

KANSAS FARMER

For the improvement



of the Farm and Home

Volume 55, Number 8. / 0

TOPEKA, KANSAS, MARCH 10, 1917.

Established 1863. \$1 a Year

MAKING OF A STOCK FARM

Eastern Kansas Well Adapted to Breeding of Pure-Bred Cattle

THERE is no better place in the country for breeding pure-bred cattle than Eastern Kansas. For fifteen years Alysedale Farm, Shawnee County, has been the home of the widely known Alysedale herd of Shorthorn cattle developed by C. W. Merriam. This is one of the most attractive farms in this section of the state, as is clearly shown by the cut on this page. Owing to the fact that his health will not permit him to longer give it the required attention, Mr. Merriam has been compelled to disperse his herd of cattle and sell the farm.

The farm will still continue to be a Shorthorn breeding farm. It has been purchased by H. H. Holmes, of Barton County, who is well known as a breeder of high class Shorthorn cattle. The consideration was \$29,000, or at the rate of over \$200 an acre. This is a big price for a farm, but it is finely equipped to conduct a pure-bred live stock business such as that carried on by Mr. Holmes. In this new location his most excellent herd of cattle will give a good account of themselves.

This transaction involving the sale of Alysedale Farm is of more than passing interest. When Mr. Merriam bought the place fifteen years ago it was a fair sample of a farm that had been rented for a number of years. No special effort had been made to keep it up in good condition. The fences were poor and the place was overgrown with weeds and brush and presented a generally dilapidated appearance. The price paid, \$75 an acre, looked big for a farm in such a run-down condition. Mr. Merriam immediately began to clear the place, gradually getting it in condition not only to suitably take care of a herd

of pure-bred cattle but also making of it a show place where he could take his friends and visitors from out of town. He built carefully planned barns large enough to house all the live stock the place could support. The plan from the beginning was to make it distinctly a live stock farm. Fences were built where needed and every foot of land was gradually brought into condition where it would do its part in supplying feed for the stock. Sheds were built for the housing of the machinery and other needed buildings were constructed.

The Shunganunga Creek winds through the place and at the time Mr. Merriam purchased the farm there was a tangle of brush and undergrowth in the thirty acres of woodland along this stream. It was rich, productive land, but in so far as returning any income it was an absolute waste. By keeping steadily at it, the buckbrush and other undergrowth was finally killed out and in its place came the best of bluegrass pasture. The trees were thinned so the grass would grow, and this thirty acres of what was waste land is now highly productive pasture. The expense of cleaning up this tract of land and getting the grass started amounted to \$1,300, but it was an investment that greatly increased the value of the whole farm. Instead of an unsightly growth of weeds and brush producing nothing of value, this tract is now a rich pasture and in addition has become a beautiful park as well.

In order to enjoy the beauties of the farm, Mr. Merriam built a bungalow near this piece of woodland pasture, where he and Mrs. Merriam have spent a part of the time each summer for a number of years. This bungalow is

shown in the cut. There is also a comfortable farm house on the place which is occupied by the foreman, who has looked after the farm and stock and who has been responsible for carrying out Mr. Merriam's many plans for bringing the place up to its present condition of neatness and productivity.

It is with deepest regret that Mr. Merriam has disposed of his pure-bred cattle and sold the farm into which he has put so much thought and effort during the past fifteen years. This regret is tempered with a feeling that the farm is going into the hands of a man who will appreciate it and make the most of what has been done in the developing of a farm so admirably adapted to the business of handling pure-bred cattle. Mr. Holmes has just moved to the farm, bringing with him his herd of some forty head or more of Shorthorn cattle of pure Scotch breeding, headed by the two bulls, Prince Valentine 4th and Clipper Brawith.

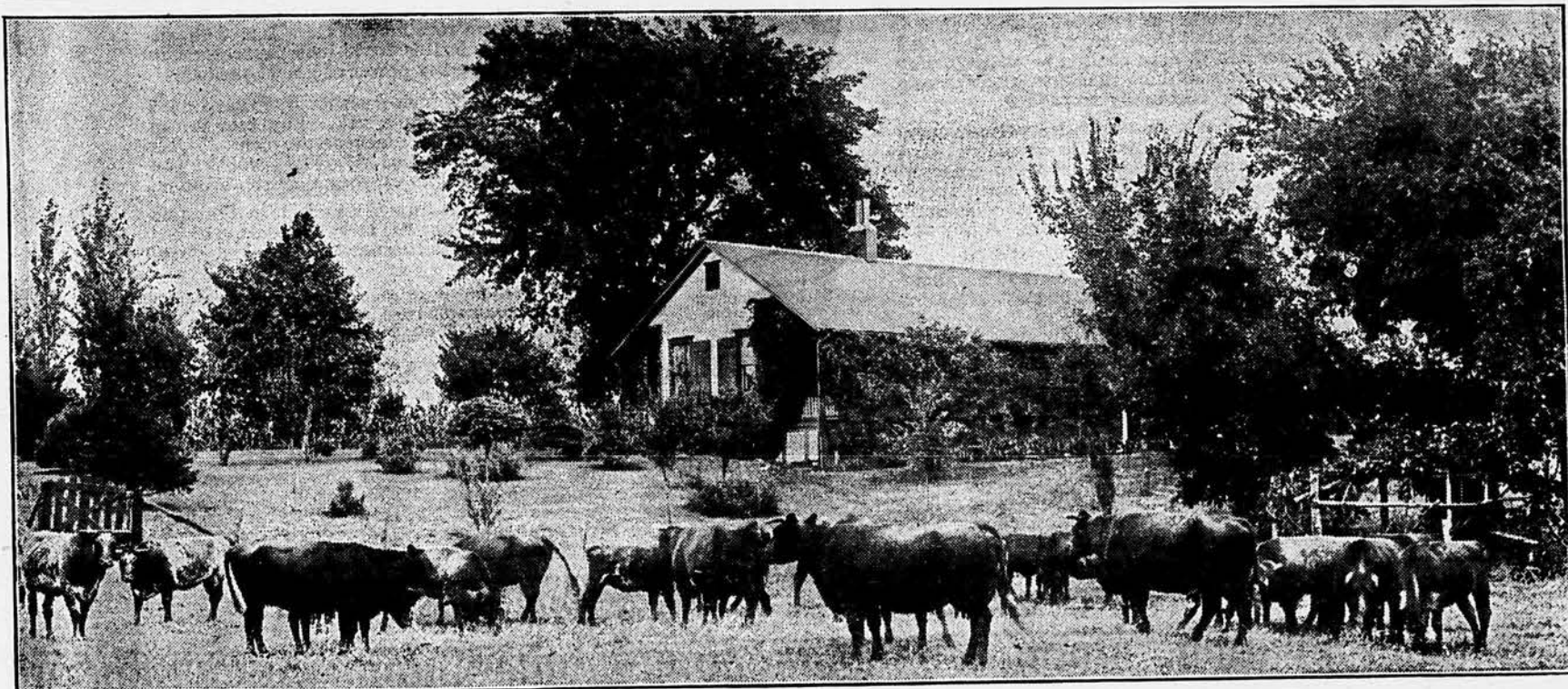
Mr. Holmes had a good farm of 550 acres in the Arkansas River Valley near Great Bend, but he could not grow bluegrass or other pasture that could be safely grazed. It was a splendid alfalfa farm, producing big crops of hay. There is too much risk, however, in pasturing high-priced cattle on alfalfa. He found it necessary to feed his cattle in the barns and yards during the greater part of the year, whereas here in this section of the state breeders of cattle manage to have their stock running on pasture seven or eight months of the year. Every time Mr. Holmes came to Shawnee County and visited the farms of the Tomson Brothers or that of Harry Forbes or others of the Shorthorn breed-

ers of this section, he coveted a farm where he could have grass for his cattle. The opportunity finally came and he is fortunate indeed in securing a farm that has been developed and equipped as has Alysedale Farm.

There is another factor to be considered and that is the advantage of being in a community where a number of well established breeders are handling the same kind of cattle. At Dover, John Tomson is on the farm where the Tomson herd of Shorthorns was started years ago. Near Carbondale is located James G. Tomson with a herd of Shorthorns from this same foundation. West of Topeka Harry Forbes is breeding Shorthorns on a farm having an abundance of bluegrass pasture and in other ways well fitted for handling pure-bred cattle. There are other less well known breeders of Shorthorns in this locality.

While these breeders are in competition with each other in the sale of the pure-bred stock they produce, each is benefited by the fact that others are growing good cattle of the same breed in the community. More buyers are attracted to a community where a number of herds of the same breed are to be found, and more buyers mean increased competition and better prices. There is also a stimulating effect from being located where others are striving to bring about improvement in the breeding and development of the same kind of stock.

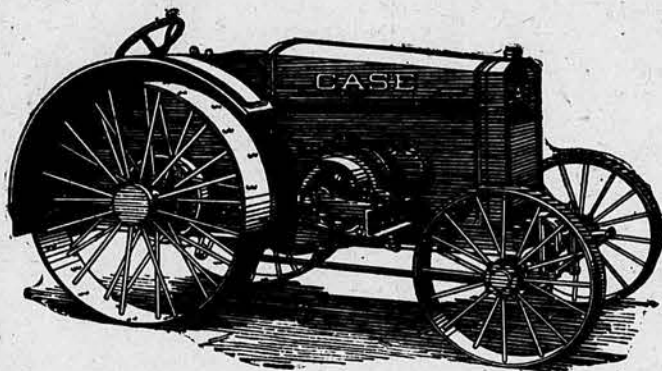
This community about Topeka might easily be developed into a Shorthorn center. The breeders now located here will welcome Mr. Holmes to Alysedale Farm and gladly co-operate with him in promoting the interests of the breed which they have all chosen.



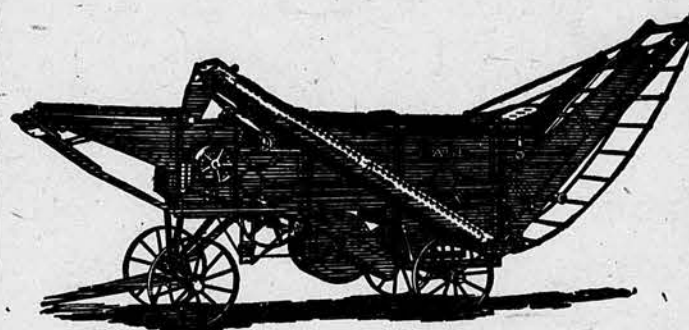
THE BUNGALOW ON ALYSDEALE FARM IS BEAUTIFULLY LOCATED ON A GENTLE RISE NEAR A WOODLAND PASTURE

CASE

9-18 Tractor



20x28 Thresher



Every Farmer Wants a Combination Like This

Above we picture a Case 9-18 all-'round farm tractor and the new Case 20x28-inch thresher. Here is a combination which can't be beat. It brings to every farmer a new independence and greater economy. We are the first in the field to satisfy the growing demand for such a *handy team* of machines as this.

Even if you are not in the market today, you should be thoroughly acquainted with these remarkable labor-savers. They are described and pictured, together with the complete Case line, in our new 75th anniversary catalog, just off the press, which will be sent to you free upon request.

CASE, the Standard Tractor

The Case 9-18 tractor is truly an all-'round mechanical farm horse because this tractor is so useful.

It will pull manure spreader, gang plow, harrow, grain drill, planter, digger, mowing machine, rake, hay loader, harvester, haul crops and other materials.

It will drive a small thresher, a silo filler, feed grinder, fodder cutter, corn sheller, wood saw or hay baler. It operates a milking machine, also dynamo for electric lighting, and many more jobs.

This Case 9-18 has a four-cylinder valve-in-head special tractor motor, and is built for continuous hard pull without overheating. All gears are enclosed and run in oil. Center of gravity low down; therefore no danger of upsetting. Short wheelbase makes for easy turning in close quarters. A boy can operate it.

Don't buy a tractor before you've learned all about the Case. It pays to investigate thoroughly. If you're from Missouri, we "can show you."



The Sign of Mechanical Excellence the World Over.

Do Your Own Threshing

Thousands of farmers have asked us to add a smaller thresher to our line, so that they might do their own threshing. They have come to us because Case has long been the leader in the threshing machine business. So we have designed and built the Case 20x28-inch. It is especially adapted for small tractors. While we recommend the Case 9-18 all-'round tractor with it, this 20x28-inch separator can easily be driven by other power of like capacity.

With the Case 20x28-inch thresher there is no need to await your turn and run a risk. You may thresh as much as you please, whenever you please. This means absolute independence. Also extra profits, if you have time to handle some of your neighbors' crops.

The Case 20x28-inch thresher maintains the same standard of excellence as the larger models, which is sufficient proof of its performance, economy, durability and results.

We want you to know all about this Case 20x28-inch thresher before you purchase a machine. Samples will be gladly shown at all of our 44 Branch Houses.

J. I. CASE THRESHING MACHINE COMPANY, Inc., 369 Erie St., RACINE, WIS.
FOUNDED 1842

Four other Case tractors besides the 9-18, as follows: 10-20, 12-25, 20-40 and 30-60. A size for every need—a size for every farm.

Eight sizes of Case steam engines: 30, 40, 50, 60, 65, 75, 80, and 110 h. p. None as good as these have ever been manufactured. They have proved superior.

Seven Case steel threshing machines in the following sizes: 20x28, 20x36, 26x46, 28x50, 32x54, 36x58 and 40x62 inches. These meet every demand. Case threshers always set the pace.

Case baling presses, in two sizes, 14x18 and 17x22 inches; also a 17x22-inch automatic baler. They do the most work in the least time.

Case silo fillers have big capacity and require least power. Their performance is unequalled, like all other Case products.

WRITE TODAY FOR THE CASE CATALOG—FREE!

Editorial, Advertising and Business
Offices, Topeka, Kansas

Entered at Topeka Post Office
as Second Class Matter

Published Weekly by The Kansas
Farmer Company, at Topeka

KANSAS FARMER

THE FARM PAPER OF KANSAS

T. A. BORMAN, President and Editor
S. E. COBB, Vice-President

W. J. CODY, Secretary and Treasurer
G. C. WHEELER, Associate Editor

CHAS. C. YOUNGGREEN
General Manager

CHICAGO OFFICE:
T. D. Costello, Stager Building
MINNEAPOLIS OFFICE:
R. B. Ring, Palace Building

NEW YORK OFFICE:
S. E. Lath, Fifth Avenue Building
ST. LOUIS OFFICE:
C. A. Cour, Globe Building

Established by First State Board
of Agriculture, 1863

Member Audit Bureau of
Circulations

Member Associated Farm Papers



FARMER ON HIGHWAY COMMISSION

The present legislature has created a State Highway Commission as a part of the road legislation passed. This commission is to consist of the governor and two men appointed by him. It will be one of the most important commissions in the state. In the neighborhood of thirty-five million dollars will be spent on roads and bridges in Kansas this year.

In our issue of January 27, we said in reference to highway legislation: "This is most important legislation and should be worked out solely from the standpoint of those who pay the bills and use the roads." Now that the bill has become a law, we wish to reiterate this statement and go a step farther by pointing out that the farmers of Kansas are more vitally concerned in the roads of the state than any other single interest. The city man who enjoys riding over the country roads can stay at home when the roads are bad, but the people who live in the country must use them practically every day in the year, rain or shine. The produce of the farm must be hauled over the roads to the railway station. Needed supplies must be hauled over these same highways to the farm, and the children must each day go from their homes to the schoolhouse and back again—no matter what the weather may be or the condition of the roads. In scores of ways that might be mentioned, the rural population is profoundly interested in roads and in such legislation as has been enacted to direct the expenditure of the money used in road building and maintenance.

Farmers were justified in watching closely the progress of road legislation during this session of our legislature as the various plans were proposed and discussed. Now that the measure has been enacted into law and the governor is required to appoint two men to sit with him as a commission in directing the road- and bridge-building work of the whole state, the farmers are well within their rights in insisting that at least one place on this commission be filled by the appointment of a farmer. It should require no argument to establish the justice of recognizing the right of the farming interest to be represented in the make-up of this highway commission.

FEDERAL MARKET REPORTS ON MEAT

A new market news service on meat was begun by the Federal Department of Agriculture on February 19. This service should be of great value both to producers and consumers.

One of the demands made by the American National Live Stock Association was that more publicity be given to the matter of marketing live stock and live stock products. A marketing committee, composed of some of the strongest and most influential live stock men of the country, was appointed at the annual meeting of the association held in January, 1916.

The need for wide and authoritative information as to the actual market price of live stock of the various grades at the central markets, as well as information concerning the supplies of meats and provisions held in storage, is becoming more and more evident. At its last session, Congress appropriated \$65,000 to be used in making regular government reports on these market conditions.

These reports will be available daily to the trade and to consumers in the cities of New York, Boston, Philadelphia, Chicago, Kansas City and Omaha.

The information has been collected experimentally for some time in order to test the system before attempting to put it into practical operation. In the three cities of New York, Boston and Philadelphia, where conditions are representative of those in other large consuming centers, government agents secure each morning all the information available and wire it to Washington and to the eastern and western local offices of the Office of Markets and Rural Organization of the Federal Department of Agriculture. This information is placed at the disposal

of all interested persons and arrangements have been made whereby it will be published in many newspapers. Individuals or groups of individuals can also make arrangements to obtain the reports from the nearest local office. No charge is made for delivering this information by mail or messenger, but when the information is forwarded by wire, the telegraph tolls must be paid by those receiving it.

In addition to this daily service, the Department of Agriculture now issues a monthly report of the quantities of meat and meat products in storage and will issue a weekly summary of the prices in the larger markets in greater detail than is possible in the daily telegraphic reports.

This is a valuable service and should be greatly appreciated by producers and consumers who have in the past felt that all the information available came from prejudiced sources.

HOW TO PLANT ORCHARD

In this issue will be found some valuable instruction on planting the young orchard, by Prof. F. S. Merrill. It has been thoroughly demonstrated that an orchard can be a source of great profit in many parts of Kansas. There was a time only a few years ago when the value of land in Eastern Kansas was actually depressed because it was planted to apple trees. Orchards were being pulled up and the ground planted to corn because it was thought that it would produce larger returns in corn than had been coming from the orchard. As a result of the co-operative work of the Kansas Agricultural College and the Federal Department of Agriculture, these orchard lands of Eastern Kansas are now producing good returns. It was shown by actual field work that the introduction of proper spraying and pruning methods and giving the orchards suitable care, they could be made to produce large quantities of high class fruit. A horticulturist familiar with apple-growing conditions throughout the Middle West made the statement that apple-growing land in Eastern Kansas selling at \$150 to \$200 an acre was far cheaper and better for successful apple growing than lands in other sections selling for \$500 an acre and upward. Success with orchard work is a matter of knowing how, and there is no corner on the knowledge required to so handle an orchard that it may be a profitable investment. No phase of the extension work of the agricultural college is more in demand than the orchard demonstration work being conducted by George O. Greene. He is dated weeks ahead for his orchard visits.

The article in this issue on planting trees should be read carefully by those who plan to plant some trees this spring, whether it be a small farm orchard or a large commercial orchard.

No more practical work could be done by agricultural classes in high schools than the testing of seeds for spring planting. Most high schools now have well organized courses in agriculture, and some use vacant lots in demonstrating agricultural work. Testing the germination of seeds is good practice for the students and the work can be made a service to the community in which the school is located. If you are near a high school teaching agriculture, try and make arrangements to have the classes do seed testing work for you. The students can be given credit for the work thus done and they will take more interest in doing something that is to be of some immediate practical value.

ARBOR DAY PROGRAMS

Last week we urged that more interest be taken in tree planting in Kansas the coming spring. A good way to arouse enthusiasm for growing more trees is to take it up in the schools. An arbor day program for schools is contained in the bulletin on tree planting in Kansas, to which we referred last week. This program supplies songs and appropriate

recitations. Teachers can secure copies by writing to the extension division of the agricultural college.

The important thing is to have the tree planting program early enough in the spring so that some trees can be planted following the meeting. An arbor day program that ends in talk and song has failed in its purpose. Such programs should result in definite plans to plant trees and care for them so they will grow.

It is important in every tree-planting campaign that emphasis be placed on caring for the trees. Too often trees planted about public buildings are neglected because what is everybody's business is nobody's business. During the tree-planting campaign place so much emphasis on the necessity for giving the trees suitable care that public sentiment will demand that this be given continuous attention.

GOOD PASTURE CHEAPENS PORK

Good forage is essential to profitable pork production. Feeding tests at the Kansas Experiment Station have demonstrated that spring pigs having plenty of good forage will make four or five times as much profit as a pig fed in a dry yard. Of course, this involves the judicious use of grain in combination with the pasture. Pigs cannot be profitably fed on forage alone for any length of time.

In the tests referred to, alfalfa, rape and sweet clover were used. With corn at fifty cents a bushel, the cost of producing a hundred pounds of gain on young pigs ranged from \$2.88 to \$2.96. On older hogs the cost ranged from \$4.23 to \$5.31.

The amount of pork that can be accredited to an acre of pasture varies with the crop, the age of the hog, and the amount of grain fed. In the tests, an acre of sweet clover netted \$42.07, corn being valued at fifty cents a bushel and pork at \$5 a hundred. An acre of rape netted \$37.50, an acre of alfalfa \$67.50, and a combination of oats, peas and rape, \$64.60.

While alfalfa is the best of all forage crops for hogs, emergency crops can be grown that will greatly add to the profits, as was shown by these station tests and as demonstrated by hundreds of farmers. By all means, plan to have plenty of good forage for the pigs.

Grapes cannot be expected to produce a good crop of fruit without proper pruning. The work is not difficult, but to be successful it must be done before the buds swell. This work cannot be delayed much longer. Of the several methods of pruning recommended, that known as the "fan system" is best for the hardy varieties, which include most of the hybrid grapes. This system consists of training from four to six arms or canes over the wire so that they resemble a fan. There is not much old wood left in pruning grapes by this system. The grapes are borne low on the vines, which makes it a little inconvenient to gather them, and sometimes they are not quite so well colored as when they are pruned by some other system. Old canes should be removed each year and the new canes which grow to replace them should be trained by heading back as in starting new vines.

The State Entomological Commission has just declared a complete quarantine against the shipment into Kansas of five-leaved pines, currants and gooseberries. The reason for this quarantine is that a dangerous imported disease of white pine trees, known as the "white pine blister rust," exists in a number of the Eastern States. Currants and gooseberries are carriers of this disease and as many eastern states have declared quarantines against the localities where the disease exists, the commission places this complete quarantine in order to prevent Kansas becoming the dumping ground of diseased stock.

Heavy spring work is close at hand. Knowing that farm machines, harness, etc., are in good working condition will prove to be a short cut in turning this work.

PLANTING YOUNG ORCHARD

Proper Care and Cultivation of Trees Will Bring Good Returns

By F. S. Merrill, Assistant Professor of Horticulture, K. S. A. C.

A YOUNG orchard may live and even grow when the trees are set with little care and no thought, but success in such cases is usually due to favorable weather and soil conditions. Any success will result in spite of, rather than because of, this poor practice, and in order to secure good results careful work must be done in the planting.

Both spring and fall planting is practiced. The advocates of fall planting argue that the trees become established during the fall and are ready to grow as soon as the soil warms up in the spring. As a result the trees can make a strong growth before the spring planted trees are set, and are consequently better able to withstand the unfavorable conditions of late summer.

A serious disadvantage of this plan in Kansas, however, has been found in the tendency of the trees to heave and the possibility of their being affected by the severe winter weather.

Spring planting does away with most of the objections to the fall planting system and if the trees are planted as soon as the ground can be worked, they should be able to start as soon as Nature intended they should.

LAYING OUT ORCHARD

Several systems of planting are followed, but all may be placed under three general heads—the square, triangle, and hexagon. The square system calls for a tree on each corner of a square, the triangular has one at each corner of a triangle, and the hexagonal one at each angle of the hexagon. The last two methods permit of a slightly greater number of trees to the acre, but the cultural advantage of the square system and the ease with which the ground may be laid out, make it the most popular. It is also considered to be the most productive.

Distance of trees will vary with the variety and kinds of fruit planted. The upright growing trees will require less room for their final development than will the spreading varieties. The tendency to plant too closely is more common than the fortunate mistake of giving the trees their maximum growing space. The following distances are usually accepted as best for the different kinds of trees: Apples, 30 to 40 feet; pears, 20 to 25 feet; peaches, 18 to 25 feet; plums, 20 feet; cherry, 20 feet.

USE OF FILLERS

It is popular with growers to plant what may be called fillers in the orchard. In this plan a tree is set half way between each two permanent trees. The space between the rows may also be used. Quick maturing fruit, the peach, or an early apple such as the Missippi



Before Pruning. After Pruning.

Pippin, is used for the semi-permanent trees. Of course these are to be removed before they injure the standard trees.

There are two factors in the make-up of every human being which prevent this plan from working out as it should. These two things are greed and cowardice. By placing the seen before the unseen the grower always wants one more crop and is afraid to cut the fullers at the proper time. As a result of this, not only the form but the bearing capacity of the permanent trees is often seriously injured.

When the ground will permit, the use of a cultivated crop will be found more

successful. But the crop should be one which will make its most rapid growth at a different time from that of the trees and should not require late cultivation or stirring of the ground. The use of such crops as small grains should be avoided.

METHODS OF SETTING TREES

The usual "sight and set" method will not decrease the productivity of the orchard, but the grower who is willing to set his trees in straight rows more often will take good care of them after they are planted.

The tree row should be located along a permanent line such as a road or fence and on this place a row of stakes, one for each tree. In the middle of the field establish a line at right angles to the first one and stake as in the former case. The subsequent stakes may be set by means of a staking board. This should be made of two 1 x 2 strips fast-

for the tree against borers, rabbits, and other young tree pests. About the first of June cheap cotton should be stuffed in the top of the wire cone as a further protection against borers.

After the tree has been set and before it begins its growth in the spring it should be headed. For the standard varieties this is from 18 to 24 inches.

The chief object in the care of the young orchard is to keep down all weeds. Trees need cultivation the same as does corn. Constant cultivation in the young orchard will induce a deeper rooting system in the trees. It is natural that where there is a great surface growth, as would be the case where the trees set in sod ground, the most moisture would be about the roots near the surface and the tree would never root deep enough to make it strong or the most productive.

In pruning young trees it will usually



PROFITABLE PEAR ORCHARD IN COWLEY COUNTY

ened at right angles and each arm as long as the distance between the trees is to be. To use this, start at the junction of the right angle lines, placing an end of this square against a stake on each line. The position of the next stake will be established at the point of union of the two arms of this square.

If the trees have not been root pruned, the broken roots should be cut off so as to leave a smooth surface. This aids the formation of the callus. It is not advisable to cut off any of the healthy tissue. The trees should be protected against drying out and the best method for this is to puddle them in clay and carry them in a barrel partly filled with water.

In setting, the use of a planting board is advocated for growers who have used the stake method. This may be made from a board three inches wide and five feet long. It should be fitted with a V-shaped notch in the center and a slot at either end. The V-shaped notch is placed against the stake and a stake is driven in each of the end slots.

The board is then removed and the hole dug. This should be large enough to easily accommodate the roots of the tree. The board is then replaced, the tree placed in the V-shaped notch and the hole filled one-third. Care should be taken that the earth is firmly packed about the roots and under the crown either by raising or lowering the tree or by pressing the earth in place with the hands.

In placing the tree, it should be set slightly deeper than it was in the nursery. In filling the hole, firmly tamp the earth with the heels, packing all but the upper two inches of soil which may be left as a mulch. When well set, the tree should be absolutely immovable. An improper firming of the soil may neutralize all previous care.

CARE AFTER PLANTING

Soon after the young trees are set in place a cone of galvanized screen wire should be placed about the main stem of each. The wire can be fastened together before being placed about the tree and the branches pulled together enough to allow the slipping of the cone over the top. The wire should extend below the surface of the ground one or two inches and cover eighteen or nineteen inches of the stem above the ground.

This screen will serve as a protection

be found that there are from six to eight side branches. These should be thinned until not more than four or five are left. These are to form scaffold branches and several points should be considered in their selection. They should be the most vigorous and healthy on the young tree and so arranged that they form no crotches. This last may be guarded against by selecting the branches forming equal angles about the central stem and preferably several inches apart.

The branches which are left should be headed back from one-third to one-half their length, cutting off the growth just above a bud growing toward the outside. It is the usual tendency in growth to produce the strongest shoot from the terminal bud and the growth should be directed toward the point where the leader should be grown. A stub should never be left in removing the tip of a branch, as this dies back and causes decay in the heart. The cuts on this page illustrate pruning methods.

After pruning the young trees has been properly attended to, there is little to do except to see that the ground is well cultivated. Trees stunted in early growth seldom recover properly and never make the success that a well cultivated tree will.

If the new orchard is located near an old one it may be necessary during the second summer to protect the young trees against blotch and other diseases by spraying them. For this purpose a 2:3:50 solution of Bordeaux mixture will be found most beneficial. This solution is made by dissolving two pounds of copper sulphate and three pounds of stone lime, thoroughly slaked, in fifty gallons of water. The most effective way to make the mixture is to dissolve the copper sulphate in half of the required water and the lime in the remainder, running these two solutions into a third tank in equal quantities as needed for use in spraying. Spraying the young trees is not usually necessary but it is advisable in order to give them the best opportunity to develop.

How to Prune Grapes

To secure a good crop of grapes of the highest possible quality, the vines should be pruned before the buds swell. In most parts of Kansas this work must

be done within the next few days to be successful.

The vine that is left unpruned may produce more fruit than the vine that has been pruned, but the size of the bunches and berries is greatly diminished and the quality of the fruit is inferior to that of the well pruned vine.

The fruit of the grape is borne on the new shoots which grow from buds formed on the preceding year's growth. The varieties vary somewhat in their behavior in different soils. In strong, heavy soils, grapes usually succeed better if set at a greater distance and may be allowed to carry more old wood than when grown in poor, light soils.

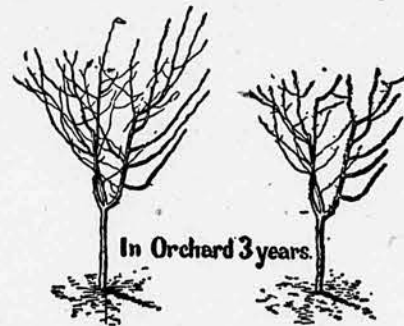
Upon the form of the trellis used will depend to a considerable extent the system of pruning required. Four systems that are most used are four-arm Kniffin, six-arm, fan, and Munson. For the hardier varieties of the American grapes the two-wire and four-cane trellis is largely used. When the plants are set they are cut back to one or two buds, but the growth the first year does not require a trellis. It is important to secure a strong growth of new canes.

The succeeding spring one of the canes should be left for training to the trellis and at the lower wire one or two canes should be retained to form a horizontal arm upon which the fruit may be borne the following season. Any bunches of grapes that grow the first year should be sacrificed to promote the greater strength of the vines. If a vine is strong the second year the arms may be trained on the second wire, but in many cases one pair of arms will be all the vines will mature in the second year's growth.

The following season the pruning will be restricted to the cutting back of the preceding year's growth on the second wire, and after these arms are well established the pruning will consist of cutting back the year's growth, leaving out a few buds. Subsequent pruning should be to remove all wood except sufficient wood along these arms to produce a maximum crop of fruit.

The number of buds to be left varies with the locality, variety, and strength of the vine, and the market for which the fruit is intended. Growers differ as to the number of buds to be left, some cutting back as close as twenty-five to thirty and others leaving double that number. In sections likely to have late frosts a large number of buds are left. If the first shoots are killed by frosts, others will be produced on the slower buds and a fair crop may be produced.

The six-arm system is similar to that of the four-arm system with the exception that three wires and six arms are used. It is suitable for varieties that make a rank growth and for vines that are growing in strong soil.



Before Pruning. After Pruning.

The Munson system, sometimes called the overhead system, has a different sort of trellis. When this system is used the posts are four or five feet high and cross-arms eighteen inches to two feet in length are nailed to the top. Holes are bored in the cross-arms and the wires are stretched through these holes for support to the vines. The third wire should be stretched either above or below their level of the wires that extend through the cross-arms. The vine is trained to the middle wire and the canes are trained to the side wires. More of the fruit is exposed to the sunlight and the picking of the fruit is easy by this method. It is also easy to cultivate under this system.—F. S. MERRILL.



They Fit and They Last—
Mayer
**HONORBIT
WORK SHOES**
Ask your dealer for
Mayer Shoes. Look for
the trade-mark on sole.
F. Mayer Boot & Shoe Co.
Milwaukee, Wis.



Treat All Seeds
—take no chances. Anyone can apply Formaldehyde. It is endorsed by the U. S. Dept. of Agriculture as the standard treatment for seed grain smuts, potato scab and black-leg.
FORMALDEHYDE
The Farmer's Friend
To insure a full yield you must destroy all forms of smuts, rust and fungus growth. Our Formaldehyde sold by your dealer for 35 cents treats 40 bushels of seed. New hand book just issued—free.
PERTH AMBOY CHEMICAL WORKS
100 William Street New York



**High Front Wheels
—Flexible Frame—**
Four successful years in the field have conclusively proven the many advantages of these features as well as the absolute dependability of the
PARRETT
The Original High Wheel Tractor
The all purpose farm power unit. Imitated but not equalled. For accurate, practical information on Parrett Farming, address
Parrett Tractor Company
409-C Fisher Bldg. — Chicago, Ill.



Free Catalog in colors explains how you can save money on Farm Truck or Road Wagons, also steel or wood wheels to fit any running gear. Send for it today.
Electric Wheel Co.
34 Elm St., Quincy, Ill.

Farm Inquiries

WE have been asked for suggestions about furnishing green forage to a couple of brood sows and their litters where there is no permanent hog pasture fenced.

Pasture is absolutely essential if the best results are to be secured in raising hogs. There is little or no profit in growing pigs in a dry lot. Where there is no pasture and no possibility of having any fenced, forage crops can be grown close to the pen and cut and carried to the pigs. Where only a few pigs are raised this is practical, although it means additional labor. J. E. Payne, demonstration agent for the Frisco Railroad in Oklahoma, tells how a farmer in Oklahoma solved the question. This man had no hog-tight fence, being a tenant, but he devised a plan whereby he kept his pigs in a movable pen and moved it about over a sorghum patch so that the pigs had fresh feed. He put an old cultivator wheel on each corner of the pen so that when it had to be moved one man could push it along.

Pasture for Hogs

P. L., a tenant farmer in Pottawatomie County, writes that there is no provision made for hog pasture on the farm he is now on and asks if there is anything he can plant that will make quick pasture that can be used this season.

There is probably nothing better for this purpose than the Dwarf Essex rape. This plant belongs to the cabbage family. It grows best in a rich soil such as an old feed lot. It will grow several feet high in this kind of soil. Its broad, fleshy leaves are rich in nutrients and it will furnish good grazing for hogs during the spring and early summer months. It should not be allowed to become tall and rank before turning in the hogs. Some complain that hogs will not eat rape. If they are turned in when it is not more than twelve or fourteen inches high, they will soon learn to eat it with a relish. If pastured too early, many of the plants will be killed by the hogs pulling them out by the roots. If the hogs are removed from the patch of rape when there are still a few straggling leaves left on the stalks, it will make a second growth and can be pastured down again later.

An acre of rape will supply pasture for fifteen or twenty hogs for two or three months. It can be sown in March or early April and will be ready to pasture in six or eight weeks. Prepare a fine, mellow seed bed and sow broadcast at the rate of about four or five pounds of seed to the acre. Rape does not do so well during the hot summer months as in the early part of the season.

Sudan grass is probably as good a forage as can be sown for immediate pasture during the hot summer months. A small patch of this will produce a very large amount of forage. Cane has been used a great deal for summer pasture but we believe the Sudan grass is better.

For early spring pasture, oats and rape can be sown together. Sow the oats first, drilling them in if possible, and then after they are up scatter the rape seed broadcast and harrow lightly to cover. Oats are particularly valuable because they come so early in the season and are especially good for sows with young pigs. It is claimed by some hog men that there is far less trouble from scouring in little pigs when they are pastured on oats than when they are on alfalfa.

Dairy Versus Beef

J. E. Kinzer, of Rooks County, writes the following letter relative to the respective merits of beef and dairy farming:

"I see the Santa Fe is going to run a dairy and poultry demonstration train. I would like to have someone who is up on figures, figure out the comparative results of dairy farming and beef farming. Let the start in dairying be made by taking four registered two-year-old heifers and one yearling registered bull of some dairy breed, a flock of hens and two registered yearling sows of any breed. In like manner start the beef farm with four two-year-old registered Hereford heifers and a yearling registered bull, with the hens and two brood sows as above. Assume placing the dairy stock on half the farms of the state, and the beef stock on half. Pour the kafir, milo, alfalfa, cane and corn into them, and see which group of farms will be ahead in five years. The writer

(Continued on Page Seven)



**Masterpieces of opera
by the
world's greatest artists**

The mere mention of opera suggests Caruso, Alda, Braslau, Calvé, Destinn, Farrar, Gadski, Galli-Curci, Garrison, Gluck, Hempel, Homer, Journet, Martinelli, McCormack, Melba, Ruffo, Schumann-Heink, Scotti, Sembrich, Tetrassini, Whitehill—the commanding personalities who dominate the operatic stage.

These renowned artists in full realization and acknowledgment that the Victor alone reproduces their art with absolute fidelity, make records for the Victor exclusively.

Any Victor dealer will gladly play any music you wish to hear. Write to us for a copy of the Victor Record catalog—the most complete catalog of music in all the world—and name and address of nearest Victor dealer.

Victor Talking Machine Co., Camden, N. J.

Important Notice. All Victor Talking Machines are patented and are only licensed, and with right of use with Victor Records only. All Victor Records are patented and are only licensed, and with right of use on Victor Talking Machines only. Victor Records and Victor Machines are scientifically coordinated and synchronized by our special processes of manufacture; and their use, except with each other, is not only unauthorized, but damaging and unsatisfactory.

**Victor
Supremacy**

FARM SEEDS ----AT FARMER PRICES---- WE CAN SAVE YOU MONEY

on your Farm and Garden Seeds, if you will write us and tell us what you want. All our high grade seeds are sold subject to government or any state test. Don't pay two or three profits between you and the man that grows the seeds, but send direct to us and we will save you a lot of money in the purchase of your seeds. We offer attractive prices on Alfalfa, Red Clover, Sweet Clover, Timothy, Alsike and other Clovers and Grasses. Can also make you low prices on all the best varieties of Seed Corn, Spring Seed Wheat, Oats, Barley, Speltz, Cane, Kafir Corn, Billion Dollar Grass, Millets, Rape, Vetch and all kinds of Farm and Garden Seeds. Write us—give us a list of seeds and quantities wanted and ask for our Big Catalog. IT'S FREE. It tells you all about everything you want to know and should know, to make farming pay. Dig Mother Earth—you will never see this great prosperity again.

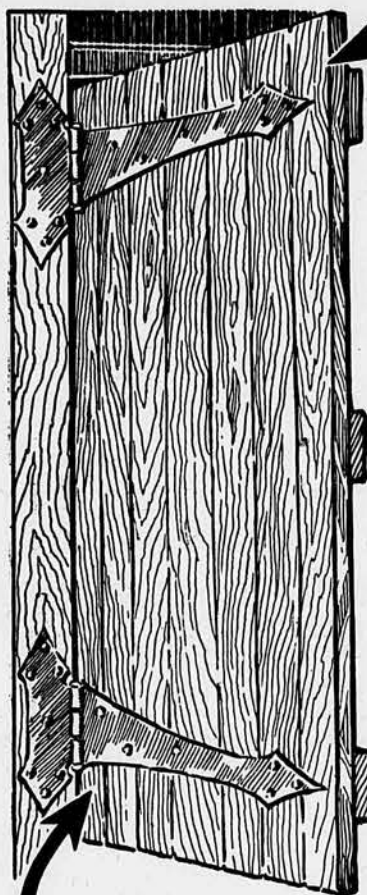
Address: JEFFERSON-RATEKIN SEED CO., Jefferson, Iowa.



KEROSENE ENGINES
OTTAWA LATEST DESIGN
Durable, Powerful, Reliable, Maintenance. Built to last; to do hard, heavy work. Uses Cheapest Fuel. Full 4 to 1/2 horse-power more than rated. 3 Months Trial. Easy Terms. Six 1/2 to 22 H.P. Easy to start. No Cranking. No batteries. 10 Year Guarantee. Most practical engine ever built. Engine book free. A Postal brings it.
THE OTTAWA MANUFACTURING CO.,
561 King Street, OTTAWA, KANSAS.



CASH FOR BAGS
Don't throw them away. Save them and ship to us. We'll pay you HIGHEST MARKET PRICE. Get your neighbor to ship his bags with yours. Established 1870.
FULTON BAG & COTTON MILLS
590 S. Seventh St. St. Louis, Mo.



ENDURANCE

THE hinges on the barn of the old homestead were hand-hammered by the blacksmith. The iron was slowly and carefully made and was free from most of the chemical impurities that cause rust. That is why those old iron hinges lasted to see many doors come and go.

"ARMCO" IRON CORRUGATED CULVERTS

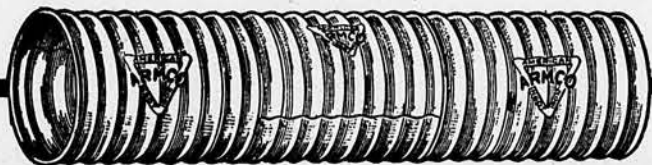
like grandfather's barn door hinges, are made of iron so pure that they resist rust. They will outlast many ordinary metal culverts and, like the old hinges, will endure after the men who place them have passed away.

"Armco" Iron Culverts mean true economy in road building and upkeep; they represent prudence in the use of public funds. The trade-mark on every section is a pledge of "value received".

For full information on "Armco" Iron Culverts, Flumes, Sheets, Roofing, and Formed Products, write the manufacturer in your vicinity, or

ARMCO IRON CULVERT AND FLUME MFRS. ASSOCIATION

Cincinnati, Ohio



Posts That Defy Decay

EVERY farmer in America using ordinary fence posts is paying his share of the millions lost each year for repairs and replacements due to decay. It is estimated that the per farm expense for this work amounts to at least \$50 each year—that is \$100 in two years and \$200 in four years. This loss can be cut down to almost nothing by using posts that are specially treated with pure distilled creosote by the Long-Bell hydraulic vacuum process.

Replace Your Old Posts Gradually.

As your old posts decay replace them with L-B Creosoted Yellow Pine Posts—a few at a time, if necessary, or save all further work and expense by replacing all your old posts now.



CREOSOTED Yellow Pine POSTS

will give upright service for as long as 40 years. No splitting or peeling—no cracking, no decay—no repairs or replacements. These posts, all treated and ready to be set cost very little more than ordinary posts. Yellow Pine has a greater shearing and bearing strength than any other wood. When treated according to our process they are practically everlasting.

FREE BOOK Write your name on a post card and mail today for a copy of our free book "The Post Everlasting." Tells all about the tremendous loss each year and how you can save at least \$50 a year. It explains fully the Long-Bell process.

THE LONG-BELL LUMBER COMPANY, Kansas City, Missouri.
122 R. A. Long Building.

For WHEAT and CORN

ALFALFA and all other crops, a perfect seed bed is as important as to seed or plant. The Western pulverizer, packs and mulches—makes a perfect seed bed—at one operation, without extra horsepower. Especially adapted for breaking crust on winter wheat or other grain—forms the hardest crust into a granular surface mulch without hurting the grain. Stops evaporation—preserves moisture.

Western Pulverizer, Packer and Mulcher

Made in 8 sizes, 1 and 3 sections. Sold direct, price \$20 and up. We want every farmer to have our free catalog before buying a roller or packer. It will prove we can save you money and have far the best machine. Contains full description and price direct to you, letters from many farmers proving its advantages over other makes, and much other valuable information. Send for it today.

WESTERN LAND ROLLER CO., Hastings, Nebr. Box 210



Catch Fish, Beels, Mink, Muskrats, and other fur-bearing animals in large numbers, with the New, Folding, Galvanized, Steel Wire Trap. It catches them like a fly-trap catches flies. Made in all sizes. Write for price list, and free booklet on best bait ever discovered for attracting all kinds of fish. J. F. GREGORY, K-233, St. Louis, Mo.

10 1/2¢ A ROD

164 Styles. YOU save money by ordering direct at wire mill prices. Shipment from Kansas, Indiana, Nebraska, Texas, Colo., Calif. CATALOG FREE. Write today. OTTAWA MANUFACTURING CO., 110 King Street, Ottawa, Kansas.

DAIRY SUPPLIES
Equipping Barns, Dairies, Creameries, Milk Receiving Stations, Butter Factories, City Milk Plants and Ice Cream Manufacturing Plants is our specialty. Send dimensions of room, number of cows, amount of production, supply, or output, also results desired and we will relieve you of all details and send you an itemized quotation immediately.
RILEY HAUK VOGELSONG SUPPLY CO.
SEND FOR CATALOG S
3rd & Vine Sts. COME IN TO SEE US ST. LOUIS, MO.

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

Kansas Farmer Dairy Club

Did You Understand Your Score Cards

WHEN you read the score card showing the way the milk sample which you sent to the contest at Manhattan, was graded, did you understand it? We have been asked some questions about these cards and will try to tell you something about how these scores are made.

The first item listed is bacteria. These cannot be seen by the naked eye and can be counted only by a method which must be worked out in the laboratory. By reading at the top of the opposite side of your score card, you will see that in order to get a perfect score on this point the milk must not contain more than 400 bacteria to the cubic centimeter. If you could see a cubic centimeter of milk it would be a little less than one-half inch square. It hardly seems possible that 400 little animals could be found in so small a space, does it, but you will note on your card that there is milk produced that contains as high as 200,000 bacteria to the cubic centimeter, and even more. The milk produced by some very careful dairymen, if it is not pasteurized and held for a day, will sometimes show 6,000 to 8,000 bacteria to the cubic centimeter, so do not be discouraged if your card shows more bacteria than you think it should. Just remember that cleanliness and care are the two important things in controlling this bacterial count. Try just as hard as possible to keep all germs from getting into the milk from the outside, and keep any that may be in it from developing by cooling the milk as quickly as possible after it is produced. If the animal heat is left in, bacteria will develop and multiply fast. The less care given the milk, the more bacteria it will show.

In a test of this kind the flavor and odor are determined by heating the milk. Any odor or flavor in the milk can be readily detected if the milk is heated to 90 or 100 degrees after it is twenty-four or thirty-six hours old. The bacteria have much to do with the odor and flavor, and the different bacteria produce different odors and flavors.

You may have thought the sample of milk which you sent in was perfectly clean, and yet if it contained even a little lint from the straining cloth, this would gradually settle to the bottom of the bottle and any foreign substance—anything that is not milk—is dirt when the milk is scored as closely as it must be in a contest of this kind.

The scoring for fat content was in this instance done on a basis of 4 per cent representing a perfect score. Butter fat content is something you cannot control in your cow. If she is a low testing cow, there is nothing you can feed her to increase the test. Her test will be higher toward the end of the year than when she first freshens, but this is a part of her nature and is not influenced by her feed.

"Solids not fat" are milk sugar, casein and ash. These are beyond your control also, and are governed to a certain extent by the butter fat test. Low testing milk will contain less of these solids than will high testing milk. Milk sugar and ash cannot be seen in milk, but the casein is that part which, when sour milk is heated, becomes clabber—the part which is made into cottage cheese. In this process of heating sour milk the milk sugar is in the whey and the ash is in both the cheese and whey. These solids are determined by a little instrument called a lactometer. This has a graduated scale on it and is floated in the milk. The solids are heavier than the water in the milk and the distance the graduated scale floats above the surface of the milk indicates the per cent of the solids in the milk.

The acidity or sourness of your milk was determined by the amount of lactic acid which was found in it. This lactic acid can be controlled to quite an extent by the temperature of the milk. Milk that is well cooled develops less lactic acid and so remains sweet longer than warm milk. This lactic acid is very necessary in making butter or cheese, but does not improve whole milk. This is why your milk was scored down if it showed a great deal of acidity.

If you will read the paragraph at the bottom of the opposite page of your score card, you will understand the mark you received for "bottle and cap."

As all these points have an important bearing on the quality of milk, it is

very necessary that the marking be done accurately and closely in a market milk contest. So if you are disappointed over your score this time, remember these points and the next time you are in a contest make sure you have used every precaution to make your score high on those points which you can control.

Is Coming to See Us

Enclosed you will find my records. The reason I charge pasture is that my cow is running in the stalk fields and meadow in the day. As the winter has been a good one, the cows get good pasture in the stalk field and meadow. But the stalks are not as good as they were and the meadow is pretty well eaten down, and father charged me only fifty cents for pasture in January.

Four or five of my friends and I are coming to Topeka between now and April 1, and we will stop to see you and your office and printing press.—ERNEST S. ASBURY, Leavenworth County.

Message to Club Members

I am sending you a picture of my cow and myself.

I am feeding my cow only six pounds of grain a day. I give her all the good



CARY BURTON AND HIS GRADE HOLSTEIN COW

alfalfa she will eat. We feed corn fodder in the lot.

I sent some of my cow's milk to Manhattan. I was glad some of the Dairy Club members won prizes.

With best wishes to the Dairy Club members.—CARY BURTON, Butler County.

Banker Is This Girl's Friend

Received your letter about sending the milk to be tested for quality and I am sorry to say that my cow Martha is only giving about one quart of milk a day now. I am only milking her once a day. Martha is in good condition. I am feeding her good alfalfa hay. She has plenty of pure water to drink.

I have sold about \$60 worth of cream from her, besides selling her calf for \$30. It isn't quite three months until she will freshen again. I deliver my cream to my cream dealer in Beardsley, three miles from our place.

I would not sell my cow for a great deal more than I gave for her. The banker of whom I borrowed the money, said he figured that it would take me two years to pay for Martha and was surprised when I paid for her in eight months. He said any time I wanted to buy another cow he would loan me the money.

I am very sorry that I could not send the milk to be tested for quality, but my cow was not giving enough. I decided to let Martha go dry this time as she has not been really dry for over two years.—LELA MAE HAYNES, Rawlins County.

The score cards covering the milk samples sent in for the state market milk contest held at Manhattan during Farm and Home Week, have been mailed to the contestants. In our letters to you giving your February butter fat tests, we asked that you send us these cards so that we might make a record of them in this office, and we hope you will have done this before this paper reaches you. If not, won't you please mail your card to us right away?

Ever keep fresh in your mind that in producing milk you are producing food for the human family and that it is impossible to be too careful about keeping that food clean and pure. This will bring its reward financially, too, when it becomes known that you are careful,

(Continued from Page Five)

Pull the Stumps

Clear land slick, clean and fast at low cost. Big money clearing land for others. The Hercules big Free Book contains boiled down experience of 25 years of land clearing. Stumps pulled at three cents to five cents each.

Hercules Portable Unlimited Guarantee

Solid steel bed plate, broad steel wheels. The marvel of the age. Get our special low introductory offer on this new machine that we can cover with an unlimited guarantee.

Write today
HERCULES MFG. CO.
110325th St., Centerville, Ia.



All-Steel Triple Power

Get Hercules Big Book FREE

ALUMINUM WORK SHOES

A Work Shoe for Rough and Wet Work on Farm, Cement Floors, Factory, Mines, Railroads, Etc.

GUARANTEED.—Break-proof metal bottoms. Water-proof—rust-proof—noiseless—comfortable—fine fit—easy walking.

NATIONAL ALUMINUM SHOES outwear several pairs of leather shoes. Keep feet dry and warm in winter, cool in summer, prevent corns, bunions. Snow or mud can't stick to sole. Best leather uppers. Sizes 1 to 13—heights 9 in. to 12 in. 14 in. Money back if not satisfied. Postal brings free catalog giving full information, how to order, etc.

National Aluminum Shoe Co.
Dept. 25
Madison, Wis.



THE NEVER GET-AWAY BRIDLE BIT

\$100.00 reward if you show me a team that cannot be stopped and controlled with this wonderful Bit. Every farmer and ranchman needs a pair.

Ten Days Free Trial

I will send you these Bits on 10 days free trial, prepaid parcel post, if you furnish bank reference. If as represented, send \$1.50 each, if not, return the Bits.

WM. H. NIEMANN, LITCHFIELD, ILL.

Hides Tanned

We give you the opportunity of sending your Horse and Cow Hides to us to be tanned and made up into beautiful Coats and Robes for you.

Our superior grade of work costs you less than the ordinary class of work.

Write for free catalog, giving you all information. Address

COWNIE TANNING COMPANY
522 Market Street DES MOINES, IOWA

Winner Opening Silo Roof

Gives 6 to 9 feet more silo space and 15 to 40 tons more silage worth up to \$160 each year. Delivered prices quoted. Special discount to March buyers. Act quickly. Write to day.

Silo Specialty Mfg. Co.
227 19th St. Clinton, Iowa

Bush Car Delivered Free

Ride in a Bush Car. Pay for it out of your commissions on sales, my agents are making money. Shipments are prompt. Bush Cars guaranteed or money back.

Write at once for my 48-page catalog and all particulars. Address J. H. Bush, Pres. Dept. 12

114-in Wheelbase
Delco Ignition—Elec. Stg. & Ltg.

BUSH MOTOR COMPANY, Bush Temple, Chicago, Illinois

\$45 SADDLE for \$36 Cash

Fourteen-inch swell front, 27-inch wool-lined skirt, 8-inch stirrup leather, guaranteed, solid steel fork.

FRED MUELLER
1413 Larimer St. Denver, Colo.

CATALOG FREE

I CAN Make YOU The BEST PRICE

Your choice of **WITTE High Grade Engines**—Gasoline or Kerosene—2 to 22 H.P.—all styles—stationary or on trucks, saw rigs, etc., with or without magneto—Cash or Payment.

WITTE ENGINES

are made in the largest exclusive engine factory in the U.S., selling direct, 30 years success proves WITTE Engine quality. Immediate shipment. Book FREE.

WITTE ENGINE WORKS
1803 Oakland Ave., Kansas City, Mo.
1803 Empire Bldg., Pittsburgh, Pa.



will stake the Herefords to win and at less labor cost. I would like to see this problem figured out by someone who has tried both ways, or by two men, one having had the dairy experience and the other the beef cattle experience. Whether you get anyone to figure this out or not, keep me posted on the Herefords and Poland Chinas through KANSAS FARMER."

We hardly believe the question of the relative merits of beef and dairy farming can be arbitrarily settled in the manner suggested by Mr. Kinzer. Success in either line requires certain personal qualifications on the part of the man. One man might do well with the Herefords who would fail absolutely if he tried to handle cattle of dairy breeding. The character of the farms and the amount of home help must be considered.

Perhaps some of our readers would like to discuss the question for the benefit of Mr. Kinzer and many of our readers interested in live stock farming. We are generally agreed that some form of live stock farming is essential if we are to get the best returns and maintain the fertility of our land.

Formalin Treatment for Smut

H. G., Greenwood County, writes that he is going to try treating his seed for smut this spring. He asks if corn and cane seed are treated the same as kafir and whether it makes any difference how long before planting time seed grain or seed potatoes are treated.

The smuts of our grains are the most common fungus diseases affecting them. The loss comes from the actual destruction of the kernels and from the decrease in the value of the whole crop because of its containing smutty grain.

The disease is carried from one year to the next by the dust-like spores which cling to the seed grain. These spores can be killed by the formalin treatment. Sometimes perfectly clean seed may become infected with smut spores from a threshing machine which has threshed smutty grain, or from coming in contact with bags, bins, or even the seed box of the drill.

To treat seed for smut, mix one pint of formalin—which is a 40 per cent solution of formaldehyde and can be secured at any drug store—with forty to fifty gallons of water. This makes a solution strong enough to kill smut spores without injuring the vitality of the seed. Spread the seed to be treated on a canvas or on a clean barn floor and sprinkle thoroughly with the mixture. Shovel the grain over, finally piling it into a heap and covering it for two hours with canvas, blankets or sacks so as to keep in the fumes of the formalin. After this time dry the grain by spreading it out and stirring it occasionally. Care should be exercised that it is not put back into bags or bins that have contained smutty grain or it will become reinfected.

Another method of treatment is to put the grain in loose bags and to suspend these in the solution for a couple of hours, drying it out after the treatment as described above.

It is always best to treat seed of various kinds just before it is used if possible, as there is less danger of re-infecting it.

Scabby potatoes can be safely used for seed if they are immersed for an hour and a half or two hours in a solution consisting of a pint of the formalin mixed with about thirty-five or forty gallons of water. They should be spread out in the sun and dried before being cut and should never be put back in infected sacks or baskets.

This treatment of the seed will not prevent the production of scabby potatoes if the land is already infected. Land that has produced scabby potatoes must be planted to other crops for several years before it will be clean of the infection so that it will again grow clean potatoes.

The smut of corn cannot be prevented by treating the seed. This smut is scattered in the field and is transmitted to the crop through the soil. Use the formalin treatment for any of the sorghums and for oats that are infected with smut.

Due to congested freight conditions existing at present, all materials for spraying orchards, gardens and shade trees should be ordered at once for immediate shipment. Orders sent at the usual dates will likely result in shipments being received too late for early spring applications.

No Time Lost With Louden Hay Tools

Wm. Louden
Recognized Authority on
Modern Barn Building
and Equipment

Louden Hay Tools are great economizers. Put them to work in field or barn and you'll have spare men and teams for other work on the farm, throughout the haying season.

A Combination that Moves Amazing Loads in Record Time

The Louden Senior Hay Carrier is the strongest swivel fork carrier made—simple as well as powerful. Never fails to register on account of kinking or twisting ropes.

The Louden Balance Grapple Fork handles dry clover, alfalfa or threshed straw as perfectly as long, heavy timothy—holds it tight; drops it clean, and spreads it well in the mow.

The Louden Power Hoist is easily operated by one man from the load. Works quickly and accurately. Available for any heavy lifting on the farm.

This combination cleans up a big load of hay in a few minutes. Efficient and dependable even in inexperienced hands, because of extreme simplicity and strong construction.

Illustrated catalog—224 pages—showing full line of Louden Hay Tools and other barn equipments, sent postpaid on request.

The Louden Machinery Co.,

(Established 1867)

1514 Court St., Fairfield, Iowa.



Louden Senior Hay Carrier. Guaranteed to handle 1,500 pounds continuously and safely.



Louden Balance Grapple Fork, built of special high grade steel. Spreads 58 inches; times going to hay 24 inches.



Louden Power Hoist, may be used with steam, gasoline or electricity.

The Louden Line Includes

- Stalls and Stanchions
- Animal Pens of all kinds
- Litter and Feed Carriers
- Spring Balanced Mangers and Manger Partitions

- Horse-Barn Equipment
- Barn and Garage Door Hangers
- Hay Unloading Tools
- Cupolas and Ventilators

"Everything for the Barn"

\$60 A WEEK AND THIS FREE AUTOMOBILE

I OFFER this Big Money and a FREE Automobile to one hustling Representative in each county in the U. S. This is not a contest. Every agent can get a FREE Automobile and \$60.00 a week. You don't need experience. I want you to advertise, sell and appoint sub-agents for the Robinson Folding Bath Tub. It's a whirlwind seller. Solves the bathing problem. No plumbing, no waterworks needed. Full length baths in any room. Folds in small roll. Won't leak. Self-emptying. Ten-year Guarantee. Rivals \$100 bath-room. Never such a big seller; never such a big money-maker. Never such a liberal offer as this. Think! \$60.00 a Week and FREE Automobile.

Exclusive Territory. 100% Profit.

Backed by 10 Year Gold Bond Guarantee

Sensational Sales Successes

It's easy. You can do it. J. H. Brown, N. J. says: "14 calls, 14 sales. How's that?" (\$70 profit). R. C. McCartney, Mich., says: "Sold 5 tubs in 15 hours." (\$25 profit). "Sold 6 from noon to night," says J. A. Hembs, S. D. (\$30 profit). H. M. Velsky, N. D. sold 10 in 3 days. (\$50 profit). W. A. Gloeckler, S. D., sold 11 in 3 days. (\$55 profit). A. R. Engle, Mont., got 11 orders in 2 1/2 days. (Addresses furnished on request). You can do as well as these men. You can sell 2 a day. That means \$60 a week, clean profit, and a big, speedy Touring Car Free. Little capital needed. I grant credit to deserving men. Furnish you with a Demonstrating Tub, on liberal plan. You can't lose. 70% of the homes have no bath-room. They need the Robinson Tub. Just show them. Take the order. Quick sales and immense profits. This is YOUR chance. Don't delay. Get busy. Write today for Demonstrating Tub and FREE Automobile offer.

H. S. Robinson, Pres., THE ROBINSON CUPBOARD MFG. CO., Toledo, O.

Plow and Pull With Your Ford

\$135.00 f.o.b. Quincy Ill.

Ford With Pull-Ford

PULLFORD—

Easily Attached to or Removed from the Car in 30 Minutes

MAKES a practical tractor out of a Ford—or most any other car. Get low cost power. No holes to drill. Attached with clamps to car frame. Does work of 3 or 4 horses. Pulls plows, harrows, drills, mowers, the binder, hay loader, road grader, etc., also your farm wagons anywhere that 3 or 4 horses can. Steel wheels with roller bearings. Two pairs steel pinions, allowing two speeds, one for plowing and one for hauling wagons. Multiplies usefulness of your car. Only \$135.00, f. o. b. Quincy, Ill. Write for circular.

PULLFORD COMPANY, Box 34C
Telephone No. 54 Walton Heights, QUINCY, ILLINOIS



A Thoroughly Well-built Car at \$845

ELCAR

There are few cars equally beautiful at any price, and few, if any, equally good at as low a price. We put into the ELCAR the style, class and high-grade workmanship that went into our former models selling up to and above \$2,000. Our organization has had long training in the production of quality cars, and both beauty and quality are inherent in the

Three New Models at \$845

Five-Passenger Touring Car
Four-Passenger Touring-Roadster
Two-Passenger Roadster

Each model is large and roomy—some would say room to spare, but you want a car that will seat its full load comfortably. Fine in appearance, fine driving and remarkably easy riding qualities, power in excess, economical in upkeep and fuel consumption, a car to give you satisfactory service for years to come—a car that we believe to be as high in quality and as nearly mechanically perfect as any car ever offered at anywhere near as low a price.

Our Illustrated Catalog

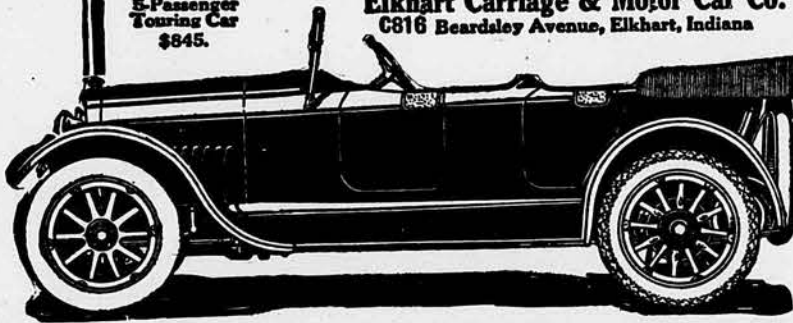
will show you views of all the ELCAR models and the more important mechanical parts, and is descriptive even to the minute details of construction. We will gladly mail it to you upon request.

A Few Elcar Specifications

Wheel Base—As long as some cars selling up to \$2,000 and more—115 in.
Motor—4-cylinder; long stroke; high speed; 34.7 h. p. at 1,800 r. p. m.
Fuel Supply—Stewart vacuum system.
Ignition—Delco automatic spark advance with manual control.
Starting and Lighting—Dyneto two-unit; double-bulb headlights; Willard storage battery.
Clutch—Dry multiple disk—seven plates, steel on Raybestos.
Rear Axle—Full-floating with roller bearings at each end of wheel hubs.
Differential—Spiral bevel driving gears, with roller main bearings and ball thrust bearings.
Brakes—Internal and external, two inches wide on 12-inch drum.

5-Passenger
Touring Car
\$845.

Elkhart Carriage & Motor Car Co.
6816 Beardsley Avenue, Elkhart, Indiana



Only \$2 DOWN and
One Year
To Pay

For any Size—Direct from Factory

You can now get one of these splendid money-making, labor-saving machines on a plan whereby it will earn its own cost and more before you pay. You won't feel the cost at all.

\$24 BUYS THE NEW BUTTERFLY

No. 3 Junior—a light running, easy cleaning, close skimming, durable, lifetime guaranteed separator. Skims 95 quarts per hour. We also make five other sizes up to our big 800 lb. capacity machine shown here—all sold at similar low prices and on our liberal terms of only \$2 down and a year to pay.

Patented One-Piece
Aluminum Skim-
ming Device, Rust
Proof and Easily
Cleaned—Low
Down Tank—Oil
Bathed Ball Bear-
ings—Easy Turn-
ing—Sanitary
Frame—Open Milk
and Cream Spouts.

30 DAYS' FREE TRIAL GUARANTEED

You can have 30 days FREE trial and see for yourself how easily one of these splendid machines will earn its own cost and more before you pay. Try it along-side of any separator you wish. Keep it if pleased. If not you can return it at our expense and we will refund your \$2 deposit and pay the freight charges both ways. You won't be out one penny. You take no risk. Postal brings Free Catalog Folder and direct from factory offer. Buy from the manufacturers and save money. Write TODAY.

ALBAUGH-DOVER COMPANY, 2181 Marshall Blvd., Chicago, Ill.
Also Manufacturers of Albaugh-Dover "Square Turn" Farm Tractors



Senora Daisy De Kol

No. 58816

Milked 7 Years With
HINMAN MILKERS

The simplicity of the Hinman is responsible for this long satisfactory service. Nothing to wear out—no complicated pulsating mechanism—no air pipe lines—no vacuum tanks. Easy to keep clean, easy to operate. Its simplicity also means low first cost and low up-keep cost.



IF YOU HAVE 10 COWS OR MORE Write For Big FREE Catalog

HINMAN MILKING MACHINE CO., 53-63 Elizabeth St., Onondaga, N. Y.

Service Dealers Everywhere. Write for one near you.

HINMAN
MILKERS
Success for 9 years

SAVE HARNESS MONEY

Write today for Bargain Catalog of guaranteed goods, harness, saddles, blankets, bits, etc., and save 50 to 60 per cent.

FREIGHT PREPAID We ship everywhere with privilege of examination. Two years guarantee. Money back if not O. K. Send name today. Address
H. & M. HARNESS SHOP, Dept. 140 St. Joseph, Mo.



BASIS OF BEEF PRODUCTION

"MORE and better live stock for Southeastern Kansas" is the slogan of the Southeastern Kansas Live Stock Association, and the attendance at the two-day meeting held in Fredonia February 20 and 21, and the interest shown, indicates that farmers of that section are keenly alive to the importance of introducing live stock farming in that part of the state. We were present at part of the meetings which were held in a building well adapted to displaying exhibits of live stock. The lectures and discussions were given in a room in one corner of the large building which housed the live stock exhibits, and this room was crowded at every talk. It is somewhat suggestive that this building, which was originally constructed as a factory for building farm machinery, should be appropriated to demonstrating and promoting the fundamental industry upon which all prosperity in Kansas depends.

No attempt was made to conduct a stock show in the ordinarily accepted meaning of the term, but a number of breeders of pure-bred live stock had gone to considerable trouble and expense to have representative animals from their herds on exhibition. W. J. Brown, of Fall River, had six Herefords; J. H. Keith, of Coffeyville, showed nine from his herd; Samuel Drybread, of Elk City, six. Howard Hill, of LaFontaine, had twelve Shorthorns, including one of his herd bulls, the son of the famous Avondale and full brother to Lord Avondale. I. L. Swinney, LaFontaine, who has been breeding Shorthorns for ten or twelve years, had some of his best cattle there.

An exhibit which attracted a great deal of attention was a pen of pure-bred Shropshires owned by John Gilmore, of the Gilmore Ranch, Fredonia. Mr. Gilmore is bringing to this ranch as foundation stock, some of the finest sheep of this breed to be found in the country, including a number of imported ewes. The agricultural college sent a car of live stock, including representative animals of the leading dairy and beef breeds of cattle, several breeds of hogs and sheep, and three first class stallions of the leading draft breeds.

Many good dairy herds are being started in this section of the state and we were sorry to note that with the exception of the college animals, there were no dairy exhibits. The program, however, made up for this lack, for most of the first day was devoted to discussions of dairying and dairy stock. In these discussions the importance of the dairy cow as a means of marketing the feed grown on the farms, and building up the soil fertility, was shown. Considerable emphasis was placed on the need for more efficient cows.

One of the strong talks of the meeting was that of Prof. W. A. Cochel on the subject, "The Basis of Beef Production." In introducing Professor Cochel, H. M. Hill paid a high tribute to the constructive experimental work being done by Professor Cochel and his able associates in the experiment station work both at Manhattan and at Hays.

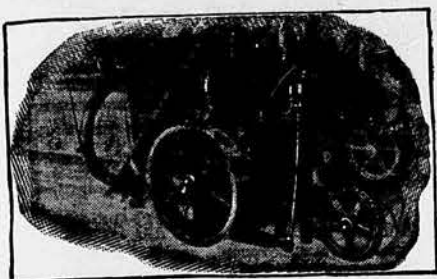
Reference was made to tests that have shown so conclusively how beef cows can be carried through the winter on silage, straw, and a little cottonseed meal, at a cost not exceeding \$7 or \$8 a head. Mr. Hill said he had visited at the Hays station when the calves were coming in the spring and had never seen stronger, healthier calves at birth. Such work as this which has been conducted during the past four years is of incalculable value to the cattlemen of the state, since it enables them to take advantage of the methods tested out experimentally and secure a wider margin of profit in their business of producing beef cattle for market.

Earlier in the session Prof. L. E. Call had shown how soil fertility was absolutely dependent upon live stock farming and what must be done to reap the benefits of live stock farming in building up the productivity of the soil. "We are all agreed," said Professor Cochel, "that live stock farming is essential to permanency in agriculture." He referred to the fact that the soil is fundamental to all agriculture. In order to have live stock develop successfully, we must first of all develop good farming methods. In other words, the live stock farmer must first of all learn how to handle his soil and grow crops. It is the exception to the general rule to find good live stock on a farm where poor farming methods are practiced. Live stock men are sometimes apt to think of the live stock business as separate and apart from farming. In proof of this statement of the relationship between good farming and live stock production, Professor Cochel called attention to the fact that no breed of live stock of any importance has ever been developed except where the soil has been productive and where pastures have been luxuriant. Grass is really the basis of the cattle business and far too little attention is paid in Kansas to the maintenance and improvement of our pastures. We hear a great deal of the breeding and improvement of our various grain crops, but very little is said concerning pasture improvement. It is difficult to find a concrete measure for the value of grass. The beef cattle man, however, to be successful, cannot overlook the matter of pasture improvement and the growing of forage crops suitable for feeding his stock.

The next point to which Professor Cochel directed attention was that of marketing the forage crops. He emphasized the point, however, that in marketing the cheap forage of the farm through cattle it must never be forgotten that the young animals must be well grown and developed in order to handle the low grade feeds with profit. The first year calves must be well fed. They make more growth during that period than in all the rest of their lives. You never hear of a champion animal in the show that was starved during his first year. As animals get older they should be kept up as much as possible on the cheapest feed that can be grown and special attention should be paid to get-



EARLY MORNING AT FREDONIA LIVE STOCK CONFERENCE.—PREPARING TO RECEIVE VISITORS.—PROF. W. A. COCHEL IN BACKGROUND AT RIGHT



E-B BINDER ENGINE

Lightens the pull on the team. Quickly attached to any binder. Also can be used on pump jack, churn, corn sheller, wood saw, feed grinder, etc. Weighs only 150 lbs.—4 h. p. One of the many articles in the E-B line of good farm machinery. Write for catalog. Look for the E-B trade mark. It is your guide to better, more profitable farming. Send for E-B literature.

Emerson-Brantingham Implement Co., (Inc.)
Rockford, Illinois

\$15.00 LINE Between March 9th and 17th a Fifteen Dollar Line Shaft will be furnished free by the E-B dealers with each purchase of an E-B Binder Engine. See your dealer at once.

THE INDIANA SILO

Fifty thousand are now in use on the finest farms in America.

If you are going to buy a silo—this satisfactory service rendered everywhere—should be of special interest to you.

The cost of all materials is advancing like the price of wheat and corn.

Why not save money by contracting for your silo now. It undoubtedly will cost you more next spring or summer.

Let us send you our proposition—to contract now for your silo and deliver it later. We still have openings for a limited number of farmer agents.

INDIANA SILO CO.

611 Union Building, ANDERSON, INDIANA
611 Silo Bldg., KANSAS CITY, MO.
611 Indiana Building, DES MOINES, IOWA
611 Live Stock Bldg., FT. WORTH, TEXAS

Stack Your Hay The Easiest Way—The Jayhawk



THICK, SWOLLEN GLANDS

that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with

ABSORBINE

also other Bunches or Swellings. No blister, no hair gone, and horse kept at work. Economical—only a few drops required at an application. \$2 per bottle delivered. Book 3 M free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Cysts, Wens, Painful, Swollen Veins and Ulcers. \$1 and \$2 a bottle at dealers or delivered. Book "Evidence" free. W. F. YOUNG, P.D.F., 211 Temple St., Springfield, Mass.

Make More Money!

I want eager, ambitious men, the kind that like to clean up \$40 to \$50 a day. I'll make them winners. Men are getting rich, selling my wonderful 12 tools in one. Pulls posts, stretches wire, fixes wheels, etc. Write me immediately.

P. J. Harrah, Pres.
The Harrah Mfg. Co., 68 Spring St., Bloomfield, Ind.

AMERICAN TILE SILOS

None Better—Warranted 5 Years.

10 x 35, 58 Tons.....	\$184
12 x 35, 90 Tons.....	198
14 x 40, 138 Tons.....	258
16 x 45, 215 Tons.....	325

Thousands in use. None Better. Warranted 5 years. Agents Wanted. Write today.

AMERICAN SILO SUPPLY CO.
210 Traders Bldg. - Kansas City, Mo.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

ting as much reserve fat on breeding cattle during the summer as possible. Fat is the most expensive part of the animal. It was estimated by President Waters, in some experimental work conducted a few years ago, that a pound of pure fat on a beef animal cost at least twenty-five cents, and under present conditions this cost would be in all probability almost doubled. Fattening is the most expensive part of beef production and it is essential that growth be made as cheaply as possible on grass and roughage. Under present methods of management it is probably best to grow and fatten at the same time as far as possible.

The beginner in live stock farming must recognize the fact that not every man is fitted to handle pure-bred animals. He may learn how later, but it is essential that methods be improved with the improvement in the breeding of the cattle. Until the live stock man is able to feed out everything that is bred into the animal he is a failure as a breeder of pure-bred stock.

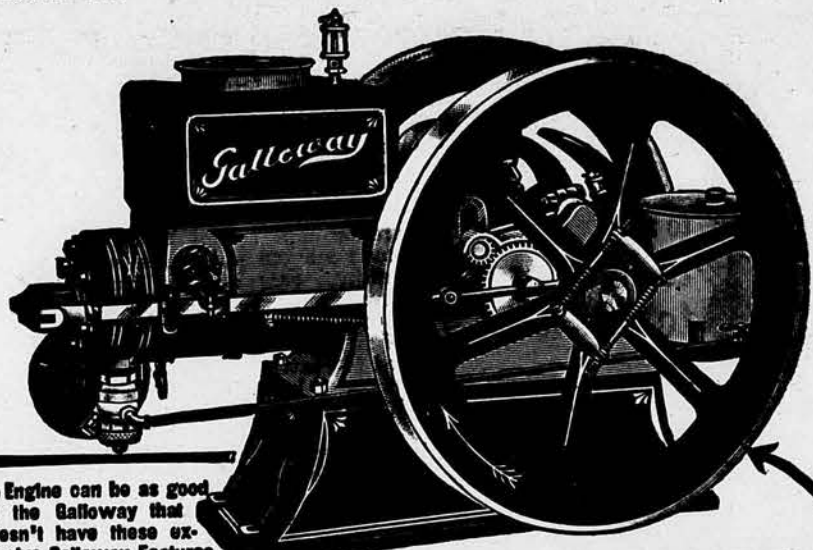
To succeed with good stock, pastures must be improved and good feed grown. Some go to the other extreme and assume that feeding is everything. The better the animal, the more value will be secured from good feeding. It is a part of the business to know when the animal has been fed to the point where it will be worth the most.

Professor Cochel made the point that in marketing feed through cattle it is possible to secure two profits. He illustrated by calling attention to the fact that during the fall and winter of 1915-16 corn was shipped from Kansas to Iowa feeders. These feeders had to pay the market price for this corn and in addition a shipping cost. An opposite condition has prevailed the past winter and feeders in Kansas have been compelled to ship in corn. Professor Cochel stated he had just purchased a thousand bushels of corn at ninety-nine cents a bushel. It was grown in North Central Nebraska, and upon investigation he found that the Nebraska man who grew the corn received but seventy-eight cents a bushel. In order to make a profit from feeding this corn, the Kansas man who shipped it in would have to get twenty cents more a bushel for it through his live stock, than would the man who grew it. Alfalfa hay in Riley County can be purchased on the farms for \$10 or \$12 a ton. In Pennsylvania this same hay is selling for \$22 a ton. The feeding value has not been increased by the shipping, although the cost has been quite materially increased. The successful cattleman should limit his operations to the capacity of his farm for growing roughage, and this estimate should be on a basis of normal years. He thus secures the profit from growing the crop and in addition can make some profit from handling the cattle.

"This brings us back," said Professor Cochel, "to the question of farming." The live stock farmer should by all means be interested in growing those crops that will produce the largest yield of nutrients per acre. If kafir or cane will yield twelve or thirteen tons of silage per acre as compared with corn yielding seven or eight, these crops are the more profitable to grow for silage purposes. Having selected the best crops to grow, it will be found that the yield per acre will be greatly influenced by the fertility of the soil.

In proof of the soundness of these statements, Professor Cochel stated that it was a matter of common knowledge at the present time that the men who have made the most in the cattle business during the past few years are those who have kept herds of high grade cows, grown their own feed and marketed the surplus animals grown either as feeders or as finished cattle. The men who have made the least money are the speculative feeders. They have had to pay too high for their feeding stock and as a result could not make a profit in finishing them for market. One of the reasons for this high cost of feeding stock is that when good cattle go to market the killers will compete with the feeders. Reference was made to the valuations placed on some calves that were fed four months in an experiment. At the close of this test some experienced buyers from the stock yards were asked to place valuations on the cattle. They asked Professor Cochel whether the valuations were to be placed on the basis of what the killers in Kansas City would pay or what the feeders would pay, and they were instructed to place both values on them. They placed a value of \$8.30 a hundred as killers, and \$8.50 a

(Continued on Page Ten)



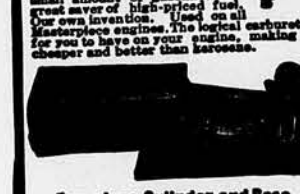
No Engine can be as good as the Galloway that doesn't have these exclusive Galloway Features.



Valve in the Head Type Cylinder
Note large exhaust valve. Engine head perfectly cooled. A steam valve, means ample charge of fuel perfect combustion. No fuel waste. Automobile ground valves insure perfect compression.



Sure-Fire Make and Break Igniter
Webster oscillating magneto makes blue-hot spark. Absolutely sure fire. Weather does not affect it. Eliminates all ignition troubles. Thousands in continuous operation for years without replacing igniter points. Gives best results from a spark or carbon of any type igniter we ever used. You will get results and satisfaction in using this type on your engine at any time of year, winter or summer.



Economy Carburetor
Worth \$15 more on any engine, costs nothing extra on the Galloway. Cuts down fuel bills. Simple, positive air valve regulated at will—easy starting in any weather. Mixes best fuel charge. Makes gasoline most perfect fuel. Has special cold weather valve which makes easy starting in cold weather. Also sets great power from small amount of gasoline. Great saver of horsepower. Used on all our own engines. The logical carburetor for you to have on your engine, making it cheaper and better than kerosene.



One-piece Cylinder and Base
On all Galloway engines from 4 to 16 h. p. insure perfect alignment of cylinder and base. Connecting rod, crank shaft and flywheels. Absolute uniformity of wear. Only scientific and successful method of construction for large, heavy duty, heavy weight engines. Two-piece cylinders and frames cannot be kept in line.

LOOK! THIS 1917 MODEL!

Go over it point by point, feature by feature, compare it side by side with any other make of engine of the same rated same bore and stroke! You will decide for years and years!

QUICK SHIPMENT
LOW PRICES
HIGH QUALITY

For hard, tough jobs, for year in and year out satisfaction they have no equal at higher or lower prices. If you pay less for an engine than a Galloway Masterpiece you could not possibly be getting as good an engine. If you pay more it would only be paying too much. Large bore, long stroke, simple design, heavy weight, mechanical perfection in their building make them power masters in their field. No matter what size or style engine you want I build them here in Waterloo in my own great chain of factories to fill every need. My 15, 25, 40 h.p. and other sizes are just as scientifically designed, built, machined and finished as my mogul engines from 12 to 16 h.p.

SIX 1917 SELLING PLANS

-CASH OR TIME
No matter which way you want to buy I have a plan that will suit you—Cash, Bank Deposit, Half Cash—Half Note, All Note, Installment, and No Money Down, to responsible people. Galloway's guarantee is absolute satisfaction or your money back, and he pays the freight both ways. Remember my **\$25,000 LEGAL BANK BOND** **ABSOLUTELY PROTECTS** you and every one of my prospective customers and proves my willingness to have every claim and statement I make fully investigated. I want you to try a Galloway engine on your farm—in your own shop. That's why I have prepared my new 1917 Masterpiece 1917 model gas, kerosene or distillate engine in every township in every state between now and June 1st, and my new 1917 prices and selling plans will get them.

NOTE 1917 IMPROVEMENTS
Adjustable bearings, no lost motion, develops way above rated horse power. Economy carburetor, worth \$15 more on any engine, costs nothing extra on the Galloway—cuts down fuel bills. Large valves in head, exactly like highest class automobile motors and perfect scavenging, admits perfect combustible mixture. Double ball governor. Large, heavy flywheels. Big bore, long stroke, heavy weight, perfect balance, smooth running. Perfect lubrication, winter or summer. Webster magneto (extra) support lubrication, never misses fire. Easy plies blue-hot spark. Make and break igniter, never misses fire. Easy started, no cranking, needs no batteries. Cylinder and water pot started, frost proof. Galloway engines honestly rated, scientifically, accurately and handsomely built. Our description the truth. Shipments made from Waterloo, Council Bluffs, Kansas City, St. Paul, Chicago, which ever is nearest you.

GET THIS 1917 BOOK ABOUT ENGINES

I want you to have this new book about the famous Galloway Masterpiece engines. It tells you how to pick out, size up and judge an engine. Gives you engine secrets and facts. Tells why to insist on heavy weight, large bore, long stroke and low speed—why light weight, high speed engines are not to be compared with Masterpiece engines and why you are asked four profits for some engines no better. Tells why we sell direct from factory to farm or shop at wholesale. How to install an engine and hook up machinery. How Galloway engines are built. How to lay out and build a cheap, efficient power house. Why our prices on high class stationary and portable engines and saw rigs are so low considering quality. The truth about engines is all set down in black and white. This book is a guide to saving money on every farm. That's why I want you to get it. If you expect to buy an engine I'll pay the postage and be glad to send the book. Ask today. A postal will do. Address me as below.

WM. GALLOWAY, Pres.,
THE WM. GALLOWAY COMPANY
215 Galloway Station Engine Manufacturers Waterloo, Iowa
Specialists

SELF-OILING WINDMILL
With INCLOSED MOTOR
Keeping OUT DUST and RAIN - Keeping IN OIL

SPLASH OILING SYSTEM
Constantly Flooding Every Bearing With Oil, Makes It Pump In The Lightest Breeze And Prevents Wear

OIL SUPPLY REPLENISHED ONLY ONCE A YEAR
DOUBLE GEARS - Each Carrying Half the Load
Every feature desirable in a windmill in the **AUTO-OILED AERMOTOR**
WRITE AERMOTOR CO. 2500 12TH ST. CHICAGO

E. E. Heacock & Son, of Hartford, Kansas, owners of Lowmore Shorthorn herd, one of the outstanding herds of pure-bred Shorthorn cattle in Kansas, report their cattle doing well this winter. They also report a record-breaking demand for high class Shorthorn breeding stock at good prices. Among their recent sales was one of eight cows and heifers to Barrett & Land, of Overbrook, who are starting a herd of pure-bred Shorthorns.

THAT OPPORTUNITY

The famous Swanson-St. Joseph Plow Company line of farm implements is being offered direct to the farmer at prices indicated below. Ten per cent discount on all orders over \$50.00. Cash with order.

14-inch Steel Beam Walking Plow.....	\$11.50
16-inch Steel Beam Walking Plow.....	13.00
20th Century Riding Cultivator, 4 and 6-shovel..	24.50
Two-Row Lister, 4 lever, disc cover.....	74.50

This is that opportunity you're been waiting for. Don't let it slip.
SWANSON-ST. JOSEPH PLOW CO., St. Joseph, Mo.

AMERICANS FOR AMERICA
Determined distinction and support is shown in American homes through framing the Red, White and Blue, and our Chief Executive, President Woodrow Wilson, Uncle Sam's choice. A beautiful, instructive copyrighted U. S. map with illustrations and title as above, size 14x17, will be delivered anywhere on receipt of 10c coin or stamps. Address **AMERICAN CITIZEN, Room 909, 150 Nassau St., New York City.**

T. R. Maurer, of Maurer's Holstein Farm, Emporia, Kansas, reports his herd doing fine. This herd has a record for heavy milking cows. A feature of their herd at this time is the choice lot of young pure-bred cows and springing heifers, including granddaughters of Pontiac Korndyke.

TOWERS FISH BRAND

everything about
a rainy day seems
to say
to keep dry,
to work in
comfort wear
the **FISH BRAND**
REFLEX SLICKER \$3.50

DEALERS EVERYWHERE.
A. J. TOWER CO. BOSTON.

Hog Pasture Mixture

GRISWOLD'S "Ready Quick"

Great for Hogs
Good for cattle and sheep, too. All live stock like it. D. W. JENKINSON, Higgins, Neb., writes: "Hog Pasture Mixture proved all right—just the thing, in the right place. No farmer can make a mistake by sowing it. When the pasture was at its best the hogs would stay in the pasture instead of coming for corn."

Contains 14 grains and forage plant seeds, practically all of which grow again if fed down. Can be sown early or late. Ready in 6 to 8 weeks. Will produce 15 tons of green fodder per acre during the season. A whole lot cheaper than feeding high-priced corn. When other pastures are dried up you can be getting the best of green fodder. Better plant some this year.

Means Green Fodder in the Dry Seasons

JOHN J. KNAPP, Brady, Nebraska, says: "Hog Pasture Mixture gave good results. The dry weather was quite a setback to all forage plants. Your Hog Mixture kept green all summer and gave me quite a help out for corn."

Write for prices. Get our big, new 1917 Seed Annual free, for your Garden and Field Seed purchases. Also Free Bee Supply Catalog.

Griswold Seed and Nursery Co.
Dept. 2-141
Lincoln, Neb.

Utah Lands

are among the choicest in the West. You can buy rich, productive, irrigated or non-irrigated, lands at moderate prices, and on good terms, that are within easy reach of excellent markets.

Tell me for what purpose you desire the land, and I will send to you authentic information absolutely FREE.

R. A. SMITH, Colonization & Industrial Agt.
Union Pacific System
Room 1058 U. P. Bldg., Omaha, Neb.

WHITE SWEET \$3.90
CLOVER 3 Per Bu.

LARGEST MONEY-MAKER KNOWN—INVESTIGATE

The greatest forage plant that grows. Superior to all as a fertilizer. Equal to Alfalfa for hay. Excels for pasture. Builds up worn-out soil quickly and produces immense crops, worth from \$50 to \$125 per acre. Easy to start, grows everywhere, on all soils. Write today for our Big 100-page free catalog and circular about unhulled and scarified hulled sweet clover. We can save you money on best tested, guaranteed seed. Sample Free.

C. A. BERRY SEED CO., BOX 987 CLARINDA, IOWA

ZELLER PRIZE WINNER SEED CORN

The best ever offered. The sensation at Ames Corn Show. Produced 135 bu. to acre in 1914. 1st prize again this year. Only 6,000 bu. to sell. Selected from 50,000 bu. Properly tested, carefully standard varieties. Get Free catalog today. Read about the wonderful corn. Order early. Get best selection for bumper crops.

ZELLER SEED CO., 420 McKinley St., Jefferson, Iowa

FREE BOOK ON TREES

Tells about large assortment of best trees and plants at lowest prices. Ask for Preferred Customer's Discount. No obligation. Book is free. Send for it now. Address

WELLINGTON NURSERIES, Deak G., Wellington, Kans.

EVERGREENS

Nothing better for windbreaks and hedges. We grow all hardy tested varieties. Also a complete line of shrubs, fruit, etc. We are specialists. Write for free catalogue.

Evergreen Nursery Co., Sturgeon Bay, Wis.

30 Select Peach or Apple Trees \$1.80

8 to 4 foot. Your choice of varieties. . . . We are headquarters for all kinds of trees, small fruit plants, roses, shrubs, etc., at wholesale prices to planters. Catalog free.

FORT NURSERY COMPANY
Kansas City, Missouri
Box 358-N

PATENTS

Send sketch. **FREE OPINION** and Certificate of Patentability. Free book, "How to Obtain a Patent and What to Invent." Patents secured through Credit System. **TALBERT & PARKER**, Patent Lawyers, 4517 Warder Bldg., Washington, D. C.

Basis of Beef Production

(Continued from Page Nine)

hundred as feeders to go back to the farms.

Even the feeder, however, who will follow the business consistently for a period of years, has been able to make a little money. The big losses in feeding cattle come from the fact that feeders are too apt to get their profits on a small lot and plunge the next year, investing three or four times as much money and, as often happens, meet with a loss on this big investment. By way of illustration, a feeder was cited who fed 400 cattle one season, making a gain of \$22 a head. The next season he fed 1,200 and lost \$15 a head. If he had fed but 400 the second year he would still have been ahead at the rate of \$3.50 a head for the two years' results. As it was, he had to stand a loss on the two years' operations of \$5.75 a head.

In the future the cattle business is bound to change to the growing of cattle, which means that the stock must be greatly improved to be profitable. Feeders can feed any kind of cattle and make money if they buy them at a price low enough so as to get a good margin by finishing them. The grower, however, who grows poor cattle is certain to lose money under present conditions. The business is clearly tending this way at the present time. Cows are in demand and are everywhere bringing higher prices than their value as beef. We can look for a tremendous improvement in the quality of cattle marketed in the coming years because of this increase in the number of breeding herds kept on our farms.

Professor Cochel made the statement that in the production of beef the cattle themselves should not be expected to do more than pay good market prices for the feeds produced, interest on the investment, and a fair price for the labor of handling them. Additional profits from growing cattle should come from the amount of brains and ability put into the business of farming and handling the stock. The increased capacity of the farm to produce crops is the biggest source of profit to come from the growing of beef cattle. There is no comparison between the farm that has grown cattle for twenty years and the one where no cattle have been kept. The animal husbandry department at Manhattan leased a farm near the college a few years ago and has handled this as a live stock farm. On this 100 acres the corn the past year produced at the rate of forty bushels an acre, while on the farm on the other side of the fence, where the land is exactly the same, the corn yield was only eight bushels an acre. It has been the constant practice to haul out and spread the manure on the farm handled by the animal husbandry department. It is here that we must look for the big profits in cattle farming.

While it is enough to expect cattle to pay merely market prices for feeds, one year with another they will pay better than market prices. At the Indiana Experiment Station, where cattle feeding has been practiced experimentally for a good many years, a calculation was made a few years ago covering a ten-year period. It was found that during this period the market value of corn had been between fifty-six and fifty-seven cents a bushel. When marketed through cattle, corn had returned an average for the ten-year period of between seventy-six and seventy-seven cents a bushel.

In concluding, Professor Cochel called attention to the fact that cattle furnish a market for feeds which have absolutely no market value. At the Hays Experiment Station this year cattle are being wintered on kafir stover, wheat straw, ten pounds of silage and a pound of linseed oil meal as the daily ration. These are breeding cows. They are being kept in the best of breeding condition. They are furnishing a market for feeds which ordinarily would be considered as by-products and wasted if not fed to the cattle. Even spoiled alfalfa hay, which would have practically no value on a city market, can be used in feeding stock cattle. We recollect that last winter considerable quantities of damaged alfalfa hay that would not have brought three dollars a ton on the market was used in a limited way in connection with silage in wintering breeding cows at Manhattan. It is possible to market these low grade feeds in this way because the breeding beef cow does not have to be sold in the spring, consequently all that is necessary is that she be in a good thrifty condition.

It was apparent from this discussion that it is impossible to separate farming from the cattle business. Beef production is based on good farming practice. It is a noticeable fact that the successful cattlemen are usually the most progressive and highest type of men in the community. Live stock farming is a higher type than grain farming and naturally attracts the best and brainiest men, and where live stock farming is the practice, there will be found the highest type of community life.

Ashes as Fertilizer

R. M. S., Woodson County, asks if ashes have any fertilizing value.

Wood ashes are rich in protein, but for general farm crops our Kansas soils do not lack potash. Analyses of our soils show that nitrogen and phosphorus are nearly always deficient in old soils that have been farmed a long time, but seldom is potash lacking. Wood ashes are quite often scattered with good results in garden soil and especially about fruit trees, grapes and other small fruits. Coal ashes have practically no fertilizing value.

Growing Potatoes

S. R. M., Morris County, asks how early potatoes should be planted to give the best results and also asks for other suggestions on potato growing.

F. S. Merrill, assistant professor of horticulture at the agricultural college, states that potatoes may be successfully planted in Kansas any time between March 10 and April 1. In the Kaw Valley east of Topeka, where potatoes are grown in large quantities, the growers aim to plant them as soon after March 17 as possible. In this part of the state the seed potatoes are cut so that each piece contains one well developed eye. This rule would fit the conditions prevailing in Morris County. In the western part of the state it is preferable to plant two eye pieces. Northern-grown seed is usually to be preferred to the home-grown seed stored under average conditions. Only clean seed typical of the variety selected should be planted. If the seed potatoes are scabby they should by all means be treated with the formalin treatment which is described in answering another inquiry on this page.

Ground for potatoes should be carefully prepared. Fall plowing is always better than spring plowing. Plant the seed from three to five inches deep, and for Morris County and Eastern Kansas generally the rows can be about thirty-two inches apart. In the western part of the state where the rainfall is less, they should be given more room, allowing at least three and a half feet between the rows.

Poland China Futurity

The American Poland China Record Association is planning to put on another futurity show in Topeka next fall providing the breeders will make the required number of nominations. The American Association and the Standard Association are jointly guaranteeing \$600 in cash prizes for this futurity show. They are requiring that a contribution of \$150 be made to the futurity fund by the fair management, which condition has been met.

In order to have the futurity at least twenty herds must be nominated at five dollars each, and all these nominations must be made by March 15, 1917. It is understood that if the required number of nominations is not made, the fee will be returned unless the breeder prefers to show in an adjoining state where a futurity show will be held.

The futurity shows of the Poland Chinas and Duroc Jerseys at the Topeka fair last fall were the strongest features, and we would urge that the Poland China and Duroc Jersey breeders of the state get in their nominations at once so as to insure the holding of these shows the coming year.

Orchardists who expect to top-graft apple trees this spring will find the following formula for grafting wax quite satisfactory: Melt together until thoroughly mixed four pounds of resin, two pounds of beeswax and a pound of tallow. Pour this mixture into a vessel of cold water. Grease the hands with tallow, and when the wax is cool pull it like taffy until it becomes light and smooth. It may then be shaped into balls or sticks, and will keep indefinitely in a cool place. Paraffin substituted for beeswax makes a harder as well as a cheaper wax.

From A Single Acre

\$700

14,000 bushels from 25 acres. Luscious red Silver Medal Winesap apples brought \$17.50 for the year's crop to John Alter, Belle Plaine, Kans. That's why he won't have anything else but Moncrief trees. Same big records are being secured everywhere.

Silver Medal Winesap

The only trees with scions taken from trees of known record and heavy yields. Success with Moncrief trees is sure. No guess work.

Free Book Tells all about my scientific method of producing trees of superior strain. Wonderful Writ!

Moncrief's Winfield Nurseries,
6313 Willow St.
Winfield, Kansas.

MONTANA NORTH DAKOTA

OPPORTUNITY LAND

Others are making good in Montana and North Dakota and so can you. Montana leads the world in development of farm lands—in quality of grain produced. There is still opportunity to homestead or purchase decided land at very low prices in this great new golden Montana country. Send for Montana Bulletin today, fully illustrated and with complete information. Up in North Dakota prosperously repute supreme. Overworked farming is proving a huge success in this broad basket of the world. And your share of this land awaits you for a small investment.

Let Me Mail You FREE Bulletin

containing full information about Montana and North Dakota opportunities. I will gladly help you make a choice and advise you homestead or purchase best values on the line of Great Northern Railway. Write for Bulletin and address today. Address

E. C. LEEDY, Gen'l Immigration Agt.
Dept. 260 Great Northern Railway, St. Paul

Comfort Indoor Closet

Odorless Sanitary Germ-Proof

Every home without sewerage needs one. Most convenient, meritorious home necessity in a century. A boon to sick people. Can be placed anywhere in house.

Abolish Outdoor Closet

Put a warm Comfort Toilet in your home, a guarantee of healthy, sanitary conditions. Germ-life killed by chemicals in vapor. Empty once a month—no trouble. Needs no other attention. Boards of Health endorse it. Write now for literature, prices, etc. Agents Wanted—Exclusive territory.

COMFORT CHEMICAL CLOSET CO., 2013 Broadway, N.Y.

MILO MAIZE

Barteldes' Milo Maize is a great drought resistant. Yields as high as 60 bushels 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 prices on field seeds in quantities.

THE BARTELDES SEED COMPANY,
907 Massachusetts St., Lawrence, Kansas.
907 Sixteenth Street, Denver, Colorado.
907 Main Street, Oklahoma City, Okla.

BIG MONEY ALFALFA

The farm's greatest money-maker—Barteldes Tested Alfalfa, cleaned and re-cleaned, the purest and best to be had. Barteldes is Alfalfa Headquarters. Immense quantity of the finest tested seed. **FREE SAMPLE.** Also BIG CATALOG and Special ALFALFA BOOKLET.

THE BARTELDES SEED COMPANY,
107 Massachusetts St., Lawrence, Kansas.
107 Main St., Oklahoma City, Okla.
107 Sixteenth St., Denver, Colo.

Such Beautiful Flowers!

Asters, Calliopsis, Calla, 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.

THE BARTELDES SEED COMPANY,
(Over 50 Years of Honest Dealing.)
1007 Massachusetts St., Lawrence, Kansas.
1007 Sixteenth Street, Denver, Colorado.
1007 Main Street, Oklahoma City, Okla.

RELIABLE WINFIELD TREES

PURE-BRED—TRUE TO NAME

Direct from grower at Wholesale Prices. New FRUIT BOOK with colored plates, FREE.

COOPER & ROGERS, Box A, Winfield, Kan.

EPAGE'S GLUE

HANDY TUBES

WHEN A NAIL WON'T DO IT

"Standard" PLUMBING FIXTURES for the HOME

Get This Book Before You Build or Remodel

It is your safe guide in the selection of Plumbing Fixtures for any purpose—for Bath, Kitchen or Laundry. It represents manufacturing experience of more than a generation—the line of variety in styles and prices; the line of standard merit.

"Standard" Plumbing Fixtures

Are sold by plumbers everywhere. Good service—in installation and in the goods themselves—is assured when you choose "Standard". Talk to your plumber about this line. Insist upon "Standard". Look for the Green and Gold label. Write for "Standard" Plumbing Fixtures for the Home and new Sink booklet—both free.

Standard Sanitary Mfg. Co.
Dept. 211 Pittsburgh, Pa.

For Bath Kitchen Laundry



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.

Big Catalog FREE
Over 700 illustrations of vegetables and flowers. Send yours and your neighbors' addresses.
R. H. SHUMWAY, Rockford, Ill.

1917 PLANTING GUIDE AND PURE SEEDBOOK

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.
Galloway Bros. & Co., 61215 Waterloo, Ia.

Buy Trees At Wholesale

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 1000; Everbearing Strawberries \$2.50 per 100. Everything in Fruit trees, Plants and Ornamentals at money saving prices. Send for our **FREE CATALOG**

HOLSINGER BROTHERS NURSERY, ROSDALE, KANSAS.

HYDE'S TESTED SUDAN

Hyde's Sudan is tagged—Showing exact purity and germination. Why take a chance? We ship direct from farm to farmer. We pay the freight and refund your money if not entirely satisfied. **FREE CATALOG** and Price List sent post-paid—Write at once.
HYDE SEED FARM, 300 Hyde Bldg., Pattonburg, Mo.

SEED CORN

Three Leading Varieties. Pure Kherson Oats, Clover Seed.
PLAINVIEW HOG AND SEED FARM, Humboldt, Neb., Box H

SEED CORN

That makes the crop bigger is raised and sold by **JOHN D. ZILLER, THE FARMER SEED GROWER, HIAWATHA, KAN.**
Catalog free.



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

To be honest, to be kind, to earn a little, and to spend a little less, to make upon the whole, a family happier for his presence, to renounce when that shall be necessary and not to be embittered, to keep a few friends, but these without capitulation; above all, on the same condition, to keep friends with himself, here is a task for all a man has of fortitude and delicacy.

—ROBERT LOUIS STEVENSON.

Time to Join 1917 Clubs

Encourage the boy and girl to join an agricultural club if you would have a sympathetic helper in your farm work. The boy who carefully tends an acre of corn through the season or who grows an animal in competition with hundreds of other boys, learns very quickly the difference between careful and careless work and will apply this knowledge in doing work other than his own. If by thought and care the profits of his own corn acre are increased, he will take pride in helping his father improve his corn yield.

And we wonder how many of the mothers of today remember their first lesson in sewing or cooking. Would not membership in a club in which many other girls were working to excel you, have made the first lesson more interesting? From our own experience we



EVERETT BAKER, STERLING, KANSAS, AND HIS CLUB PIG, "IMP"

can emphatically answer in the affirmative. Our first lesson in button-holing will never be forgotten. Unfortunately it was a very hot summer afternoon when the good aunt who had our best interests at heart, labored with us on this buttonhole. We tried and cried and reached the point of indifference long before the job was completed. The knowledge that other girls were working buttonholes and that our work would be compared, would have made the lesson more attractive and the results would probably have been better. This is the incentive to work which the boys' and girls' clubs supply. And this interest is worthy of encouragement.

Many of these clubs will be organized this year throughout the state by the extension division of the Kansas Agricultural College. There will be square-rod garden clubs, corn clubs, tomato clubs, sorghum clubs, poultry clubs, pig clubs, gardening and canning clubs, sewing clubs, and bread-making clubs. Then there is the mother-daughter canning club, which is one of the best ones for it stimulates close co-operation of mothers and daughters in the work of the home and community. The work accomplished by the Glenwood Mother-Daughter Canning Club of Leavenworth County, has been reported in the columns of our paper. The work of this club should be duplicated in many communities this year.

The work of each of these clubs is practical and interesting. This statement is borne out by the number who

work in the clubs year after year.

Otis E. Hall is the state club leader, and an inquiry addressed to him at Manhattan in care of the Kansas Agricultural College, will bring full particulars about any or all of the clubs under his leadership.

Plan for Canning Garden

There is an advantage in planning the vegetable garden on paper for in this way an estimate can be made of the amount that will be needed of each variety. Now that vegetables can be canned with a certainty as to their keeping quality, every housewife should learn to do this work so that she may provide her family with an economical winter diet that will both please the appetite and be healthful. The amount of canning that will be done will have much to do with the size of the garden and for this reason plans will be a help.

The more vegetables we eat, the healthier we will be, and the more home-canned vegetables we have the more reasonable will our winter food cost be. Now is the time to plan for this so that we will have everything in readiness when the canning season comes. If we then suddenly decide to put up vegetables we may not have enough for both summer and winter use, or we may not be able to arrange for the equipment which will greatly simplify the work.

Any kind of work goes better if it is planned ahead, and in the case of canning work if it is not planned ahead we are apt to leave much of it undone.

Too Much Fancy Work

Few women there are who do not have a bit of crocheting, embroidering or tatting handy to pick up when a spare moment comes during the day. Many have more than a bit of it at hand and devote more than just the spare moments to it.

We believe in fancy work, but we also believe it is possible to overdo it. The woman who decides she will make enough lace to edge the curtains in every room in her house—and we have a friend who has just finished such a task—and can get no enjoyment out of sitting down without her crocheting because this is hanging over her, is doing herself an injustice both physically and mentally. If curtains trimmed with hand-made lace were essential, or even added to the comfort of herself or the other members of her family, there would at least be an excuse for her thinking she should overtax her nerves to this extent. But fancy curtains are of no value compared with the successful rearing of the family, and the mother should not overtax her strength to make them. That time spent in giving herself freedom that will refresh body, mind and spirit, or in doing something that will give pleasure to the family as well as to herself, will have a much more lasting effect and will be of greater value than will the hand-made lace.

Neither do we think the children's clothes or the underwear should be hand-trimmed to the extent that some member of the family feels she always has a job of this kind waiting for her.

Fancy work, so long as it serves as an interesting, restful diversion, is proper, but it never should claim every moment intended for things other than routine work.

Rice and Tapioca

4 cupfuls milk
4 cupful rice and pearl tapioca
in equal parts
1/2 cupful sugar
teaspoonful salt

Generous grating of nutmeg
Bake three hours in very slow oven, stirring three times during first hour to prevent rice and tapioca from settling.

It is dangerous to eat pork that has not been thoroughly cooked. A safe rule is to cook pork until all portions of it have lost the red color, or at least until the meat fluids have become jellied.



Everything Tastes Better on the Farm

—everybody knows a farmer's wife has a "knack" for making things that taste great.

Why not add to your reputation by using Calumet Baking Powder? There's something about the taste of goodies made with Calumet that makes folks want to eat 'em all day long.

Give more serious thought to your Baking Powder. Try Calumet—follow the directions on the can. New bake-day results will be yours.

Calumet means greater economy, no loss of materials—big, light, fluffy bakings—absolutely pure foods and the same success every bake-day.

Try Calumet at once on our money-back guarantee.

Received Highest Awards



New Cook Book Free—See Slip to Pouch Can

APPLE, PEACH TREES—True to Name

4c

Cherry Trees only 10c.

Everything at bargain prices.

SEED CORN, standard varieties, per bu. **\$1.75**

Buy of the producer—save money! Send for latest FREE Catalog of Bargains.

MANHATTAN NURSERY

Box 117 MANHATTAN, KAN.

SCHOOLS and COLLEGES

Spalding's COMMERCIAL COLLEGE

10th & Oak Sts., KANSAS CITY, MO. 51st YEAR. Over 28,000 former Students. Our modern Building has 15 elegant Rooms, including FREE GYMNASIUM and Auditorium, 21 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.

LEARN AUCTIONEERING

At World's Original and Greatest School and become independent with no capital invested. Every branch of the business taught in five weeks. Write today for free catalog. Jones Nat'l School of Auctioneering, 34 N. Sacramento Blvd., Chicago, Illinois. Carey M. Jones, President.

ARROW COLLARS



ARROW Collar styles are not only most correct, but the collars are the most durable and perfect fitting it is possible to produce.

MARLEY 2½ inches
DEVON 2¼ inches

15 cts. Each—6 for 90 cts.

CLUETT, PEABODY & CO., INC., Makers

Raise Every Chick

Feed your chicks properly at the start and you will raise them. Millions of baby chicks die each season because they are not fed "baby food" especially suited to their needs. We guarantee that

Pratts Baby Chick Food

will safely carry your baby chicks through the critical first three weeks and make them big and strong. Then you can bring them to maturity. Pratts Baby Chick Food is a correctly-proportioned, balanced ration for baby chicks. It contains cereals, animal food and mineral matter to build flesh, feathers and bone. It completely nourishes the chicks—gives them a strong start—prevents chick troubles due to improper food and digestive disturbances. Our dealer in your town has instructions to supply you with Pratts Preparations under our square-deal guarantee—"Your money back if YOU are not satisfied"—the guarantee that has stood for nearly 50 years.

Write for FREE copy of "Baby Chick Book"

PRATT FOOD COMPANY
Philadelphia Chicago Toronto

pratts

40
Years
At
It

ARMSTRONG'S PURE BRED SEED CORN

Heavy yielding, early maturing, high test, pure bred seed corn grown on our Pleasant Valley Seed Corn Farms in the Famous Shenandoah District. Matured on stalk, picked when just right, sure to grow. Finest stock ever offered.

ORIGINATORS OF THE SEED CORN BUSINESS

Write for
FREE
Samples and
Seed Corn Annual

Growers and breeders of high quality seed corn for over 40 years. Get a bumper crop and bigger prices this season. Plant Armstrong's Seed Corn. Varieties adapted for your section. Often produce 15 to 20 bushels more per acre than native corn. Special Prices on Early Orders. Try some this year. Your name and address on a postal brings you Free Samples and Seed Corn Annual.

J. B. ARMSTRONG & SON, Box 153 SHENANDOAH, IOWA

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 5 to 8 of your friends who use incubators. Send names today. RAISALL REMEDY CO., Box 58, Blackwell, Okla.

Kansas Farmer's Big Magazine Bargain Offers

For a limited time we are able to offer you an assortment of the greatest money-saving clubs ever put before the public, all high class literature, no trash. Look them over, pick out a club of your favorites, and order today. This order is open to every one. If you are already a subscriber to one or more of these publications, your subscription will be extended one year.

CLUB NO. 90
KANSAS FARMER \$1.00
Today's Housewife50
Boys' Magazine 1.00
Farm and Home25
Home Friend25
Our price, **\$1.60**
Save \$1.40

CLUB NO. 91
KANSAS FARMER \$1.00
Boys' Life 1.00
People's Popular25
McCall's75
Our price, **\$2.00**
Save \$1.00

CLUB NO. 92
KANSAS FARMER \$1.00
Gentlewoman25
Poultry Success50
Home Life25
Our price, **\$1.25**
Save 70c

CLUB NO. 95
KANSAS FARMER \$1.00
Little Folks 1.00
Today's Housewife50
Woman's World35
Our price, **\$2.10**
Save 75c

CLUB NO. 96
KANSAS FARMER \$1.00
Everyweek 1.00
Boys' Magazine 1.00
Needlework Magazine50
Woman's World35
Our price, **\$1.95**
Save \$1.90

CLUB NO. 97
KANSAS FARMER \$1.00
Woman's World35
People's Popular25
Farm and Home25
Home Friend25
Our price, **\$1.40**
Save 70c

Special Bargain Offer to Kansas Farmer Readers Only

CLUB NO. 99
KANSAS FARMER \$1.00
Baseball Magazine 1.50
Who's Who in Baseball 1.00
Our price, **\$1.75**
Save \$1.75

Total \$3.50

Start the Baseball Season Right

The baseball season opens April 4. We make this exceptional offer at the beginning of the season for the benefit of all baseball lovers. BASEBALL MAGAZINE is the only national monthly devoted to baseball. It is the official organ of the baseball players' fraternity, which includes all players in the big leagues. WHO'S WHO IN BASEBALL is the greatest baseball record ever published. A regular one-dollar book that every man or boy should have. Gives all the information about players and the game that you want.

Order Now and Get the April Number

KANSAS FARMER, TOPEKA, KANSAS.

I accept your BIG MAGAZINE OFFER NO. and enclose remittance of \$.....

NAME.....

ADDRESS.....



FEED COST OF EGGS

THE final test of efficiency in poultry farming, from the standpoint of profits, is the cost of eggs per dozen. I believe some tests should be carried out along this line.

The laying of the largest number of eggs in a given time is not always the determining factor in the cost of production. Some hens will make eggs more cheaply than will others. Large hens require more feed for bodily maintenance than do small ones. Some hens lay larger eggs than do others and therefore require more feed. Hens with the best shelter and care will produce more eggs from a given amount of grain than will those needing much of their feed for bodily warmth. Usually the method of feeding a ration which is properly balanced for the production of eggs is more economical than the feeding of a larger quantity which is improperly balanced and which must be picked over to get the necessary constituents of eggs. At times, however, difference in price of feeds may make the larger quantity the most economical. A variety of feed will stimulate egg production. The supply of greens and succulence, method of feeding, location, range in house and yard, heredity, hatching and brooding, and personality of the caretaker, all have an influence on the economy of production even more than on the amount.

I live just outside of town and buy all my grain. Last year I produced eggs at a feed cost per dozen for the different months ranging from less than six cents in July to thirty-six cents in November. Why this difference? In July the hens were still laying close to their maximum. About the middle of the month most of those that were beginning to loaf were sold. The flock had the range of about one acre of alfalfa, all the table garbage they wanted in addition to grain and dry mash, and had a comfortable house, but no outside shade. In November only the staying layers were at work. The pullets were beginning to lay. Had it not been for a mistake in crowded housing and yarding during the last of their brooding period, the pullets would have been laying well at that time.

The record of one pen of 100 Single Comb White Leghorn pullets for the month of December is worthy of note. The total cost of grain for the whole flock of 320 was \$23.30. Of this amount \$5.20 was charged to seventy capons and roosters in the fattening pen, leaving \$18.10 to be charged to 250 hens and pullets. Thirteen hundred and fifty-six eggs, or 113 dozen, were laid during the month, making the average cost sixteen cents per dozen. The hundred pullets laid 985 eggs. Estimating that they ate half the grain with a value of \$9.05, the cost of their eggs per dozen was eleven cents. This may be a little high. However, the laying hen eats much more than does the loafing hen. The cost of the remaining thirty-one dozen eggs was .292 cents per dozen. The feed used was ear corn and barley, with a dry mash of bran, shorts and meat scrap. A generous feed of garbage was given at noon.

The year's record for 1916 has not been tabulated, but for 1915, when only grain, mash and free range were given, the cost of grain and mash for an average of 165 hens and pullets was \$193.15. A total of 20,945 eggs, or 1,745 dozen, were laid at an average feed cost of .116 cents. Owing to lower prices at which the grain for ten months of 1916 was bought, the cost per dozen will be less than in 1915. While grain prices for 1917 are doubled, a better grade of hens and better care are expected to keep the cost price per dozen below half the selling price.

Many, especially those on the farm, will say they cannot tell their cost price, that they do not have time to figure it. With several kinds of grain in bins, boxes, or barrels, it can be quickly measured the first of the month by marking on the outside the height to which 100 or 200 pounds of grain stands when it is bought or filled from a larger bin. On most farms there is room in the barn granary or in the hen house where feed barrels can stand. In this

way the amount of grain fed for the month can be noted with little difficulty. Chick feed can be kept in a separate barrel. Another method is to measure the amount fed the first day of the month, record it, and consider this as the average amount eaten by the hens each day of the month. The feed for different seasons will vary, but a fairly close estimate may be made in this way, and the results obtained may justify or condemn the flock you now have.—FRANK UHL, Riley County.

Chickens on City Lot

E. B. M., Atchison County, asks if chickens can be successfully raised on the back end of a town lot.

N. L. Harris, superintendent of the poultry farm at the agricultural college, answers this inquiry as follows:

"Raising chicks indoors is a precarious undertaking. It requires a love for the work and constant care. Space will not permit of a discussion of more than a few of the most important points. The writer at one time raised 1,200 chicks to broiler size in a house 14 x 28, but is frank to state that he will never do it again. The greatest trouble is to induce sufficient exercise. This can be accomplished only by feeding often and sparingly, keeping the appetite constantly keen. No wet feeds should be furnished, as baby chicks easily gorge themselves where a wet mash is given. Some form of green feed is necessary. Probably there is nothing better for this than raw onions and sprouted oats. All grain should be scattered in a deep litter of alfalfa leaves. If a heating system is used for brooding, the building should be divided so as to allow a cool scratching shed. The building must be constructed so there is a constant supply of fresh air passing through the house without causing any direct drafts. Constant attention to cleanliness is one of the essentials to success.

"While chicks can be thus raised, it is only practical on a comparatively small scale owing to the amount of work necessary."

Shipping Baby Chicks

That there were twenty million baby chicks shipped in 1916 in shipments ranging from twenty-five to several thousand in a single order, is the statement made by H. D. White, secretary of the International Baby Chick Association. This industry has grown tremendously, and suggestions for the handling of the chicks are given in a revised edition of the National Lumber Manufacturers' Association bulletin on model poultry houses. Mr. White says the shipping of baby chicks is made possible by the fact that the egg yolk which is absorbed into the chick's body just before it breaks the shell is sufficient to last the chick as food for at least seventy-two hours. In fact, harm results in feeding during that period. Shipment can be safely made to any point reached in that length of time. Express service is the only means of transportation at present, and the express companies make special provision for handling chick shipments, so great is the volume of this business. Specially designed boxes are used which protect the chicks from ordinary exposure, the natural body heat of the chicks keeping them warm while on the road.

Well-built, small, portable colony houses ranging in size from 5 x 6 feet to 8 x 10 feet, and sometimes larger, are best suited to average conditions for baby chicks. A coal-burning brooder stove or portable lamp-heated hover can be used in the house as long as the chicks need heat. It is then taken out, leaving the chicks in the house until they are removed to permanent quarters. A small portable house is readily moved about to the orchard, the corn field or the shady lane, affording fresh new range ground for the chicks as often as desired. If properly constructed these houses can be quickly converted into practical laying or breeding houses by the use of simple portable equipment—nests, roosts and feed hoppers.

\$8.55 Buys 140-Egg Size World's Champion Belle City Incubator

The Prize Winning World's Champion Model with Fibre Board, Double-walled Construction—Hot water—Copper Tank—Thermometer—Holder—Deep Nursery—Self-regulating—same as used by Uncle Sam and America's most successful Poultry Raisers—that has led the field for over ten years. Over 524,000 satisfied users.

When ordered with my \$4.85 Double-walled—Hot-water—Roomy—140-chick Brooder—Both cost only \$12.50.

Freight Prepaid East of Rockies Allowed that far to points beyond. Satisfaction Guaranteed—Handiest machines, sure to please—and you can share in my \$1000 Cash Prizes.

Conditions easy to get biggest prize. Start early—order now. With this wonderful hatching outfit and my complete guide book for setting up and operating, you are sure of success. And with it comes my Big Catalog, "Hatching Facts", or I will send this book free for the asking. Write me today. Jim Bohan, Pres.

Belle City Incubator Co., Box 18 Racine, Wis.

SAVES THE LITTLE ONES

Here it is—the one sure, safe, scientific chick feed. The feed that brings 'em through the first two weeks—the critical period. Don't permit roup, dysentery and other diseases to kill off your chicks when for a few cents you can keep them well. You will lose hardly more than 5 or 10 chicks out of every hundred—if—right from the start—you will feed

OTTO WEISS CHICK FEED

For "new" chicks. A natural food, prepared by poultry raisers who know how to mix the right ration of cereals, beef, bone and milk.

A pound feeds 50 chicks one week. Ask your dealer for it.

THE OTTO WEISS COMPANY

Wichita, Kan.

Ironclad WINS
In 2 Biggest HATCHING CONTESTS Ever Held

150 Egg Incubator BOTH \$11.00
Chick Brooder FOR \$11.00

If ordered together. 30 days Freight trial, 10-year Guarantee. Paid Order direct from the advertiser. Money back if not satisfied. Ironclad Incubator is covered with galvanized iron, triple-walled, copper tank, nursery and brooder. Set up ready to run. The brooder is roomy and well made. Send for free catalogue.

Ironclad Incubator Co.
Box 147 Racine, Wis. (3)

FARM AND HERD.

Catalogs are out for W. W. Otey's Duroc bred sow sale to be held at Winfield, Kansas, March 20. This year Mr. Otey has catalogued a choice offering, consisting of eight tried sows, twelve fall yearlings, twenty-five spring gilts, ten summer gilts and eight summer and fall boars. The offering was sired by such boars as Good E Nuff Again King, grand champion 1913; Otey's Dream, champion 1914, and other noted boars.

The Missouri Hampshire Breeders' Association held a very successful sale at South St. Joseph, March 1. An offering of seventy-seven head consisting of ten young boars, six pigs six months old, and the balance bred sows and gilts, sold for an average of \$55 per head, with a top of \$125.

Clarence Dean, of Weston, Missouri, held one of the successful Poland China bred sow sales of the season at Dearborn, Missouri, February 28, 1917. Forty-six head of bred sows and bred gilts sold for an average of \$80. No. 1 in the catalog topped the sale at \$165, going to W. F. Allen, of DeKalb, Missouri. The offering was presented in splendid breeding condition. The sale was a quick snappy one and at no time was there a lack of interest. Col. P. M. Gross, of Macon, Missouri, did the selling, assisted by local talent. Mr. Dean invited all present to come back on the 28th of next February, when he would present a bigger and better offering.

The sale of Holstein cattle held at South Omaha, Nebraska, February 21, by Nebraska Holstein breeders, under the management of Dwight Williams, was a very successful sale. Eighty head of Holsteins consigned by fourteen Nebraska breeders sold for \$24,045, or an average of \$300.56 per head. The top of the sale was the bull calf, Rag Apple Korndyke Clyde, a son of Rag Apple Korndyke Boon. This calf sold for \$1,000.

Ed Stegell, of Straight Creek, Kansas, cleans June 8 as the date of his public sale of double standard Polled Durham cattle. Mr. Stegell owns one of the great herds of that breed now assembled and will have a great offering in this sale. The remarkable winning record of his show herd at the principal shows during the last few years will appeal to all lovers of high class Polled Durhams.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 60,000 farmers for 5 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order.

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

HELP WANTED.

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

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.

MEN—18 OR OVER BECOME RAILWAY mail clerks. \$75 to \$150 month. Vacations. Big chances farmers. Write immediately for list government positions easily obtainable. Franklin Institute, Dept. A-82, Rochester, New York.

AGENTS WANTED.

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

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

REAL ESTATE.

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 on 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., 931 Railway Exchange, Chicago.

BUSINESS CHANCES

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.

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.

PET STOCK.

BELGIAN HARES FOR SALE. E. RATH-bun, Lucas, Kansas.

HOGS.

BIG-TYPE POLAND BOARS. U. A. Gore, Seward, Kansas.

O. I. C. REGISTERED HOGS FOR SALE. September and October male pigs and serviceable males. Write for prices. Carl F. Schuster, Scranton, Kansas.

DOGS.

COLLIE PUPPIES, \$5. FRANK BARRington, Sedan, Kansas.

FOR SALE—SCOTCH COLLIE PUPS, farm raised, from good workers. I. P. Kohl, Furley, 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.

SITUATION WANTED.

WANTED—WORK IN UP-TO-DATE dairy by an experienced reliable young man. Lawson Sappington, Centralia, Missouri.

TREES, SEEDS AND PLANTS.

WHITE BLOSSOM SWEET CLOVER, reasonable. John Lewis, Hamilton, Kan.

SEED CORN.—LAPTAD STOCK FARM, Lawrence, Kansas.

TREES AT WHOLESALE—CATALOGUE free. Agents wanted. Peyton Nurseries, Boonville, Mo.

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

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

SUDAN GRASS SEED FOR SALE, 35c per pound; 100 pounds at 30c, f. o. b. J. K. Burke, Estacado, Texas.

SEED CORN—WON FIRST AND SWEEP-stakes, Missouri State Corn Show, 1917. For catalog, write George Manville, Faucett, Mo.

BEST PROGRESSIVE EVERBEARING strawberry plants cheap. For particulars write R. N. Thomas, Shenandoah, Iowa.

ALFALFA SEED, NEW CLEAN UPLAND, 14 cents per pound for one bushel or more. Bags, 25 cents. Sample on request. W. M. Hixon, Berryton, Kansas.

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

PURE GOLD MINE AND BOONE COUNTY White seed corn, selected, graded, \$2 per. Alfalfa seed, \$7.50 per. Samples free. J. F. Feigley, Enterprise, Kansas.

FOR SALE—BOONE COUNTY WHITE seed corn, made over 30 bushels this year. Hand picked. \$1.75 per bushel. W. C. Baumgartner, Halstead, Kansas.

ONE 5-CENT PACKET EACH OF RAD-ish, lettuce, onion, mustard, spinach, beets, parsnips, all for 25c. Sunny Slope Seed Farm, Independence, Missouri.

GIANT SWEET PEAS—ENOUGH FOR A 40-foot run. Special collection mixture, 25c. Sunny Slope Seed Farm, "The Home of Sweet Peas," Independence, Missouri.

ALFALFA SEED FROM HIGH PRODUC-ing fields. 370 bu. from 40 acres, 99.74% pure; 95% germination. \$8.00 per bu. Sample free. Stockwell Farms, Larned, Kansas.

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

SEED CORN—YELLOW DENT; ST. Charles White, carefully selected. Shelled, bushel, \$2; bags free. Orders filled with care at once. Frank Crosby, Route 2, Bellevue, Kansas.

TREES, SHRUBS, PLANTS, VINES, seeds. Everything at lowest prices direct to you. All tree peddlers' commissions cut out. Free book. Wichita Nurseries & Seed House, 105 Shell Bldg., Wichita, Kansas.

GERMAN MILLET, FINE GERMINA-tion, 100 pounds, \$3.75. Tested white black-hull kafir, 1.85 bushel in two-bushel sacks. All sacks free. Brooks Wholesale Co., Ft. Scott, Kansas.

SEND \$1.00 FOR 100 PROGRESSIVE strawberry plants and get our Twentieth Century Berry Book absolutely free. Worth dollars to you. E. W. Townsend, Box 3, Salisbury, Md.

SEED CORN—PURE-BRED REID'S Yellow Dent and Boone County White. Alsike, Mammoth and Medium Red Clover, Kherson and Iowa 103 Oats, new crop timothy seed. Folder and prices free. F. M. Riebel & Son, Arbela, Mo.

ROSE BUSHES

FIVE HARDY TWO-YEAR-OLD EVER-blooming rose bushes for only \$1.50, or each 50c. Richmond, deep red; Ward Grand, yellow; Killarney, superb pink; White Killarney, sweet scented white; American Beauty, charming red. Sunny Slope Seed Farm, Independence, Missouri.

HORSES AND MULES.

SHETLAND PONIES, FIFTY HEAD, moderate prices. Charles Clemmons, Coffeyville, Kansas.

FOR SALE—REGISTERED FRENCH Draft Stock Percheron-bred stallion, age 4, weight 1,760. Two fillies, coming two. Frank Kratzberg, Sr., Greeley, Kansas.

FOR SALE—FOUR 5-YEAR-OLD PER-cheron mares, two Percheron stallions; one 2, one 3. All registered P. S. A. and large. L. H. Luckhardt, Tarkio, Mo.

JACK FOR SALE OR TRADE—FIVE years old, gray, 14 hands jack measure; excellent breeder. Sacrifice price. Harry Bilson, Eureka, Kansas.

FOR SALE—ONE REGISTERED PER-cheron stallion, bay, coming 3 years old, sired by Casino. Weight about 1,600 pounds. J. E. Regier, Whitewater, Kansas.

HEDGE POSTS.

FOR SALE—FIFTY THOUSAND OSAGE hedge posts. H. W. Porth, Winfield, Kan.

CATTLE.

FOR SALE—ONE HOLSTEIN MALE calf, 27 months old. Write for his picture and prices. H. A. Prachej, Jennings, Kan.

CATTLE.

CHOICE POLLED DURHAM BULL AND seven high grade cows and heifers. Priced right. C. M. Albright, Overbrook, Kan.

FOR SALE—TWELVE REGISTERED Galloway calves, three bulls and nine heifers. B. F. Young, Richland, Kansas.

FOR SALE—ONE PURE-BRED JERSEY bull calf, born January 24, 1917. Write H. H. Starr, Claflin, Kansas.

TWO GUERNSEY HEIFERS, BOTH REGISTERED, richly bred, in calf and priced right. J. W. Marley, Oswego, Kansas.

FOR SALE—REGISTERED HOLSTEIN bulls, ready for service. Prices right. G. H. Ross, Independence, Kansas.

REGISTERED HOLSTEINS—CHOICE bull calves from heavy producing dams and our \$1,000 sire, \$50 each. Nu-Born Farms, Jasper, New York.

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

CHOICE CALVES—HOLSTEINS, GUERN-seys, Shorthorns, high grades, \$15 to \$35 according to age. Expressed to you at little cost. Write Paul Johnson Company, South St. Paul, Minn.

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

ONE HUNDRED CHOICE BREEDY HOL-steins from six months to six years. Some fresh, a lot springing. Tuberculin tested, three-fourths white, dairy conformation. Yearlings extra large. C. S. Simmons, Bel-mont, Wisconsin.

MISCELLANEOUS.

\$\$\$ SAVED—OWNERS HORSE OR sheep clipping machines or automobiles. Particulars free. Phelps, Moberly, Mo.

STAR ROUTE AND SIDE LINE, PAY-ing \$35 a week; price \$1,500; to exchange for farming outfit and live stock. Eppe, 1015 Park, Kansas City, Mo.

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

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.

THE STRAY LIST.

TAKEN UP—BY ROY J. PHILLIPS, Council Grove, Council Grove Township, Morris County, Kansas, on December 18, 1916, one red heifer, no marks or brands. Appraised at \$25. Lee A. Moser, County Clerk.

TAKEN UP—BY HUGH JONES, OF Reading, Reading Township, Lyon County, Kansas, on December 16, 1916, one red and white steer, branded on left hip and piece out of right ear. Appraised at \$60. G. L. Miller, County Clerk.

TAKEN UP—BY PETER MUGLER, OF McPherson, King City Township, McPherson County, Kansas, on the 19th day of February, 1917, one red steer, about 1½ years old, small V cut in top of right ear. W. E. Rostine, County Clerk.

TAKEN UP—BY MRS. LAURA ATKIN-son, of Americus, Americus Township, Lyon County, Kansas, on February 12, 1917, one red steer, no marks or brands. Appraised at \$40. G. L. Miller, County Clerk.

TAKEN UP BY W. H. DECROW, WA-mego, Wabunsee Township, Wabunsee County, Kansas, one six-months-old heifer calf, red with brockle face. Both ears bobbed. 2½ feet high. Appraised at \$20. Taken up on February 10, 1917. L. B. Burt, County Clerk, Alma.

FARM AND HERD.

F. J. Searle, Oskaloosa, Kansas, has announced April 10 and 11 for a two days sale of 170 head of registered Holstein cows and heifers. Mr. Searle will sell his entire herd of fifty cows and heifers. Thirty cows are bred to the great herd bull, Prince Artis Pontiac Abbecker by the King Pontiac Artis. This bull will also be sold. Twenty cows are now giving milk. Fifteen heifers are also bred to drop calves in the spring. Consignments to this sale will be made by R. E. Haeger, Coleman & Son of Denison, Kansas, Segrist & Stephenson, Holton, Kansas, and Mr. Glissman of Omaha. All the cattle are registered and the 170 head that go in this two days sale will be carefully selected and will represent the best breeding of the Holstein breed. They will be backed by records and they will be one of the useful lots of Holsteins that will be sold this season.

R. J. Linscott, Holton, Kansas, owner of the famous Register of Merit herd, announces a dispersion sale of his great herd to be held May 31. Mr. Linscott expects to sell his farm and engage in other business and will sell his entire herd. The Linscott herd was the first Register of Merit herd in Kansas. It is made up of representatives of the best families of the breed and there are few Jersey herds in existence that will compare with it in breeding and individuality. Among the great bulls that been used in the herd are Jacoba Irene's Premier 80234, first dam Jacoba Irene 146443, 1,191 pounds butter in one year, \$2,927 pounds and three calves in thirty-seven consecutive months; second dam Pogis Irene 2d 146435, 737 pounds when eighteen years 11 months old. Gamboa's Knight 16040, one of the best sons of Gamboa's Knight and out of a Register of Merit Flying Fox cow; brother to sire of more thousand-dollar cows and tested cows than any living sire. Mr. Linscott will catalog 120 head of Jerseys for this sale.

C. M. Albright, of Overbrook, Kansas, owner of Clover Lawn Farm and one of the good herds of Polled Durham cattle in the state, reports a good demand for high class Polled Durham breeding stock. He recently sold seven cows and heifers to Clayton Kaufman, of Clyde, Kansas. He also reports a recent sale of two fine double standard Polled Durham bulls.

RELIABLE POULTRY BREEDERS

PLYMOUTH ROCKS.

WHITE ROCK EGGS, \$4 PER HUNDRED. Nora Lamaster, Hallowell, Kansas.

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

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

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

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

CHOICE WHITE ROCK COCKERELS for sale. Mrs. T. A. Case, Route 2, Sterling, Kansas.

WHITE ROCK EGGS, \$2 PER FIFTEEN. Quality guaranteed. W. G. Allison, Sterling, Kansas.

EGGS—FANCY BARRED ROCKS, winter layers, \$1.25 and \$2.50 setting. Clyde Karel, Clarkson, Nebraska.

WHITE ROCKS, SIZE AND QUALITY, good egg strain. Eggs—fifteen, \$1; fifty, \$3; hundred, \$5. G. M. Kretz, Clifton, Kansas.

BARRED ROCK EGGS FOR HATCHING. Eighty-seven premiums. A. G. Hammond, Vinland, Kansas.

BEAUTIFUL IMPERIAL "RINGLETS," \$5 cockerel heading Pen No. 1. Eggs, \$4 per fifteen. Mrs. Iver Christenson, Jamestown, Kansas.

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

WHITE ROCKS—SEVENTEEN RIBBONS. This season's eggs, one and two dollars per fifteen. Mating list. Ed Fehr, Marquette, Kansas.

BARRED ROCKS—FIRST COCKEREL, Manhattan, 93%. Fifteen eggs, \$3; hundred, \$5. Duroc boars, gilts. F. F. Wood, Wamego, Kansas.

BLUE RIBBON BARRED ROCKS—Twenty-eight years experience. 110 premiums. Pens headed by Chicago winners. Eggs, fifteen, \$3, \$3.50. Mrs. Chris Bearman, Ottawa, Kansas.

PRIZE WINNING BARRED ROCKS—Four entries, five prizes, State Show 1917. Eggs, special mating, \$3 to \$5; farm flock, \$1. C. D. Swalm, Geuda Springs, Kansas.

BARRED PLYMOUTH ROCKS, E. B. Thompson strain. Eggs, \$1.50 per fifteen; \$3.50 per fifty; \$6 per hundred. C. J. Rivir, Lafontaine, Ind.

BARRED ROCKS, EXCELLENT IN SIZE and quality. Eggs, first pen, \$3 per fifteen; range flock, \$6 per hundred. Mrs. Myrtle Henry, Route 1, Leocompton, Kansas.

PURE BARRED ROCK EGGS FROM large well-marked range birds, \$1.25 setting, \$6 hundred. Choice Thompson strain pen eggs, \$3 setting. S. R. Blackwelder, Isabel, 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.

EGGS FOR HATCHING—FROM BEST laying strains of Barred Plymouth Rocks, Bradley Bros. and Parks 200-egg strains, \$3, fifteen; \$5, thirty. Catalog. Gem Poultry Farm, Haven, Kansas.

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.

BARRED PLYMOUTH ROCKS—GENUINE Thompson strain prize winning strains. Pen eggs, either cockerel or pullet mating, also utility flock eggs. Circulars free. A. F. Sierker, Defiance, Missouri.

BARRED ROCK SPECIALIST—PRIZE winning Hobart, first, second, third, fourth cockerel; first, third pullet; first pen; second, third cock; silver cup, gold special. Oklahoma City, first pullet, bred pen, first cock. Eggs, fifteen, \$2, \$3; hundred, \$6. Fred Hall, Lone Wolf, Okla.

BRAHMAS.

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

EGGS FOR HATCHING FROM PRIZE-winning Light Brahmas. Write for prices. R. W. Getty, Downs, Kansas.

TURKEYS.

BOURBON RED TURKEY EGGS, \$2.50 per eleven. Fred Watts, Havensville, Kan.

BOURBON RED TURKEYS—EGGS, \$3.50, eleven. Mrs. J. E. Bundy, Goodrich, Kansas.

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

MAMMOTH WHITE HOLLAND TURKEYS—EGGS, \$2.50 per eleven. Let us book your order early. Mrs. Roy Davison, Sabetha, Kansas.

FEATURING THE MUCH WANTED "Goldbank" Mammoth Bronze turkeys, Eggs, \$1 each after April 1. Will book orders. Mrs. Iver Christenson, Jamestown, Kansas.

MAMMOTH BRONZE TURKEYS—NO more toms for sale. Pullets, \$5, \$10, hens, \$10, \$15. Eggs—Yard, 1, \$1 each; second, 50 cents. Black Langshan, Barred Plymouth Rock cockerels for sale, \$2, \$5. Eggs, \$2-\$5 per setting. Show record. Jas. W. Anders, Unionville, Mo.

RHODE ISLAND REDS.

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

LARGE BRILLIANT ROSE COMB RED eggs for hatching, \$1 per fifteen; \$6 per hundred. Mrs. Roy Davison, Sabetha, Kan.

ROSE COMB RHODE ISLAND RED eggs, one dollar per fifteen. R. R. Wilson, 2519 Grand Ave., Parsons, Kansas.

ROSE COMB RED EGGS FROM BLUE ribbon winners, \$3, \$5, \$7.50 per fifteen. Best of guarantee. Fred Keim, Seneca, Kan.

SINGLE COMB RHODE ISLAND RED eggs. Maple Hill Poultry Farm, Route 6, Lawrence, Kansas.

SINGLE COMB RED EGGS—GOOD FARM range, \$4 per hundred, \$1.50 per thirty. Mrs. Rosa Janzen, Box 242, Geneseo, Kan.

HIGH SCORING R. C. R. I. REDS—EGGS, \$1.50 per setting. Fertility guaranteed. Chas. Wodke, Council Grove, Kansas.

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

DARK R. C. REDS, PURE-BRED, EXTRA fine. Eggs, \$3 and \$2 per fifteen; \$5 per hundred. W. J. Honeyman & Sons, Hillside farm, Madison, Kansas.

SINGLE COMB RHODE ISLAND REDS, Tallant's strain. Eggs especially packed for hatching, \$1 for fifteen. Jay McCabe, Garnett, Kansas.

PURE-BRED ROSE COMB RHODE Island Reds. Eggs for hatching, \$1 per fifteen, \$5 per hundred. Mrs. L. F. Hinson, Stockdale, Kan.

"FRANKLIN REDS," SINGLE COMB Rhode Island cockerels, deep rich red color, \$10 and \$20 each, sent on approval. Hatching eggs, \$5 and \$10 per setting. Franklin Poultry Gardens, Omaha, Nebraska.

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.

FERTILITY AND SAFE ARRIVAL guaranteed on low priced eggs for hatching, from high quality, both combs, Rhode Island Reds. Fourteen years breeding. Mating list free. H. A. Sibley, Lawrence, Kansas.

SIX GRAND PENS, ROSE COMB RHODE Island Reds that have shape, size and color. Mated to roosters costing \$15 to \$50. Fifteen eggs, \$2.50; thirty eggs, \$4; fifty eggs, \$6. Fine pure-bred range flock, \$5 per hundred. Baby chicks. Send for catalog. W. R. Huston, Red Specialist, Americus, Kan.

WYANDOTTES.

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.

WHITE WYANDOTTE EGGS, \$1 PER 15. Martin Fishel strains. Fred Watts, Havensville, Kansas.

WHITE WYANDOTTE EGGS, \$1, FIFTEEN; \$5 hundred. Mrs. Geo. Downie, Lyndon, Kansas.

ROSE COMB WHITE WYANDOTTE EGGS \$4 per hundred; farm range. Bertha Rogers, Route 6, Garnett, Kansas.

PURE-BRED SILVER WYANDOTTE stock and eggs for sale. Reuben M. Roddie, Ada, Okla.

WHITE WYANDOTTES—EGGS FROM choice stock, \$1.80, thirty; \$5, hundred. Mrs. Will Beightel, Holton, Kansas.

ROSE COMB WHITE WYANDOTTE eggs, per fifteen, \$1; one hundred, \$4. H. A. Ritter, Route 2, Kiowa, Kansas.

EGGS FOR SALE FROM PURE WHITE Wyandottes, \$6 per hundred. Mrs. D. J. White, Clements, Kansas.

WHITE WYANDOTTE EGGS, ONE DOLLAR for fifteen. Four-fifty per hundred. Geo. Tuls, Fredonia, Kansas.

R. C. WHITE WYANDOTTE COCKERELS, \$1 each. Also eggs per fifteen, \$1. Mrs. E. S. McCandless, Nashville, Ark.

CHOICE ROSE COMB SILVER WYANDOTTE eggs, \$1 for 15; \$5 for 100. Mrs. Phillip Schuppert, Arrington, Kansas.

WHITE WYANDOTTE EGGS FROM farm range stock, \$4 per hundred. Vida Hume, Tecumseh, Kansas.

SHUFF'S "BEAUTILITY" SILVER WYANDOTTES. Cockerels and hens. Eggs—Fifteen, \$1.50; fifty, \$3.50; hundred, \$6. Baby chicks. Mrs. Edwin Shuff, Plevna, Kansas.

CHOICE ROSE COMB WHITE WYANDOTTES eggs for sale, \$1.50 per setting of fifteen eggs. Mrs. George Foresman, Route 1, Belvue, Kansas.

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

PARTRIDGE WYANDOTTE EGGS, Mahogany strain, \$1.50 per fifteen. Good cockerels, \$3 to \$5 each. Canaries, fine singers. Baby chicks. Mrs. Edith B. Taylor, Marion, Kansas.

SILVER WYANDOTTES. YES, I AM still selling Silvers. Have some good cockerels left. Eggs in season. Prices reasonable. Write me. M. B. Caldwell, Broughton, Kansas.

PARTRIDGE WYANDOTTES—PENS headed by Madison Square Garden and Chicago Coliseum winners. Eggs, \$3 per fifteen. Book early. Rev. F. R. Beery, Concordia, Kansas.

LEGHORNS.

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

WHITE LEGHORN EGGS (YOUNG'S \$20 stock). Elsie Thompson, Mankato, Kan.

PURE-BRED BUFF LEGHORN EGGS, \$6 hundred. P. A. Wempe, Seneca, Kansas.

ROSE COMB WHITE LEGHORN COCKERELS, \$1 each. N. C. Dewey, Stafford, Kan.

TIP TOP ROSE COMB BROWN LEGHORN eggs. J. E. Wright, Wilmore, Kan.

PURE-BRED SINGLE COMB BROWN Leghorns. Choice farm flock. Eggs, 100, \$4. Mrs. D. A. Wohler, Hillsboro, Kansas.

PURE-BRED S. C. BROWN LEGHORN eggs, \$1 per fifteen, \$5 per hundred. Mrs. L. H. Hastings, Thayer, Kansas.

"BARRON'S 268-EGG LEGHORNS"—Eggs, \$5 hundred. Sunlight Poultry Farm, Mt. Moriah, Mo.

EGGS, \$1.50 PER SETTING. LEGHORNS, Reds, Rocks, Wyandottes and Orpingtons. Royal Poultry Yards, Coffeyville, Kansas.

EGGS, EGGS FROM KEEP-LAYING strain Single Comb White Leghorns. Thol. R. Wolfe, Conway Springs, Kansas.

SINGLE COMB BUFF LEGHORN COCKERELS. Eggs. White Holland turkey toms. Eggs. Mrs. S. F. Crites, Florence, Kansas.

SINGLE COMB WHITE LEGHORN EGGS—English Barron strain. Baby chicks. F. B. Morger, Fowler, Colo.

R. C. B. LEGHORNS, WINTER LAYERS, vigorous stock. Eggs, \$5 per hundred. W. C. Gilmore, Onelda, Kansas.

ROSE COMB BROWN LEGHORNS—Prize winners, \$5 hundred, \$2.75 fifty, \$1 fifteen. Rufus Standfield, Reading, Kan.

BROWN LEGHORN HATCHING EGGS, \$1 per fifteen, \$3 per fifty, \$5.50 per hundred. R. W. Getty, Downs, Kansas.

PURE-BRED ROSE COMB BROWN LEGHORN eggs, \$1 per fifteen, \$5 per hundred. Mrs. Daisy Denlinger, Frankfort, Kansas.

BUREKA FARM SINGLE COMB WHITE Leghorns, bred to lay. Farm range eggs, \$4 per hundred. Henry Richter, Hillsboro, Kansas.

EGGS FOR HATCHING FROM HOGAN'S laying strain of Single Comb White Leghorns, \$5 per hundred. Roy Rhodes, Maize, Kansas.

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

ROSE COMB WHITE LEGHORNS—Eggs for hatching, \$1 for fifteen, \$5 for 100. An extra grade of eggs, \$2 for fifteen, \$10 for 100. F. J. Nesetrl, Munden, Kansas.

TOM BARRON S. C. WHITE LEGHORNS—Best winter layers. Our hens proved their merit. Fifteen eggs, \$1.25; 100, \$5. J. L. Stratton, Ottawa, Kansas.

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 LEGHORNS—OH! YES, we have been raising them 21 years; the 222 to 268 trap nest egg record kind. Eggs, 15, \$1.25; 100, \$5.00. Gorsuch, Stilwell, Kansas.

EGGS FOR SALE FROM PURE-BRED heavy winter laying Single Comb White Leghorns, \$2 fifteen, \$10 hundred; 100% fertility guaranteed on seventh day of incubation. H. M. Blaine, Sylvia, Kansas.

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

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.

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

S. C. W. LEGHORN COCKERELS FROM hens with records over two hundred eggs; one, two, three dollars each. Baby chicks, 12¢ each. Eggs, \$5 per hundred. Hypocrit 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.

SINGLE COMB WHITE LEGHORN EGGS for sale. Range raised. Famous Yesterday hens mated to Barron cockerels from two hundred forty egg stock. \$1.25 per setting; two or more, \$1 each; \$5 per hundred. Shady Pine Leghorn Farm, Rossville, Kan.

S. C. WHITE LEGHORNS EXCLUSIVE-ly. Decker's laying strain. Many winners. Eggs for hatching, \$6 per hundred. Write for 1917 price list. Yours for quality (Nuf sed). Decker's White Poultry Farm, Route 1, Des Moines, Iowa.

S. C. BROWN LEGHORNS—WINTER layers and beauty strain. Booking orders for chicks to be delivered April 1, any quantity, at \$12.50 per hundred. Eggs at \$5.50 per hundred, trap-nested stock. Pullets in laying contest. Paradise Poultry Farm, Carona, Kansas.

EGGS—FROM BELMONT'S UTILITY strain Single Comb White Leghorns, bred to lay kind, that pays the grocery bill. Flock headed by White King, the largest and whitest bird we have ever owned. Setting fifteen, \$1; fifty, \$3; hundred, \$5. Belmont Farm, Trenton, Mo.

WHITE LEGHORNS

YOUNG'S STRAIN WHITE LEGHORNS—Eggs, \$5 hundred. Folder free. Reed Poultry Circle, Box H, Reed, Oklahoma.

LANGSHANS.

GET MY FREE MATING LIST OF Madison Square and Chicago prize winning Langshans. John Lovette, Mullinville, Kan.

BLACK LANGSHAN EGGS, \$3 FOR 15, from my San Francisco and Kansas State Show winners, 1917. H. M. Palmer, Florence, Kansas.

EGGS—PURE-BRED BLACK LANGSHANS exclusively from free range fowls, \$1 for 15, \$5 for 100. Mrs. John A. Roberts, Route 5, Stanberry, Mo.

SEVERAL BREEDS.

EGGS—BARRED ROCKS, BRONZE TURKEYS and Toulouse geese. Grace Aspedon, Farragut, Iowa.

SINGLE COMB ANCONA AND SILVER Laced Wyandotte eggs, \$1.26 per sixteen by post prepaid. Mrs. Cecile McGuire, Pratt, Kansas.

TURKEYS, GEESE, WHITE RUNNERS, Buff Drakes, Single Comb White Orpingtons, Buff and Brown Leghorn cockerels. Emma Ahlstedt, Roxbury, Kansas.

EGGS FOR HATCHING—PURE-BRED, high scoring Barred Rocks and Rhode Island Reds. No better birds anywhere. Send for mating list. Tom Leftwich, Winfield, Kan.

FREE—1917 PRICE LIST OF EGGS. ALL leading breeds of chickens, turkeys, ducks, geese and guineas. Monroe Poultry Yards, Monroe, Iowa.

PURE-BRED BOURBON RED TURKEY eggs, \$3 per eleven. Pure-bred Rhode Island Red eggs from open range herd, \$1 per fifteen, \$4.75 per hundred. J. W. Harshbarger, Milo, Kansas.

FOR SALE—BARRON'S IMPORTED English White Leghorn and Wyandotte cocks, \$10, \$5, \$3 each. Eggs for hatching, \$5, \$3, \$2 per setting. Ettie Sprague, 1068 Clay St., Springfield, Mo.

EGGS FROM PURE-BRED PRIZE WINNING Bourbon Red turkeys, both combs. S. C. R. I. Reds, White and Black Langshans, Anconas and Light Brahmas. Write for mating list. Mr. Henry Gillen, Route No. 1, Osborne, Kansas.

EGGS—M. B. TURKEY, NEW YORK prize winning blood in flock, \$3 per eleven; geese eggs, African, Embden, Toulouse, \$1.75 per seven; White Muscovy ducks, \$1.75 per eleven; White African guinea, \$1.50 per seventeen; White Rock, Fishel strain, \$5 per hundred. W. L. Bell, Funk, Neb. Dry Creek Poultry Farm.

FOR SALE, EGGS—EGGS FROM PURE-breds, and cockerels, turkeys, geese, eight kinds of ducks, pearl and white guineas, bantams, Barred, White and Buff Rocks, Rhode Island Reds, Houdans, Hamburgs, Games, Langshans, Minorcas, Brahmas, Cochins, Buff and White Orpingtons, Buff and Silver Laced Wyandottes, Leghorns, Hares, Rabbits, Guinea Pigs, Dogs, Fancy Pigeons. Write wants. Free circular. D. L. Bruen, Platte Center, Neb.

ORPINGTONS.

PURE-BRED WHITE ORPINGTONS—Eggs for hatching, \$1 per fifteen, \$5 per hundred. Frank Hinson, Stockdale, Kansas.

EGGS FROM PRIZE WINNING BUFF Orpingtons, \$2 per 15; fine Barred Rock, \$1 per 15, \$5 100. Mrs. M. Ditto, Newton, Kan.

FINE GOLDDUST BUFF ORPINGTONS—Eggs, \$1.50 setting; \$3 hundred. Prepaid. Mary E. Price, Route 7, Manhattan, Kansas.

FINE BUFF ORPINGTON EGGS FROM my regular winners, reasonable. H. T. Farrar, Axtell, Kansas.

WHITE ORPINGTON COCKERELS—Eggs and chicks reasonable. Mrs. Barracough, 137 S. Fern, Wichita, Kansas.

WHITE ORPINGTON COCKERELS, A few pullets. Eggs reasonable. Also Indian Runner duck eggs. James Kennicott, Bunker Hill, Kansas.

WHITE ORPINGTONS—PERSISTENT winter layers. Four pens. Mating list free. Eggs, \$1.50 per setting and up. Urbandale Poultry Farm, 418 Butts Bldg., Wichita, Kansas.

POULTRY WANTED.

EGGS AND POULTRY WANTED. CASES and coops loaned free. Daily remittances. The Copes, Topeka.

MINORCAS.

S. C. BLACK MINORCA EGGS, FIFTEEN, \$1; 100, \$5. Frank Scherman, Route 8, Topeka, Kansas.

S. C. WHITE MINORCAS—EGGS FROM pure-bred birds, \$3 and \$2 per setting. Correspondence solicited. A. Goodwyn, Minneapolis, Kansas.

BABY CHICKS.

ROSE COMB RED CHICKS—WHITE Runner duck eggs. Lily Robb, Neal, Kan.

REDS, ROCKS, LEGHORNS; 12¢c. Request folder. McCune Hatchery, Ottawa, Kansas.

PHEASANTS.

PHEASANTS—DEMAND UNLIMITED for Ringnecks this spring at \$6 to \$8 pair. Booking orders. Eggs of these, \$4 dozen; Golden, \$5 dozen. Harper Lake Poultry Farm, Jamestown, Kansas.

(Continued on Next Page.)

HEREFORD CATTLE.

Walnut Breeding Farms



Where real Anxiety 4th blood is found in abundance. The home of Concentrate 289644, a double Beau Brummel. Young stock always on hand for sale from this noted sire. Five extra herd headers on hand at reasonable price, blood lines considered. Twenty choice young bulls for sale. Come and see my herd. Satisfaction guaranteed. Also a few Berkshire pigs.

LEON A. WAITE, R. F. D. 8, WINFIELD, KAN.

HEREFORDS AND PERCHERONS

Choice 2-year-old bull, weight 1,600 lbs.; extra good bull calves. One May calf, weight 600 lbs., outstanding herd header prospect. Two choice yearling Percheron stallions. Priced to sell.

M. E. GIDEON - EMMETT, KANSAS

POLLED DURHAM CATTLE.

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

JERSEY CATTLE.

REDHURST JERSEYS

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

REDMAN & SON - TIPTON, MISSOURI

120 Jersey Cows and Heifers

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

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

DORNWOOD FARM JERSEYS

Some richly bred young Jersey bulls. Pedigrees and prices on request.

DORNWOOD FARM - TOPEKA, KANSAS

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

LINSCOTT 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. LINSCOTT - HOLTON, KANSAS

LONGVIEW JERSEYS

SeventyThree in Register of Merit. Why Take a Chance?

Buy from a responsible firm. Bulls all ages, type and production combined with Register of Merit backing. Guaranteed to be satisfactory and as represented. Otherwise money refunded and express charges paid both ways.

LONGVIEW FARM, LEE'S SUMMIT, MO.

AYRSHIRE CATTLE.



DR. JOHN A. NESS, of Auburn, Me., states that Lenetta is seventeen years old:

that in her fourteenth year official test was 10,248 pounds of milk; fifteenth year (private record), 9,648 pounds; sixteenth, 10,714; seventeenth year, 10,814.

AYRSHIRES are notable for their sound teeth, youthful appearance and productiveness at advanced ages.

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

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. DORSET-HORN SHEEP. H. C. LaTourette, Route 2, Oberlin, Mo. JERSEY CATTLE. J. B. Porter & Son, Mayetta, Kan.

GUERNSEY CATTLE.

HEREFORD CATTLE.

SHORTHORN CATTLE.

Barber Shorthorns

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

F. C. Barber & Sons

SKIDMORE - MISSOURI

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

Doyle Spring Shorthorns

Scotch-topped Shorthorns. Ten bulls, age 9 to 11 months, sired by the famous Star Goods, Orange Marshall. Write your wants.

F. P. WILSON - PEAODY, 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

RIVERSIDE SHORTHORNS.

Prince Valentine 4th and Clipper Bra-worth in service. Such popular tribes as Orange Blossom, Butterflies, Queen of Beauty, and Violets. Choice young bulls, fit to head good herds, for sale.

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

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

POULTRY.

ANCONAS.

SINGLE COMB ANCONA EGGS, \$1.50 per setting. Chas. Merkel, Cedar Rapids, Ia.

SINGLE COMB ANCONAS—EGGS, FIF-teen for \$1.25 or \$6 per hundred delivered. Write for printed matter. C. K. Whitney, Route 9, Wichita, Kan.

ANCONAS—BLUE RIBBON WINNERS. Eggs, \$1.50 per fifteen, \$6 per hundred. Pens two and three, \$1.25 per fifteen, \$6 per hundred. Frank Glenn, Newton, Kansas.

CORNISH

CORNISH INDIAN GAME HENS, \$2.00 each. Maggie Flesher, Ottawa, Kansas.

DUCKS AND GEESE.

MAMMOTH PEKIN DUCKS, EXCELLENT layers, \$2 each. Helen Harrington, Fairfax, Iowa.

FARM AND HERD.

The work of inspecting and selecting the Polled Durham and Shorthorn cattle that will go in the two days' sale to be held at Omaha, Nebraska, March 29 and 30, has been completed. The animals that will go in this sale have been very carefully selected and will be one of the useful offerings sold this season.

E. D. King, of Meadow Brook Farm, Burlington, Kansas, reports his big herd of pure-bred Berkshire hogs doing well. Mr. King owns one of the biggest herds of Berkshires now assembled and one of the oldest herds in the West. During the many years he has been breeding Berkshires he has found them very profitable as a feeder and market hog. At present he has over a hundred head of sows in his herd bred for spring farrow.

GUERNSEY CATTLE.

844.8 lbs. of BUTTER FAT in ONE YEAR or 985 lbs. of butter is the record of

This Grade Guernsey Cow

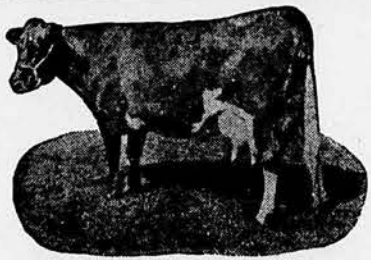
Her milk production for the year was 16286.1 lbs.

GUERNSEY PRODUCTS HAVE THE HIGHEST NATURAL YELLOW COLOR OF ANY BREED

Write for our free booklet "GRADE GUERNSEYS"

THE AMERICAN GUERNSEY CATTLE CLUB

BOX R. K. PETERBORO, N. H.



Percheron and Jack Sale

Oakland Stock Farm, Chillicothe, Mo.

Tuesday, March 20



TWENTY HEAD OF CHOICE JACKS. TEN PERCHERONS.

Our offering of jacks will include some of the best that will be sold this year, among them Giant Mammoth by Paragon, Black Casino Mammoth and Day Star Mammoth, also by Paragon. A number of the jacks will measure from 15.1 to 16 hands. They are bred right and are right.

The Percherons are a choice lot, among them Talladega 123628, foaled August 1, 1915, that now weighs 1,800 pounds, will mature to a 2,400-pound horse. Also other good stallions. The Percheron mares and fillies are the breeding and type that make good. For catalog address

OAKLAND STOCK FARM, Chillicothe, Mo.

HORSES AND MULES.

HORSES AND MULES.



German Coach Stallions and Mares THE FARMER'S GENERAL PURPOSE HORSE

Twenty-three stallions from weanlings to 5-year-olds. Handsome, stylish, gentle, but powerful young stallions, 1,300 to 1,600-pound fellows, the right kind to produce durable, active farm horses and command attention in any stud. Priced where you will buy. Satisfaction guaranteed. Come or write at once.

ROUTE 4, PRATT, KANSAS

Waldock Lake Ranch

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. 38 Mi. E. of K. C. on C. M. & St. P. 40 Mi. S. W. of St. Joe, on Santa Fe



PERCHERONS—BELGIANS

Imported and home-grown 4 and 5 yr. old stallions, ton and heavier, 3 yr. olds, 2 yr. olds, yearlings. Produce of 62 imported mares and noted prize winning imported sires. Farmer's prices. Fred Chandler, R. 7, Charlton, Iowa. (Above Kansas City.)

FOUR BIG JACKS FOR SALE

Also 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. Barns 3 blocks north of depot.

F. W. POOS - POTTER, KANSAS

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

REGISTERED PERCHERONS Yearling and two-year-olds, both sexes. Good breeding and individuals grown in a way to make useful animals. Would trade filley for Shorthorn bull good enough to head herd of registered cows.

GEO. S. APP, Route 2, ARCHIE, MISSOURI

When writing to KANSAS FARMER live stock advertisers, please mention this paper.

POLAND CHINAS

POLAND CHINAS.

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

TOWNVIEW FARM

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

C. E. GREENE - PEAODY, KANSAS

ARKELL'S BIG POLANDS

Fall boars sired by Longfellow Again and Chief Big Bone, out of choice big-type sows. Choice individuals. Some herd header prospects.

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 ROW STOCK FARM

A. S. Alexander, Prop. Burlington, Kansas

PROFITABLE TYPE POLANDS

Big-type Poland Chinas, as good as grows. You prove it at my expense. Breeding stock for sale at all times.

L. C. WALBRIDGE - RUSSELL, KANSAS

ROSS & VINCENT BIG-TYPE POLANDS

Gilts bred for March and April farrow. Also both sexes of September and October farrow. These represent the breeding of Big Type Jr. Douglas Jr., Improved King Jr. and Cowles' Orange. All immune.

ROSS & VINCENT, STERLING, KANSAS

LANGFORD'S SPOTTED POLANDS

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

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

HOLSTEIN CATTLE.

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 pedigree 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**HOLSTEIN CATTLE.**

F. W. ROBISON, Cashier Towanda State Bank

HOLSTEIN-FRIESIAN FARM, TOWANDA, KANSAS

Breeders of pure-bred Holsteins. Special attractions in choice young bulls ready for service, with fashionable breeding. Write for pedigree 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**MAURER'S HOLSTEIN FARM**

Is offering another choice lot of young pure-bred cows and springing heifers, including several granddaughters of Pontiac Korndyke. Also some registered yearling heifers, and a fine lot of large, heavy milking, high grade cows, and both pure-bred and grade calves of either sex. Write or call.

T. E. MAURER & CO., EMPORIA, KANSAS.**HOLSTEIN CATTLE**

We offer for sale 200 choice, high grade Holstein cows, heifers and service bulls of various ages; well marked and in good condition. Also can furnish a few choice, beautifully marked, 15/16ths pure-bred heifer or male calves, 1 to 2 weeks old, out of heavy milk-producing dams, at \$15 each, crated f. o. b. cars. First draft takes them. Write **W. C. KENYON & SONS, ELGIN, ILLINOIS**

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**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.**Braeburn Holsteins**

A. R. O. BULL CALVES
With De Kol-Netherland-Korndyke main blood lines, and Johanna, Walker, King Segis out-crosses.

H. B. COWLES - TOPEKA, KANSAS**HIGH GRADE HOLSTEIN CALVES**

Five to six weeks old, nearly pure, well marked, \$20, express paid.

COLD SPRINGS FARM, WHITEWATER, WIS.**NEMANA VALLEY HOLSTEIN FARM**

Choice yearling bulls and bull calves. World's record blood lines. Price reasonable. We invite inspection of our herd.

H. D. BURGER, Route 2, SENECA, KANSAS**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**

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.**CEDAR LANE HOLSTEIN HERD**

We are making very low prices on a few young bull calves. It will pay you to buy them of us while young. Sired by our 29.4-pound grandson of Pontiac Korndyke.

T. M. EWING, INDEPENDENCE, KANSAS**AUCTIONEERS.****Live Stock and Farm Auctioneer**

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

Jas. T. McCulloch Live Stock Auctioneer. I make sales anywhere. Write for date. **CLAY CENTER, KANSAS**

LESTER E. HAMILTON Live Stock Auctioneer. Write for terms and date. **Clarksdale, Mo.**

BERKSHIRE HOGS.**BERKSHIRE BRED SOWS**

The Berkshire is the best hog for Kansas as a mother, as a grazer, and to follow cattle and for quality meat. One hundred choice bred sows. Unrelated boars. Best families, no pampering.

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

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

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.**

CEDAR LAWN FARMS

C. A. Schroeder & Sons, Props.

Forty years of registered Holstein breeding, not dealing. Birthplace of 40-pound cow, Johanna DeKol Van Beers. State wants and get delivered prices on young bulls.

W. C. SCHROEDER - WEST BEND, WIS.

Look to the future.

Tredico Bulls

(Holsteins)

Kingman, Kansas

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

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.

M. E. FRIZELL, Frizell, Pawnee Co., 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 West of Kansas City.

Real Estate For Sale**A GENUINE BARGAIN**

Fine 320 Acres, Unimproved. All good wheat land. Three and one-half miles to center of Leoti, the county seat of Wichita County. One-half mile to school. Not a draw between this half section and town. Price, \$12 per acre, cash.

D. F. CARTER, Leoti, Wichita Co., Kansas**For Sale**

EIGHT-ROOM HOUSE, MODERN, in Kenwood Addition. The best residence district of Topeka. Good terms. Write

KANSAS FARMER, BOX 3**TOPEKA, - - - KANSAS****EXCHANGES.**

I have good farms to trade for smaller farms and city property. Write me. **W. M. GARRISON - SALINA, KANSAS**

640-Acre Homestead waiting for you. Good grass, water, plenty timber. Don't miss opportunity. Best ever. For particulars write **J. C. WYNN, LOCATOR, GRANTS, N. MEX.**

LANDS, IN EVERY STATE. Thirty-six pages, colored covers, 25c a year, four months, 10c.

LAND MAGAZINE - 60, TRAEER, IOWA

SPECIAL BARGAIN—Highly improved 120-acre farm adjoining Ottawa, abundance good water, good soil, very choice home. Write for descriptive list of same.

Special Price on 360 acres, well improved; 100 acres tame grass.

Also 170 acres, well improved, choice farm, ideal location, very attractive. Write for full descriptions. Possession at once.

MANSFIELD LAND CO., OTTAWA, KAN.

200 ACRES, all bottom, all tillable. 70 a. cult., bal. meadow and pasture, adjoins city, this county, 1,500. \$35 a., terms.

SOUTHERN REALTY CO., McAlester, Okla.**Improved Section \$8 per Acre**

Excellent Stock Ranch, Wichita County, Kansas. With plenty of outside range, on daily motor mail route. Some rolling land but greater part of place nice smooth farm land. Abundance of water, bargain, must be sold at once.

D. F. CARTER - LEOTI, KANSAS**RANCH FOR SALE**

Eight miles from county seat and shipping point. One-half mile to school. 200 acres under cultivation; 400 or 500 acres good alfalfa land if cultivated; creek running through place giving plenty of living water; 200 acres or more of good timber; excellent shelter for stock; balance good buffalo grass pasture. Nine-room story-and-a-half house, cistern, well, wind mill, carriage shed, granary, corrals, hog lots, chicken yards, etc. This is one of the best ranches in the county. Come and be shown. Have lived on ranch for forty years, am retiring and would sell. For particulars address **P. O. BOX 292, MEDICINE LODGE, KAN.**

REGISTERED KENTUCKY JACKS

I have shipped from my home, Poplar Plains, Kentucky, eighteen head of jacks to Newton, Kansas, and they are for sale privately. This is a good load of jacks, with lots of bone and size, with all the quality and finish you would ever see in a load of jacks. Ages from two to eight years; height from 14½ hands to 16 hands standard, and good performers.

I have shipped jacks to Kansas since 1879 and I do not believe I ever shipped a better load.

Any one wanting a good jack, call and see me at Welsh's Transfer Barn, two blocks from Santa Fe Depot, one block from Interurban. Come and see me.

E. P. MAGGARD

Successor to Saunders & Maggard

NEWTON, KANSAS**Otey's Great Bred Sow Sale****Winfield, Kansas, Thursday, March 29**

Undoubtedly the Duroc event of the Spring, 1917, will be this great sale. We drive into the ring eight great young tried sows, twelve fall yearlings, twenty-five spring gilts, ten summer gilts, eight summer and fall boars (some of them grand champion prospects), and one great tried herd boar. These are sired by such noted boars as Good E Nuff Again King, grand champion 1913; Crimson Wonder 4th, second; Otey's Dream, champion 1914; and All Col. 2d, one of the very great young boars in the field. Bred to All Col. 2d and Day Dream, a great son of Otey's Dream. No richer blood anywhere, and no more grand champion blood in one herd. It is your last and biggest chance to buy in the purple at your own price. Stick a pin in the date, Thursday, March 29. Send for catalog, and COME.

W. W. OTEY & SONS, WINFIELD, KANSAS**AUCTIONEER—LAFE BURGER.****JACK, JENNET AND PERCHERON SALE**

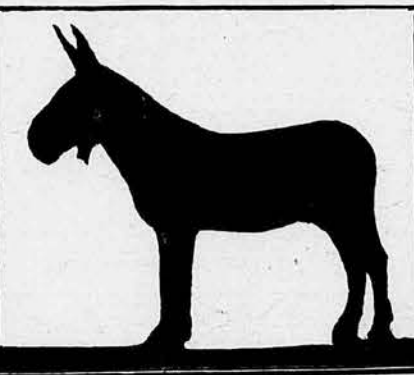
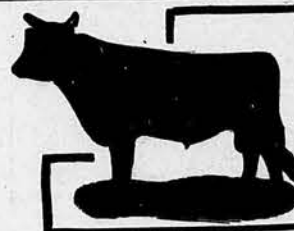
AT SAVANNAH, MISSOURI

FRIDAY, MARCH 16

Twenty large, heavy boned, thick bodied, black, Mammoth bred, registered Jacks. A few Jennets. Three black registered Percheron Stallions.

The jacks are from 2 to 8 years old, 14½ to 15½ hands high.

This is our 54th sale. Write for catalog. Sale at Savannah, Mo., thirteen miles north-east of St. Joseph, on the C. G. W. and C. B. & Q. Railroads. Interurban from St. Joseph arrives and departs every hour.

G. M. SCOTT**ROUTE NO. 2 REA, MISSOURI****AYRSHIRE CATTLE.****AYRSHIRE CATTLE.****KILMARNOCK HERD OF AYRSHIRES**

I have for sale bull calves, heifer calves, cows in milk and freshening, also bulls two and three years old at low figures for spot cash. Come and see my herd. If impossible to come, describe your wants in detail.

Wm. Galloway, Personal, Waterloo, Iowa