big Bob Jr.

By Head and Leonard's Model Big Bob out of a dam by Long Jumbo 2d, a line of breeding second to none.

Robinette

By Robidoux and a litter brother to Robin Hood, a prize winner last year wherever shown, including the National Swine Show.

THOS. F. STRICKLER, CRAIG, MISSOURI, will consign ten head of top sows to this sale, equal in every way to the offering listed above.

The catalogs are ready and will be sent upon application by mentioning Kansas Farmer. Send today for catalog and arrange to come to my sale. Sale right in town, under cover.

J. S. TURNER, FAIRFAX, MISSOURI

20 Head - JACKS & JENNETS 20 Head AT McCUNE, KAN., THURSDAY, FEB. 22



12 HEAD OF JACKS

From two years to aged Jacks; 14 to 15½ hands high. Black with white points. Good bone, body, head and ears. These Jacks are my own raising. Sired by Bradley's Sunlight and Kentucky Yelberton, both big Kentucky Jacks. Kentucky Yelberton's dam took fourth premium at the St. Louis world's fair in a bunch of thirty and his sire took first premium at the Lexington, Kentucky, state fair for the best Jack, and first premium for best Jack with three colts, and his grand sire sired the champion yearling Jack at the St. Louis world's fair.

8 HEAD OF JENNETS

Eight head of jennets from yearlings up to aged jennets. Aged jennets from 14 to 15 hands. Black with white points.

Will sell two driving mares and two good ponies. Will offer for sale one registered Percheron mare coming four years old; registered Percheron stud colt coming two years old, an extra good one.

TERMS: Cash or 12 months' time on bankable notes drawing 6% interest from date.

G. W. OVERLEY, McCUNE, KANS.

HOLSTEIN CONSIGNMENT SALE

at the
UNION STOCK YARDS SALE PAVILION

South Omaha, February 21, 1917, by the

Nebraska Holstein Breeders' Consignment Sales Company
(Incorporated under the laws of the State of Nebraska)

THIS IS A QUALITY SALE

80 HEAD of pure-bred registered Holsteins from the breeder's own herds, chosen to please the purchaser who desires to buy good breeding and quality. Seventy-one females, nine bulls. Among them are:

Forty-seven cows and heifers bred to 30 to 35-pound bulls; 10 daughters of 30-pound sires; 20 cows with advanced registry official milk and butter records; 3 cows with yearly records of over 16,000 lbs. milk; a 27-lb. cow; a 26-lb. cow; a 25-lb. cow; a 24-lb. cow; and a 23-lb. 3-year-old.

BULLS—King Segis Lyons, one of the greatest proven sires in the West, and who will have over 30 A. H. O. daughters in 1917; a 5-months-old son of Rag Apple Korndyke Boon (a 35-pound bull), from a 31.33-pound dam; a son of that wonderful producing cow, Katy Gerben, consigned by the University of Nebraska.

Everything over 6 months old tested by reliable veterinarians.

SALE BEGINS AT 10 A. M. SHARP

The consignors are: University of Nebraska, Lincoln; S. B. Davis, Superintendent Indian School, Genoa; D. E. C. Brown, Fullerton; LeRoy Ball, Albion; W. J. Jenkinson, Monroe; D. M. Hildebrand, Seward; J. F. Bunte, Cortland; B. E. Davis, Omaha; Nelson Bros., Stromsburg; W. M. Condon, Humphrey; Badger & Frost, Central City; Little & Little, Clark; C. J. Furry, Franklin; Dwight Williams, Omaha; E. C. Swanson, Stromsburg.

If interested, write for Sale Catalog.

DWIGHT WILLIAMS

103 Bee Building.

Sales Manager

OMAHA, NEB.

GUERNSEY CATTLE.

GUERNSEY CATTLE.

IMPROVE YOUR GRADE HERD
Use a Guernsey Bull

GUERNSEY DAIRY PRODUCTS are the most in demand in every market. They are noted for HIGHEST NATURAL COLOR, and PLEASING FLAVOR.

Write for our Booklets
THE AMERICAN GUERNSEY CATTLE CLUB
Box R-K Peterboro, N. H.



REGISTERED GUERNSEY BULL CALVES FOR SALE
Grandsons of Imp. Masher's Sequel A. R. out of first class cows. Tuberculin tested.
R. C. KRUEGER - - - BURLINGTON, KANSAS

HEREFORD CATTLE.

HEREFORD CATTLE.

WALNUT BREEDING FARM



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

LEON A. WAITE,

WINFIELD, KANSAS

HEREFORD CATTLE
FOR SALE

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

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

T. I. WOODDALL,

HOWARD, KANSAS

STAR BREEDING FARM---HEREFORD PLACE

FOR SALE--100 BULLS

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

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

SAMUEL DRYBREAD,

ELK CITY, KANSAS

HEREFORD CATTLE

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

B. M. BROWN, FALL RIVER, KANSAS

JERSEY CATTLE.

JERSEY CATTLE.

SEVENTY HEAD REGISTERED JERSEYS

FORTY COWS AND THIRTY HEIFERS FOR SALE.

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

N. L. DUCHESNE

GREAT BEND, KANSAS

120 Jersey Cows and Heifers

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

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

REDHURST JERSEYS

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

REDMAN & SON - TIPTON, MISSOURI

Bargains in Jersey Cows

From one to a carload of good, young, registered Jersey cows, mostly fresh or soon due. Offered at sacrifice prices because short of feed and cannot winter. Also a few open heifers and young bulls. Write your wants or come and see this stock.

The Ennis Stock & Dairy Farm, Horine, Mo.
(Just South of St. Louis.)

LINSOTT JERSEYS

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

R. J. LINSOTT - HOLTON, KANSAS

\$50 Noble Stockwell's Torono \$50

Sire, Noble Stockwell. Dam, granddaughter of Hood Farm Torono. She milked 32½ pounds milk daily, 2 years old.

BISONTE FARM - LAWRENCE, KANSAS

FARM AND HERD.

E. E. Carver & Son, of Guilford, Mo., held a very successful Poland China sale on January 16. The twenty-six head of Poland averaged \$46.63. The top price of \$77.50 was paid for No. 1 sow by Fred B. Caldwell, Howard, Kansas. The average was very satisfactory to Garver & Son.

Atteberry & Son, Lancaster, Mo., owners of one of the choice herds of pure-bred Hampshire hogs, report a heavy demand for breeding stock. A feature of their herd at present is the outstanding lot of well grown July boars.

The date of the 1917 National Swine Show has been set, and it will be held at Omaha from Wednesday, October 3, to Wednesday, October 10, inclusive. The arrangements for the show are similar to those of the 1916 show. The same buildings will house it in 1917 as were used in 1916, with such additional room as is necessary to properly care for the exhibits. Extra show ring facilities will be provided and everything possible will be done looking toward the proper handling of the exhibition.

FIFTH

ANNUAL BRED SOW SALE

THE KANSAS STATE AGRICULTURAL COLLEGE will sell Poland Chinas and Duroc Jerseys, Friday, February 16, Manhattan, Kansas.
WRITE FOR CATALOG.

FARM AND HERD
NEWS NOTES

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

Address All Communications to
Kansas Farmer, and Not to
Individuals

Personal mail may have to be held for several days, or be delayed in forwarding, and Kansas Farmer cannot assume any responsibility for mistakes occurring thereby

CLAIM SALE DATES.

Percheron Horses.
Feb. 9—Breeders' Combination Sale, Manhattan, Kan. C. W. McCampbell, Mgr.

Jacks and Jennets.
Feb. 22, 1917—W. H. Roller & Son, Circleville, Kan., and Bruce Saunders, Holton, Mo. Sale at State Fair Grounds, Sedalia, Missouri.
March 19—G. C. Roan, La Plata, Mo.

Jersey Cattle.
Feb. 22—G. W. Overley, McCune, Kansas.
March 13—H. T. Hineman & Sons, Dighton, Kansas.

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

Holsteins.
Feb. 6—H. C. Glassman, Omaha, Neb.
Feb. 21—Dwight Williams, Omaha, Neb.

Shorthorn Cattle.
March 30, 1917—Combination Sale, South Omaha, Neb. H. C. McKelvie, Lincoln, Neb., Manager.
April 4-5, 1917—Central Shorthorn Association at Stock Yards Pavilion, Kansas City, Mo.

Hereford Cattle.
Feb. 9-10—Carl Miller, Bellevue, Kansas. Sale in new sale pavilion, Alma, Kansas.
Feb. 26—Combination sale at Hays, Kan. Prof. W. A. Cochel, Manhattan, Mgr.
March 3—W. A. Cochel, Manhattan, Kansas.
March 6—Moses Bros. & Clayton, Great Bend, Kansas. Combination sale.

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

Poland Chinas.
Feb. 1—P. M. Anderson, Lathrop, Mo.
Feb. 6—H. B. Walter & Son, Effingham, Kansas.
Feb. 7—W. B. Wallace, Bunceton, Mo.
Feb. 20—Fred B. Caldwell, Howard, Kan.
Feb. 22—A. J. Erhart & Son, Ness City, Kan. Sale at Hutchinson, Kan.
Feb. 23—E. Olivier & Sons, Danville, Kan.
Feb. 28—Clarence Dean, Weston, Mo. Sale at Dearborn, Mo.

Durocs and Polands.
April 25—Fred G. Laptad, Lawrence, Kan.

Polands and Durocs.
Feb. 16—Kansas State Agricultural College, Manhattan, Kansas.

Durocs.
Feb. 10—W. W. Jones, Clay Center, Kan.
March 6—Richard Rothgeb, Pleasant Green, Mo.
March 15—W. T. McBride, Parker, Kan.

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

A. H. Seymour, of Great Bend, Kansas, is one of the live workers for better draft horses in Kansas. His specialty is, high-class Percherons of the real draft horse type, the kind that will be profitable on any farm.

A. S. Neale, Manhattan, Kansas, has a Holstein heifer in his herd with her second calf that is completing her yearly semi-official record. When fully completed her record will be practically 15,500 pounds of milk and 510 pounds fat. Her butter fat record for January, the eleventh month, will be practically 40 pounds. This record was made on dry feed, no pasture, and most of the year she was milked only twice a day. Mr. Neale is breeding Holsteins for production. The record of this heifer is proof of his success, and demonstrates that breeding backed by records results in profit producers instead of boarders.

John D. Henry, of Lecompton, Kansas, owner of one of the choice herds of big-type Poland in Kansas, reports his herd doing fine. This herd is headed by Mammoth Orange, one of the great sires now in service. A feature of Mr. Henry's herd at this time is the fine lot of big growthy fall pigs sired by Mammoth Orange.

We have just received a catalog of the Poland Chin bred sow offering of F. Olivier & Sons, to be sold at Danville, Kansas, February 23. They have catalogued a very useful offering of the type that are profitable feeders. Most of their offering is bred to the great sires, A Wonderful King and Logan Price. A Wonderful King was grand champion at Kansas State Fair, Hutchinson, and at Dallas and Muskogee, and first in aged boar class at Topeka, 1916. Logan Price was third in class at the Topeka State Fair and second to A Wonderful King at Dallas and Muskogee.

G. W. Overley, of McCune, Kansas, announces February 22 for a public sale of Jacks and Jennets. Mr. Overley has rented his farm and will move to town and will sell most all of his Jack stock, including a number of young Jacks and Jennets. One registered Percheron, a four-year-old mare, and one two-year-old Percheron stud will be offered at this sale. Also a number of grade horses and mules.

AYRSHIRE CATTLE.



The late JAMES J. HILL was an enthusiastic friend of AYRSHIRES.

He maintained a large herd on his stock farm at Gladstone, Minn., and to encourage the breeding of PROFITABLE DAIRY CATTLE, he gave many bulls to farmers along his railroad lines. If a man of his ability saw the PROFIT in AYRSHIRES, isn't the breed at least worth your investigation?

AYRSHIRE BREEDERS' ASSOCIATION
C. M. Winslow, Sec'y 33 Park St., Brandon, Vt.

SHORTHORN CATTLE.

Barber Shorthorns

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

F. C. Barber & Sons

SKIDMORE - - - - MISSOURI

OUR HERD BULL

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

CHESTER A. CHAPMAN, Ellsworth, Kan.

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

CEDAR HEIGHTS SHORTHORNS

For Sale—One Lavender bull, 14 months old; one Orange Blossom, 10 months old; one Golden Drop, 10 months old.

HARRY T. FORBES

Bell Phone 59 N-1, Route 8, Topeka, Kansas

Lowmont Shorthorns—Bulls, including white 2-yr.-old; 18 cows and heifers; priced right. E. E. Heacock & Son, Hartford, Kansas.

RED POLLED CATTLE.

Red Polled Cattle

A few 1916 fall bull calves for sale. Also a few cows and heifers.

AULD BROS. - FRANKFORT, KANSAS

RED POLLED BULLS

FORTY yearling bulls, big rugged fellows, sired by ton sires; all registered and priced reasonably. Will sell a few females.

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

AUCTIONEERS.

Live Stock and Farm Auctioneer

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

FRANK J. ZAUN Live Stock Auctioneer.
Write or wire for date.
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LESTER R. HAMILTON Live Stock Auctioneer
Write for terms and date. Clarksdale, Mo.



P. M. GROSS
MACON, MISSOURI
LIVE STOCK
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Pure Bred Sales a
Specialty

"Twelve Years on the
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Sales Made Anywhere

Breeders' Directory

ANGUS CATTLE.
Geo. M. McAdam, Holton, Kan.
Geo. A. Deitrich, Carbondale, Kan.
D. J. White, Clements, Kan.

RED POLLED CATTLE.
Mahlon Groenmiller, Pomona, Kansas.

HOLSTEINS.
C. E. Bean, Garnett, Kansas.

DORSET-HORN SHEEP.
H. C. LaTourette, Route 2, Oberlin, Kan.

JERSEY CATTLE.
J. B. Porter & Son, Mayetta, Kan.

She's The
Money Cow

She makes use of every ounce of feed. Her milk is the richest of all the breeds in butter fat and solids. She is rugged and vigorous—will thrive in any climate. She milks steadily. She is beautiful and gentle. She's the mortgage lifter. She's the cow for the everyday farmer, yet she's the rich man's pride, too. And she's the cow for the family.

Our free book, "About Jersey Cattle," proves these things. Send for it now—a postal will do—it's interesting and instructive.

The American Jersey Cattle Club
375 West 23rd Street - New York City

DORNWOOD FARM JERSEYS

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

DORNWOOD FARM, Route 1, Topeka, Kan.

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

HORSES AND MULES.

HORSES AND MULES.

PIONEER STUD FARM

Established 1870

FIFTY REGISTERED STALLIONS AND MARES

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

C. W. LAMER & SON

SALINA, KANSAS

PRAIRIE VIEW STOCK FARM

Has 40 big, black Mammoth jacks and jennets. Every jack my own raising; two to six years old, 15 to 18 hands high, extra heavy bone, big bodies. I can sell you a better jack for \$500 to \$600 than most speculators can for a thousand. Come and see for yourself. They must sell.

ED BOEN, LAWSON, MO.
33 Mi. E. of K. C. on C. M. & St. P.
40 Mi. S. W. of St. Joe, on Santa FeMARES AND FILLIES
ABOUT ALL SOLD

A few good ones left. Fifty head of stallions and mares. Thirty head of stallions, including Percherons, Belgians and Coach stallions, 2 to 6 years old. All for sale at hard times prices. Come and see me.

J. M. NOLAN - PAOLA, KANSAS

40 Head Percheron Stallions - 40
Jacks and Jennets - 40

Two to six years old, heavy bone, right in every way. Imported Spanish jack, weight 1,200 pounds, at head of jennet herd. Come and see us. We mean business. Prices reasonable.

J. P. & M. H. MALONE

CHASE - KANSAS

SIX BREEDS DRAFT STALLIONS
Pedigree and guarantee with each, \$450 and up. Time given.

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

POLAND CHINAS

Poland China Boars and Gilts

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

WM. WATT & SON - GREEN CITY, MO.

IOWA KING BRED SOW SALE FEB. 1

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

P. M. ANDERSON, LATHROP, MISSOURI

Henry's Big-Type Polands

Fall pigs, either sex, sired by Mammoth Orange. Special price of \$15 each to make room for spring litters.

JOHN D. HENRY, LECOMPTON, KANSAS

TOWNVIEW FARM

Big-Type Poland Chinas.
For Sale—25 summer and fall gilts, sired by Miller's Sioux Chief and out of Lady Longfellow. Bred for late spring litters. Also 25 summer boars. Come and see my herd.

O. E. GREENE - PEABODY, KANSAS

BIG-BONED IMMUNE POLANDS

Both sexes, July and August farrow. Best big-type breeding. Choice individuals. Also bred gilts. All sired by that great boar, Chief Miami. Dams 600 to 700 pounds. Remember this is the home of largest boned boar of the breed.

WALTER B. BROWN, PERRY, KANSAS.

Size and Quality Polands

Five big-type gilts, weight 150 pounds each, bred for February, March and April farrow. \$35 each. Two good tried sows, priced to sell. Choice lot of summer sow pigs, weight 150 pounds and over, \$15 each or two for \$25. Fall pigs, \$15 each, two for \$25, sired by 1,000-pound boars, out of extra large sows.

OTTO FLAGAMANN, EUREKA, MISSOURI

ARKELL'S BIG POLANDS

April and March bred gilts by Longfellow Again and Chief Big Bone, weight 225 to 275 pounds. They are bred to Arkell's Big Timm. Also a few bred sows. Priced right.

JAS. ARKELL, JUNCTION CITY, KANSAS

OLD ORIGINAL SPOTTED POLANDS

Stock of all ages, sired by seven of the very best boars of the East and West. Priced right. Write your wants to the CEDAR BOW STOCK FARM.

A. S. ALEXANDER, Prop. Burlington, Kansas

Lone Cedar Poland China Herd

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

A. A. MEYER - McLOUTH, KANSAS

LANGFORD'S SPOTTED POLANDS

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

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

DEMING RANCH POLANDS

We will not hold a spring sale. Our show herd will be at Wichita, Kansas, Oklahoma City, and Fort Worth, Texas. We have for sale forty bred sows and gilts bred to our four herd boars, also 125 high class fall pigs, boars and gilts.

H. O. SHELDEN, HERDSMAN

THE DEMING RANCH,

OSWEGO, KANSAS

HOLSTEIN CATTLE.

HOLSTEIN CATTLE.

MAURER'S HOLSTEIN FARM

Offers a number of pure-bred cows and heifers from noted sires with high record A. R. O. dams; a number of nicely marked heifer and bull calves also having high record A. R. O. dams and well known sires, and high grade heifers and cows, all at reasonable prices. Before you buy, write, wire or call.

T. R. MAURER & COMPANY,

EMPORIA, KANSAS

CLYDE GIROD, At the Farm

HOLSTEIN-FRIESIAN FARM, TOWANDA, KANSAS

Breeders of pure-bred Holsteins. Special attractions in choice young bulls ready for service, with fashionable breeding. Write for pedigrees and prices. We maintain a breeding herd of pure-bred females and offer a grand lot of young springing heifers and cows, a number with A. R. O. records at prices within reason.

IT WILL PAY YOU TO SEE OUR OFFERING
Of choice extra high grade young cows and heifers, all springers in calf to pure-bred sires; large developed females, good udders, well marked and the right dairy type at prices that will challenge comparison for Holsteins of their breeding and quality. A visit to our farm will convince you. Keep us in mind before purchasing. Wire, write or phone.

GIROD & ROBISON

F. W. ROBISON, Cashier Towanda State Bank



This splendid registered Holstein bull calf for sale. His individuality is practically faultless and his breeding just as good. Priced right.

A. S. NEALE - MANHATTAN, KANSAS

Purebred Registered
HOLSTEIN CATTLE

The undeniable facts that the Holstein-Friesian Association of America is the largest and most prosperous dairy cattle association in America, that its membership is over 7,000 more than the combined memberships of the other dairy cattle associations, and that it increased its membership by 1,200 during the fiscal year ending April 30, 1916, are primarily a fitting testimonial to the superior merits of the pure-bred Holstein-Friesian cow, that yields more milk for a day, for a year, for a life-time and for profit than any other cow. There is big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklets.
The Holstein-Friesian Association of America
F. L. Houghton, Sec'y. Box 114, Brattleboro, Vt.

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.

HOLSTEIN COWS

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

CORYDALE FARM HERD

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

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

Sunflower Herd Holsteins

Watch for Date of Big Public Sale. 150 head bred for production. Get catalog early.

F. J. SEARLE - OSKALOOSA, KANSAS

Butter Bred Holsteins

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

J. P. MAST - SCRANTON, KANSAS

The Cedar Lane Holstein Herd

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

T. M. EWING, INDEPENDENCE, KANSAS

Wichita Holstein Herd

High grade and registered cows, some heifers and heifer calves at reasonable prices. Bull calves at \$10 and up.

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

BONNIE BRAE HOLSTEINS

Registered bulls from calves to 5 months old. Best breeding and good individuals.

IRA ROMIG - TOPEKA, KANSAS

LILAC DAIRY FARM

Route No. 2, Topeka, Kansas.

BREEDERS OF PURE-BRED HOLSTEINS

Bulls from A. R. O. cows, all ages, for sale.

GOLDEN BELT HOLSTEIN HERD

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

W. E. BENTLEY, MANHATTAN, KANSAS

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.

HOLSTEIN CALVES—Ten heifers and two bulls, 15-16ths pure, beautifully marked, 5 weeks old, from heavy milkers. \$29 each, crated for shipment anywhere. Write EDGEWOOD FARM, Whitewater, Wis.

TREDICO BULLS
G. C. T.
Kingman, Kansas

HOLSTEIN CALVES.

Very high grade heifer calves, five weeks old, nicely marked, \$20 each delivered to your station. We can supply you with registered or high grade Holsteins, any age or number, at reasonable prices. Clover Valley Holstein Farm, Whitewater, Wis.

Bonnie View Stock Farm

Duroc Jerseys and Holsteins

PUBLIC SALE FEBRUARY 19.

20 Holsteins and 15 bred sows. Write for sale bill.

Searle & Cottle, Berryton, Kansas

Braeburn Holsteins

A. R. O. BULL CALVES

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

Real Estate For Sale

TO CLOSE ESTATE

One hundred acres rich Kaw Valley farm, no waste, one-half mile to station, two miles to good town and high school; fine improvements. Write or telephone.

B. L. FOWLER, Executor, PERRY, KAN.

40 ACRES, 5 miles McAlester, city 15,000. 23 acres fine bottom, cult.; fair improvements. \$25 per acre. Terms.

SOUTHERN REALTY CO., McAlester, Okla.

Virginia Farms and Homes

Free Catalogue of Splendid Bargains.

R. B. CHAFFIN & CO., Inc., Richmond, Va.

280-ACRE FARM located 2 miles good town, Franklin County, in proven oil field; fair improvements, 20 acres tame grass, 140 acres native meadow and pasture, remainder in cultivation; good orchard, well watered. A big bargain for immediate sale at \$60 per acre. Possession at once. Write for full description of this or any size farm you may want. Mansfield Land Co., Ottawa, Kansas.

160 ACRES, 6 miles Adrian, Mo. All smooth land, 25 acres in wheat, 40 acres in tame hay, remainder cultivation; 95 acres fenced hog-tight; fair improvements. Price right, easy terms for immediate sale.

MANSFIELD LAND CO., Ottawa, Kansas.

FARM AND HERD.

Catalogs are out for the J. S. Turner Poland China bred sow sale to be held at Fairfax, Mo., February 10, 1917. This year Mr. Turner has catalogued thirty-six head, twelve tried sows and twenty-four fall-yearling gilts bred for March and April litters. The sows and gilts will be bred to the King's Equal and out of an Expansion-Tecumseh bred dam; Model Big Bob Jr. by Head & Leonard's Model Big Bob and out of a dam by Long Jumbo 2d, now at head of U. S. Byrne's herd; Robinette by Robidoux, a litter brother to Robin Hood, is also used in the herd. The offering is a very useful lot and the kind that is profitable to farmers and breeders.

Catalogs are out for A. J. Erhart & Son's Poland China bred sow sale to be held at Hutchinson, Kansas, February 22. This year they have catalogued sixty-three head of sows and gilts by such boars as the grand champion Big Hasey Jr. Orphan Big Gun, Young Orphan, King Price Wonder, and Big Bob Jr. They are all bred to the great herd boars of the Erhart herd.

T. R. Maurer, of Maurer's Holstein Farm, Emporia, Kansas, reports his herd doing well. Mr. Maurer has a two-year-old heifer in his herd that is a niece of the new world's record cow, Sage Payne Johannah, and a five-week-old bull calf that is a nephew of the champion.

F. J. Searle, of Oskaloosa, Kansas, owner of the famous Sunflower Herd of Holsteins, announces that he will hold his fifth annual sale some time during the coming spring, probably in April. He expects to have an offering that will surpass any ever sold in his sales, and it will include thirty-five and forty-pound breeding and a number of A. R. O. cows. He expects to catalog 150 head of cows, heifers and bulls.

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



PERCHERONS-BELGIANS

Imported and home-grown 4 and 5 yr. old stallions, ton and heavier, 8 yr. olds, 2 yr. olds, yearlings. Produce of 82 imported mares and noted prize winning imported mares. Farmers' prices. Free Catalogue, R. 7, Chariton, Iowa. (Above Kansas City.)

PERCHERONS FOR SALE

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

J. W. BARNHART, BUTLER, MISSOURI

FOUR BIG JACKS FOR SALE

Four three jennets. Jacks are all blacks, 4 and 5 years old, 15 1/2 to 16 1/2 hands, standard. All grandsons of Limestone Mammoth. Bards 3 blocks from depot.

F. W. POOS - POTTER, KANSAS



JACKS AND JENNETS

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

PHIL WALKER, Moline, Elk County, Kansas

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

REGISTERED PERCHERON STALLIONS for sale at their actual cash value. Barn in town.

A. H. SEYMOUR, GREAT BEND, KANSAS

DUROC JERSEYS.

TWENTY FIVE SPRING BOARS

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

G. M. SHEPHERD - LYONS, KANSAS

GUARANTEED DUROC BRED GILTS

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

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

ROSS HILL HERD DUROCS
For Sale—Thirty spring gilts bred for March and April farrow; ten boars for service; a few fall pigs. All immune, eligible to record. Out of prolific sows and young boars of state fair prize blood. S. Y. THORNTON, Blackwater, Missouri, on Missouri Pacific Ry.

GALLOWAY CATTLE.

GALLOWAY BULLS

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

E. E. FRIZELL, Frisell, Pawnee Co., Kansas

HAMPSHIRE HOGS

ATTEBERRY'S HAMPSHIRE HOGS
Choice July boars, best breeding, \$12.50 each. They are bargains.

ATTEBERRY & SONS, Lancaster - Missouri

POLLED DURHAM CATTLE.

POLLED DURHAM BULLS

Choice bull calves out of Belle's Hero, he by Roan Hero. Reds and roans. Also a few heifers and cows bred to this same bull.

C. M. ALBRIGHT, OVERBROOK, KANSAS

DOUBLE STANDARD POLLED DURHAMS

Bulls for sale. "Forest Sultan" at head of herd. C. M. HOWARD, Hammond, Kansas.

ANGUS CATTLE

EDGEWOOD FARM

ABERDEEN-ANGUS CATTLE
Twenty-five young bulls, also some good cows and heifers for sale. All registered.

D. J. WHITE, CLEMENTS, KANSAS

Main line of A. T. & S. F. Ry., 145 Miles W. of Kansas City.

MULEFO

Buy Big-Type Mulefoot Hogs from America's champion herd. Low cash prices. Big catalog free. Jno. Dunlap, Williamsport, O.

Poland China Bred Sow Sale



CALDWELL'S BIG BOB 76436—WORLD'S CHAMPION SENIOR YEARLING AND SENSATION OF 1916 SHOWS
Is the Topliner in the First Sale of the Southern Kansas Circuit at

Howard, Kansas, Tuesday, February 20, 1917

40 Head - 25 Sows and Gilt Bred to Him---15 Head of Gilt Sired by Him - 40 Head

Daughters of Caldwell's Big Bob are bred to EXPANSION BUD 82486, an outstanding spring prospect by Expansion Sure.

FRED B. CALDWELL, - HOWARD, KANSAS

EVERYTHING IMMUNE. — Watch for further announcements—Send for the catalog. Attend this sale if possible.
O. W. Devine will represent Kansas Farmer.

Poland China Bred Sow Sale

At Danville, Kansas, Friday, February 23, 1917

A SUPERB OFFERING OF SIXTY HEAD OF TRIED SOWS, YEARLINGS AND SPRING GILTS
Right as to individuality and breeding. All immune. Offering bred to A Wonderful King, Logan Price, and Smooth Jumbo by Quality Hutch.

OUR 1916 WINNINGS:

TOPEKA.

First and third aged boars; second senior yearling boar; third junior yearling boar; third junior boar pig; first and third senior yearling sow; first on aged herd and aged herd bred by exhibitor.

KANSAS FUTURITY.

Third spring boar; third and fourth fall boars; seventh spring sows; fifth and sixth fall sows; sixth and seventh spring litters.

MUSKOGEE.

Grand champion boar; first and second aged boars; second senior yearling boar; first junior yearling boar; second and third senior boar pigs; fourth senior yearling sow;

second aged herd and aged herd bred by exhibitor; third young herd and young herd bred by exhibitor.

HUTCHINSON.

Grand champion boar; junior champion boar; first and second aged boars; first senior yearling boar; first junior yearling boar; first and second senior yearling sows; first aged herd; second young herd; second on produce of sow.

DALLAS.

Grand champion boar; first and second aged boars; first, second and third junior yearling boars; second senior boar pig; third aged sow; second, third and fourth senior yearling sows; third and fourth junior yearling sows; first and junior champion on senior sow pig; first on aged herd and aged herd bred by exhibitor; first on get of boar.

We Breed the Kind That Win the Ribbons

And make money for the farmers. Grow quick and fatten easy. Remember our sale. Send in your name for the catalog, and plan to attend this sale.

FRANCOIS OLIVIER & SONS, DANVILLE, KANS.

Mention Kansas Farmer and write today for catalog.

O. W. Devine will represent Kansas Farmer at sale.

It's Up to You

When Your Animals
Get "Off Feed" and
Do Not Thrive



Dr. Hess Stock Tonic

**Gets Rid of Worms
Makes Stock Healthy**

We are now in the dead of winter. Animals are closely stabled and on dry feed. You are crowding them. You want them to eat well and turn their feed to good account. Remember, your animals are not out on pasture. It is up to you to supply the laxatives and tonics and blood purifiers. Dr. Hess Stock Tonic will

I'll Save Your Veter- inary Bills

When you have a sick or injured animal, write me, telling symptoms. Enclose two-cent stamp for reply and I will send you prescription and letter of advice free of charge.

Condition Your Animals

It cleans out the worms and improves the appetite. They will then eat their feed with a relish because worms will not be distressing them. They will be free to digest, assimilate and get the good out of their feed. Dr. Hess Stock Tonic is not a secret preparation. Here are some of the ingredients and what they do—the same for animals as for the human family. Ask any doctor, consult any medical work:

Nux Vomica, nerve tonic, aids digestion.

Quassia, tonic and worm expeller.

Sulphate of Iron, blood builder, worm expeller.

Charcoal, prevents unhealthy fermentation.

Sulphate of Soda, a laxative and liver tonic.

Epsom Salts, a laxative.

Nitrate of Potash, acts on the kidneys.

Foenugreek, a flavor.

You will be well repaid for this special care of your live stock. Horses will be in condition for spring work, cows for heavy milking, sheep will fatten up, hogs will be free from worms and make larger growth.

Why Pay the Peddler Twice My Price?

My Stock Tonic is never peddled. It is sold only by reputable dealers—28,000 dealers in the United States and Canada. You buy it from the dealer in your town, a man with whom you trade every week, at rock-bottom prices.

25-lb. pail, \$2.00; 100-lb. drum, \$6.50

Smaller packages as low as 50c (except in Canada and the far West and the South).

So sure am I that Dr. Hess Stock Tonic will put your animals in a thriving condition, make the ailing ones healthy and expel the worms, that I have authorized my dealer in your town to supply you with enough for your stock, and if it does not do as I claim, return the empty packages and my dealer will refund your money.

Dr. Hess Poultry Pan-a-ce-a

This is just the time you should be giving your poultry this splendid tonic. It will put them in fine condition, make your hens lay, insure fertile hatching eggs and strong, vigorous chicks. Very economical—a penny's worth is enough for 30 fowl per day. Sold only by reliable dealers—1½ lbs. 25c; 5 lbs. 60c; 12 lbs. \$1.25; 25-lb. pail, \$2.50 (except in Canada and the far West). Guaranteed.

Dr. Hess Instant Louse Killer

Kills lice on poultry and farm stock. Provide your hens with a dust bath, to which add Dr. Hess Instant Louse Killer occasionally. The hens will do the rest. For lice on stock, with one hand rub against the hair and with the other sift the Louse Killer. Rub thoroughly into the skin. 1 lb. 25c; 3 lbs. 60c (except in Canada).

96-page Veterinary Book free for the asking

DR. HESS & CLARK, Ashland, Ohio