

KANSAS FARMER

For the improvement  of the Farm and Home

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THE growing and marketing of pork has probably helped more Kansas farmers to clear themselves of debt and place their business on a permanent basis, than has the handling of any other class of live stock. The hog has truly been called "the mortgage lifter".

Cattlemen must of necessity have considerable money invested in breeding stock for a long period of time before they begin to receive any returns. The hog has ever been the poor man's helper. It brings forth its young in litters, and sometimes produces two litters a year. In a few months the pigs are ready for market. No other domestic animal possesses such great fecundity or can be placed on the market so young.

Two or three good brood sows can be bought for the price of a cow, and the pigs will produce a pound of increase for every four or five pounds of feed they consume.

Without hogs to save the waste grain, there would be little chance to make money feeding cattle. They are almost indispensable on the general live stock farm. G. C. W.



Large English Yorkshire Sow. This Breed Noted for the Quality of its Bacon

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KANSAS FARMER

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SHEEP FEEDERS MAKE MONEY.

With the professional or speculative sheep feeder it is usually a "feast or a famine." This year fat sheep and lambs are bringing record prices. This is because of the scarcity of sheep and the demand for wool. The pelt and wool alone of a lamb brings the killer \$2 to \$2.50. This shortage of wool seems to be world-wide. Both mutton and wool are staple products and those interested in growing sheep can certainly find encouragement in this unprecedented demand for finished mutton.

While the professional feeder is making big money this year, these same men have many times lost money in finishing sheep. This has usually been due to paying too high prices for the feeders. The same thing is true of speculative feeding of cattle. However, in the case of sheep the risk seems to be even greater than in feeding cattle. It never pays to plunge in the speculative sheep-feeding business. Many a man has been compelled to stand serious losses as a result of ventures of this kind.

The present high prices cannot do otherwise than reduce the breeding stock. The theory may prevail that ewes are retained, but with present prices the temptation is to count the bird in the hand worth more than the bird in the bush, and ewe lambs are being fattened and sent to market.

While sheep are more prolific than cattle, they cannot compete with hogs in this respect, and when breeding flocks are once seriously depleted it will take several years to build them up again. People must be fed and clothed and the use of mutton and wool is steadily increasing. We have only half as many sheep as people now, and this is not near enough to supply the present demands. There is little danger of overdoing the business of growing sheep. Only a few years ago the demand for choice mutton was all in the East and practically all the sheep and lambs slaughtered at Chicago were sent to Eastern cities. Now the people of the West have learned to eat mutton. Chicago has become one of the largest mutton-consuming centers in the United States.

It is to the farms that we must look for any increase in sheep production. Those who have a few good breeding sheep can well afford to give them the best of care. They are valuable property and certain to return a good income on the investment.

We believe these facts in the sheep business are worthy of the consideration of farmers who might raise a few and thus help to meet this strong demand for wool and mutton at a profit to themselves. It is evident it must be largely a farm proposition, as the raising of sheep on the ranges cannot be greatly extended. Theoretically, it would seem that wool and mutton production has unlimited possibilities in the United States, but in actual practice we are failing to take advantage of them. These high prices should stimulate production. It sometimes seems as though the only solution of the puzzle as to why sheep are not more generally grown is that they cannot compete with the hog.

SPRAYING PAYS.

Spray materials may be unusually high in price, but the profit from spraying is so great that those having orchards can hardly dispense with it, even though it might cost several times as much this year as in years past. It is almost impossible to produce marketable apples without spraying.

In Missouri last year the College of Agriculture worked out a most striking demonstration of the value of spraying. Through the co-operation of twenty-five orchard men, orchards were sprayed four times at a cost of \$22.26 an acre. The fruit on the unsprayed trees brought only \$18.05 an acre, as compared with \$187.19 an acre for the fruit from the sprayed trees. This is more than ten times what the unsprayed fruit brought, or a profit of \$136.70 an acre. This was over six times the cost of the spraying.

Equally striking results have been secured through the co-operative spraying work done in Kansas. In some of the best orchard sections of our state whole orchards were being uprooted because there was no profit in them. When these orchard owners learned proper spraying methods they found that fruit production was highly profitable. Those familiar with spraying methods and the handling of spraying materials should by all means learn at once how to proceed. The most complete information will be furnished by our agricultural college and in many instances demonstration work can be done in the orchards so that whole communities may see exactly how the work is done. This week George Greene, of the Extension division, is doing such work in Leavenworth County.

SPRING STALLION SHOWS.

We have at various times advocated the spring stallion show as a means of encouraging the growing of better horses. Such shows should not be competitive exhibits as are the shows held in the fall. It is too near the breeding season and owners do not care to have their horses passed on by a judge and ribbons awarded at this time. The function of the spring show is to attract the attention of all to the growing of better horses. The stallion owners will be glad of the chance to show off the strong points of their respective horses and those who are going to patronize them will be glad of the opportunity to look the various stallions over and decide which one is most suited to their needs and most likely to bring about improvement.

Such a show of horses can be made quite a spectacular event. Only recently a show of stallions was made in Newton. There were but twelve stallions entered, but they were all pure-bred, sound, and probably twelve better horses could not have been gotten together anywhere in the state. They paraded through the streets and as they passed a prominent corner an announcement was made, giving the names of the owners, the names of the horses, and their breeding. Following this, the horses were taken to the place assigned to them where the street was roped off, and for a half hour farmers examined the different horses and talked to their owners.

There should be many more such shows held. This kind of exhibit comes second only to a colt show in arousing the interest of a community in better horses.

FUTURITY SHOW ASSURED.

We have just learned that both the Kansas futurity hog shows planned for the Topeka fair have been filled. This means that twenty or more Duroc breeders and the same number of Poland China breeders have nominated their herds to compete in these shows.

This assures the strongest show of hogs of these two breeds that has even been made in the state. It is now up to the breeders who have nominated, to grow out their litters in the best possible manner. They cannot afford to do otherwise.

WHERE TO PLANT FETERITA.

Feterita is distinctly a dry weather crop and for this reason it can be given a place in our Kansas agriculture. It is not at all adapted to cool, wet weather, therefore did not do as well anywhere in the state last year as it did the year before. While it will produce a good yield of grain with very little moisture, it is our opinion that for most of the state the standard black-hulled kafir should be more generally planted. There seems to be one exception to this. Prof. L. E. Call, of the agricultural college, says that on the white shale soils of Southeast Kansas feterita seems to do better than either kafir or corn.

Those who planted feterita last year had a great deal of trouble getting a stand. The reason was that the soil was too cool and wet most of the time. The seed of this plant does not germinate well until the ground is thoroughly warm. If planted too early it is apt to rot. It matures in so short a period that there is no necessity for early planting.

It is better to wait until about three weeks after corn planting before planting feterita.

In Eastern Kansas it is to be looked upon much more as a catch crop following wheat or oats or on some other field that could not be prepared for a standard crop at the right time. Under favorable conditions feterita will mature some grain even when planted quite late in the summer.

BREEDING PATCH OF CORN.

On every farm where corn is grown it would pay to give some attention to the question of seed production. There can be no improvement of a crop without careful selection of the seed planted. Few farmers can take up the business of seed breeding, but it would be possible to select fifty or a hundred of the very choicest ears and plant them by themselves. From such patch could be selected the seed for the following year's planting. It is not absolutely necessary to have a seed corn patch entirely isolated from other corn. These choice ears can be planted on one side of a field that is planted to the same variety. The pollen from the general field may fertilize some of the silks of the special patch, but there will be no mixing of varieties, and many of the advantages of the special selection will not be detrimentally influenced by this cross-fertilization.

Similar methods can be followed in improving the grain sorghums. Far less attention has been given to the improvement of these crops by seed selection than in the case of corn. If head selection was made of kafir seed last fall, it should most assuredly be planted so that it will not be mixed with poor or unselected seed.

A seed patch of this kind is possible on every farm. If no choice seed was saved last fall, it would be a paying proposition to buy enough from some reliable breeder and plant it as suggested.

LINDSBORG MUSICAL FESTIVAL.

Around Lindsborg, Kansas, centers a remarkable piece of community work. The thirty-fifth annual Messiah Musical Festival will be given, April 16-23. During all these years the very life of this community has centered around this yearly rendition of Handel's great oratorio. This year it will be given by a chorus of 500 voices. The home chorus will be assisted by several soloists of national reputation. Madame Schumann-Heinke, the world's most famous contralto, and the New York Philharmonic Orchestra will have a part in this festival.

Such has been the development of the musical taste of this community that nothing but the best the world affords in music will satisfy.

Bethany College at Lindsborg has become recognized as a center in musical education in Kansas. The work of preparing for this festival each year has taught people some valuable lessons in co-operation. All must work together for the common good in giving this oratorio.

CO-OPERATION ILLUSTRATED.

Aesop, the famous writer of fables illustrates the value of co-operation as follows. A father had several sons who did not get along well together. When the old man knew that he would soon die he called his sons to him. He had a bundle of sticks that he asked them to break. Each one in turn tried with all his strength but could not break the sticks. He then untied the bundle and gave his sons a stick at a time and asked them to break the sticks which they did very easily. He then addressed them as follows: "My sons, if you are of one mind and unite to assist each other you will be as the bundle of sticks uninjured by all the attempts of your enemies; but if you are divided among yourselves you will be broken as easily as these single sticks."

Wool that comes from the back of a sheep is good, bad or indifferent according to the manner in which it is fed.

Don't breed at too early an age and be sure that you don't inbreed.

CREDIT BUILDING.

We are hearing a great deal these days relative to improving our system of rural credit. By credit we usually mean the ability to secure money for productive purposes for which interest is paid. Credit is largely based on character and business methods. Some of our greatest financiers have stated that the personal character of the man is the big thing in extending credit. This kind of foundation for credit can never be secured by the passing of laws, either state or national. It is something the individual must exert himself to obtain—whether he be a farmer or a town business man.

Business men in towns make more use of borrowed capital, as a rule, than do farmers. It is a part of their business methods to create a credit standing. They do it by having their business in such shape that they can show its exact condition to the party furnishing them additional capital. They are very careful to meet every obligation on the very day it becomes due. The bank or loan company that cannot be sure certain notes will be paid on the day they become due, is handicapped in its business. Such companies are not usually very anxious to furnish capital to those who cannot be depended upon to always be on hand when the obligation is due. It is not enough for the debtor to say in his mind, "He knows I am worth it and will pay it soon." This is not the way to build up a credit standing.

The business man who wants to build his credit goes about it systematically, and is not only absolutely honest in his dealings but punctual to the minute. Credit is essential to his success and the only way he can establish it is through his own individual efforts or the efforts of a group of men working together for the same purpose. With the best of credit facilities there will always be this sifting of those who can be depended upon, from the careless or indifferent.

The farmer who would use borrowed capital must pursue the same methods in acquiring a credit standing, as does the town business man. It is not a bad idea to secure such standing even though not needing credit at the time. Some additional capital might be needed some time in a hurry, and it would be worth a good deal to be able to go to the bank and without any delay or red tape, secure the necessary money.

CO-OPERATE IN SELLING STOCK.

There is no more practical form of neighborhood co-operation than that of selling live stock through an association organized for this purpose. Few farmers raise enough market stock to be able to ship in carload lots. They must sell the few finished animals they have through some local buyer or speculator who assembles the small bunches of animals until he can make a carload shipment. This is a case where the middle man is unnecessary and expensive.

A group of farmers can easily get together, bunch their stock and ship direct. It requires very little machinery and the expense is not great. Such shipping associations have been most successfully operated in some counties in this state for a good many years. The shipping association at Mankato claims to be the oldest in the state. Only recently an association similar to this was organized in Republic County, its special purpose being to further the interests of the cattlemen of that section who were not raising enough stock to be able to ship direct.

In the handling of fat lambs such association can be specially helpful. On very few farms would there be enough lambs for a carload shipment.

The extension division of the agricultural college has recently employed T. H. Parks for field work in connection with the control of insect pests. Mr. Parks has had a great deal of experience with the insect pests of the staple crops and is also familiar with the control of orchard insects. This is a line of work of the greatest importance. Each year it seems to become more necessary to have accurate knowledge of the different insects that prey on our farm crops.

PORK PRICE PROSPECTS

Supplies Large but Light Weight—Home and Foreign Demand Unusually Strong

ON the farms of the principal hog producing states, including Kansas, the spring farrowing season is a period of expectancy. Millions of pigs are born in the United States at this season—15,400,000 in April, 16,400,000 in March and 10,900,000 in May, or more than half of the annual total crop, according to a recent federal estimate. Farmers naturally wonder what the new pigs will bring when marketed. Today, after three months of one of the greatest upward price movements in the history of the hog trade, there is more speculation than usual as to the outlook for returns from the spring crop of 1916.

While the future is always uncertain, it appears quite safe to count on this year as one of the most profitable in the history of the hog growing industry of America. The summer season, which often witnesses the highest hog prices, may bring a ten-dollar level in Kansas City and other important markets. Some hog traders even predict an eleven-dollar market, which would exceed the record price of \$10.95 paid at Kansas City in March, 1910. There are other hog men who believe that hogs will sell during the summer at lower levels than those now prevailing. The market next fall and winter depends on the 1916 corn crop, and health of herds and developments in Europe. Prospects in general are bright, however.

ENCOURAGEMENT FOR PORK PRODUCER.

Here are the dominating factors in the market which promise to be of greatest influence throughout the next twelve months:

Supplies, so far as numbers are concerned, have been of record proportions for the first quarter of 1916 and give signs of continuing enormous all year.

Demand has been huge since the opening of 1916 in domestic and foreign markets. With the country prosperous and labor well employed, the domestic demand has been stimulated. With Europe at war, with millions of soldiers to be fed under unusual conditions and with commerce upset in the Old World, there is enormous foreign buying of hog products.

Receipts of hogs at Kansas City, Chicago, Omaha, St. Louis and St. Joseph for the first three months of this year aggregated 6,400,000 head, a record total for the first quarter of any year in history. The receipts exceeded those for the period between January 1 and April 1, 1915, by 1,040,000 head, and were 1,918,000 in excess of the corresponding three months in 1914. Arrivals at other markets were almost in the same proportion. These figures appear extremely bearish, but they did not have this effect on markets, for hogs are more than \$2.50 per hundredweight higher today than at the opening of 1915.

One of the reasons why the enormous marketings were not bearish and may not continue to have such an influence on prices is the showing of average weights. Thus, the March runs were mostly below the average weights of a year ago, when, with a top of only \$7.05 on hogs at Kansas City, and corn high, producing conditions were discouraging. In Chicago in February hog receipts averaged 216 pounds in weight, compared with 238 pounds a year ago; in Kansas City the February average weight was 199 pounds, against 204 a year ago; in Omaha, 216 against 238 a year ago; in St. Joseph, 215 against 220. In the month of January hog receipts at Chicago averaged 195 pounds, or 28 pounds per head lighter than a year ago. At Kansas City the January average was 204 pounds, or three pounds heavier than a year ago. Omaha showed an average of 216 pounds in January, against 241 a year ago. These average weights are highly important, as they show that packers have obtained relatively less meat from the 1916 hog marketings thus far than from those at this time last year. If the receipts thus far this year averaged approximately fourteen pounds lighter in weight than a year ago, there has been a decrease of nine pounds per head in the amount of meat obtained by packers. On 6,400,000 head this means more than 57,000,000 pounds.

PACKERS HAVE SMALL STOCKS STORED.

Present stocks of pork products in the hands of the packers of the leading western markets are approximately 100,000,000 pounds below the total of a year ago. The official figures for April 1 are not yet available, but on March 1 the total stocks for pork products at Chicago, Kansas City, South Omaha, St. Joseph and Milwaukee were 284,788,387 pounds, against 365,547,501 pounds a

year ago, this being a decrease of more than 80,000,000 pounds. This decrease in the face of the enormous expansion in marketings may be explained only by the great enlargement in demand for pork products in domestic and foreign markets and the lighter weights of the receipts. The former is the principal explanation.

The fact that packers have less pork in their cellars today than a year ago augurs well for the future market. Fresh arrivals of hogs will be in broader demand in consequence. This, of course, leads to inquiries as to the outlook for receipts.

Hog growers lost money in March last year. They lost money last fall and early last winter, when the top at Kansas City was as low as \$6.50. But the recent advances have undoubtedly stimulated feeding. This is reflected by the increased weights of offerings the last few weeks. Another indication which is too frequently overlooked is the strength which corn has displayed in the face of a slump of about 30 cents a bushel in wheat recently. Corn has held up in price because such states as Iowa, Illinois and other hog growing states have, after great liquidation of hogs, been encouraged to buy corn and finish out their remaining supply of porkers suitable for the market the first half of 1916. In other sections which fared better in corn last year there is more of a holding tendency on account of the attractiveness of sales of the grain through hogs. This means that many farmers will feed corn this spring and next summer to take advantage of the high prices now prevailing instead of running hogs on pastures. So the summer marketings will be enlarged, perhaps at the expense of fall supplies. Still, producers have had good success with their pigs thus far, weather having been quite favorable for farrowing. On January 1 there was a total of 68,047,000 hogs on farms of the United States, according to the Department of Agriculture, the largest on record, and 3,429,000 head in excess of January 1, 1915. There is therefore reason to believe that the pig crop may establish a new high record this year. The amount of pork it yields will depend in part on the size of this year's corn crop.

Were the demand conditions not so favorable, the supply situation in the hog trade would be depressing just now. But it happens, fortunately, indeed, that the United States never enjoyed a greater degree of prosperity than it is enjoying today. The wages of laborers in mines and factories were never so high, and the chances for full employment were never so great. This means an increased purchasing power for the laborers of America, who are heavy consumers of pork. A year ago these laborers were complaining of bad times. So fresh pork is selling more actively in Kansas City today at about 18 cents a pound than at 12 cents a year ago. Other cuts are about as much higher.

EXPORT TRADE HIGHER.

Besides the better domestic demand, there is an extraordinary export trade. Last year the United States exported about 1,350,000,000 pounds of pork products, against 876,172,059 pounds in 1914. The 1915 exports were equal to the product of 10,500,000 hogs, being the largest for any year since 1901. Exports thus far this year point to a vast business again. The European belligerents have found pork the most economical food for their millions of soldiers, who are each consuming nearly four times the average consumption of meat in Europe under normal conditions. European civilians are also heavy buyers. Lard is not participating in this business on the same scale because Germany and Austria-Hungary, which are under blockades, are usually the heaviest buyers of that commodity. The Teutonic allies are almost completely cut off as buyers of lard. However, lard prices have been strengthened materially by the short cottonseed oil output in the South last year and the exceptionally high prices for butter and other edible fats. Canada has been buying both live hogs and dressed pork in the United States to fill European export contracts. This has made competition, as even Kansas City has had a demand from Canada for hog carcasses.

The cessation of Europe's war probably will cut off much European army buying, but there is a likelihood of heavy German and Austrian purchases as soon as peace comes. Then, too, Europe will need meat pending the restoration of her producing capacity to a more normal state. Prosperity in the United States, if it continues, will absorb great quantities and should contribute to the maintenance of profitable markets.

Sudan for Pasture.

S. R. M., Rice County, asks if Sudan grass can be depended upon as a pasture grass.

This crop cannot be considered as a pasture grass, although it can be used to supplement pastures for short periods. It does not make a sod and would be injured by tramping in wet weather. A good many plants would probably be pulled out also if it were grazed while young. A good many report grazing down the second growth that comes up after the seed or forage crop has been harvested. It will produce a large amount of feed after the crop has been removed for hay or seed. This second

growth can in many instances be grazed more economically than it could be mowed and put up for hay.

Since Sudan grass belongs to the sorghum family it is likely that it may at times cause prussic acid poisoning as does cane or kafir, although as yet we have had no reports that such poisoning has occurred.

Improving Roads Increases Land Values.

In Franklin County, New York, where 124 miles of good road has been built, eight pieces of land selected at random increased 27.8 per cent in value. In Lee County, Virginia, which built 84 miles of road, land advanced 25 per cent in value. Spotsylvania County in the same state improved 41 miles of road and the land adjoining sold for \$44.75 where previous to the improvement it has been bought for just \$20 less an acre. After Manatee County, Florida, had constructed 64 miles of macadam and shell highway, the land along the road increased more than \$20 per acre in less than two years and the land a mile away from the road showed an increase of \$10 an acre. In Wood County, Ohio, where land has been drained and bounded by limestone pikes, the values have risen from \$70 to \$250 an acre.

Plowing Under Grass.

The difficulties in plow under a rank growth of vegetation are: First, where the covering is mainly of grass which lies close to the ground the soil dries out so slowly as to throw plowing late. Second, it is very difficult to turn under this material and incorporate it thoroughly with the soil. There is no entirely satisfactory way of drying out the land if the soil is very heavy and the layer of dry grass is very thick except by burning it off, but burning should be the last resort. It might even pay better in such cases to plow late and seed to soybeans or cowpeas rather than attempt to prepare the land for corn. The problem of turning under this material can largely be solved by thoroughly disking as soon as the land is dry enough. There are doubtless extreme cases where this cannot well be done, but as a general rule the use of a sharp, weighted disk will aid very greatly in preparing this material for plowing under. Farmers are using the disk before plowing and this is a case where its use becomes of greater importance than usual.

In case the land does not dry enough to allow the plowing under of the grass, weeds, and stalks before the latter part of April, the disk must certainly be used to aid in incorporating this organic matter with the soil. A large amount of dry material plowed into land late would be injurious to the immediate crop, in spite of the fact that it might be beneficial to the soil in the long run. By the use of a sharp disk one should be able to save this organic material for the soil and at the same time prepare a thorough seed bed for the immediate crop, except in the most extreme cases.

Poison Pocket Gophers.

Pocket gophers do an immense amount of damage to farm crops, and especially alfalfa. They are just beginning their early spring work of burrow extension. Their increase of young takes place in late March or April. Their number should be reduced as much as possible before this takes place. While they are more active they can be most easily poisoned or trapped.

Poisoning is the most effective and easily applied method of ridding a badly infested farm. Some years ago the experiment station at the Kansas State Agricultural College began the manufacture of a poison which has proved effective. This is sold at cost. Openings into the burrows are made with a sharp iron or stick and the poisoned corn is introduced into the runways. Sulphate of strychnine crystals may be purchased also and inserted into raisins, prunes, or pieces of sweet potatoes by means of a slit made with a sharp knife, and then introduced into the gopher runways in the same manner.

In trapping the ordinary steel trap may be used or, what is somewhat better, those traps designed especially for this animal. The principle of these traps is that of the spring rat trap. The gopher thrusts his head into the trap when bringing dirt to the surface.

Keep vermin off of the calves and colts. See that they are free from worms too. Copperas, kerosene or turpentine is a good thing in the feed.



ASK these pigs how much corn to feed on alfalfa, and they will tell you, "All we can eat". Ask why and here is their story:

Big Pig: "Look at my little litter-mate. When they divided us into groups she was given a 1 per cent corn ration and it wasn't enough to keep the squeal down. After 120 days feeding she weighed only 116 pounds, hardly enough for profit; and I heard the herdsman say that that pig—meaning my sister—had earned only \$2.13 since put on alfalfa. But she ate lots of alfalfa."

Little Pig: "My big brother is always lucky, that's why he weighs 185 pounds and has earned \$3.16 instead of \$2.13 as I have. But he was self-fed in alfalfa—a regular pig heaven was his lot. Gee, but he's lucky. But I am thankful because thirty days ago I was thin and scrawny, but awakened to find two self-feeders in my pasture—one full of corn and the other of tankage. If it hadn't been for that, my brother would be twice as tall and twice as big. After all I'm happy, 'cause I'll be here on the farm two months after brother is in the sausage."—JOHN M. EVVARD, Iowa Experiment Station.

GENERAL FARM INQUIRIES

Something For Every Farm—Overflow Items From Other Departments

AN Arizona reader asks if fresh, clean, sweet whey will not take the place of skim milk in feeding, and if not, what should be added.

Whey does not have more than half the value of skim milk for feeding purposes. Unless it is handled very carefully it cannot be fed to young calves satisfactorily at all. It is not a protein-rich feed like skim milk, the casein or protein all going into the cheese. About all it contains of feed value is the milk sugar. It contains a very small percentage of fat, but in some cheese factories it is being run through separators and practically all the fat is taken out. Whey must be supplemented with feeds rich in protein, such as oil meal or alfalfa hay in addition to such grain as corn or kafir.

Sweet Clover a Biennial.

A McPherson County reader asks how long sweet clover will last and whether or not it would be advisable to plant some in that county.

Sweet clover, like the common red clover, is a biennial. The year following its seeding its habit is to produce a crop of seed and then die. Sweet clover that starts in the fall will produce seed the following year unless kept mowed or pastured. Like red clover, it may vary its biennial habit if prevented from maturing seed. It seeds very profusely and for this reason seems to be a perennial plant as it is seen growing by the roadside and other waste places.

Our correspondent failed to state whether he is interested in sweet clover as a pasture crop or as a hay crop. Where alfalfa can be grown successfully it is hardly advisable to attempt to grow sweet clover. Like alfalfa, it will not thrive on sour land nor land greatly deficient in lime. It will, however, grow on somewhat poorer soil than will alfalfa. Because of this fact it is useful as a soil improver.

Burning Straw Stacks.

We wish some of those who have been scattering straw on their land instead of burning it, would write and tell us of the results they have secured. The burning of straw is not as common as it was formerly, but a lot of it is still burned and especially in the wheat growing sections. The difficulty of satisfactorily spreading the straw might have been an objection to this use of it a few years ago, but now that we have spreaders specially designed for spreading straw, the bulk of that grown should go back to the soil. The principal difference between old soil and new soil is that the old does not contain anywhere near as much decaying vegetation as the freshly broken soil contains. The loss of this decaying vegetation is what makes soil old. Wheat growers all know that new land is more sure to produce a paying yield of grain than old land that has been farmed for a good many years.

We have just about run out of new soil to break up and the question of how to keep our land new is a thoroughly practical one. Burning and destroying all waste vegetation each year is a quick means of changing new or virgin soil into old or wornout soil. A large portion of the fertility value is lost when straw is burned and its decomposition in the ground has an important relation to the development of available plant food. While there is still millions of dollars' worth of fertility going up in smoke each year, we know there are many farmers who are working the straw back into their land and their experience would be of great value to our readers.

Breeding Corn.

M. R., Crawford County, asks if it would pay him to put some special effort into corn breeding. He has turned over the responsibility of the farm work to his son and has thought of corn breeding as a sort of work that he might find both interesting and profitable.

We believe this is a splendid idea. There is always room for improvement in corn as in all farm crops. The average farmer seldom has time to do the careful, painstaking work necessary to bring about this improvement in the various crops he grows. He must depend to some extent upon the specialist who is devoting his time to the improvement of varieties.

The work of corn breeding is fascinating and the results secured can be put to practical use. Corn is wonderfully responsive to the work of the breeder. In a few years by careful work a type can be fixed that will reproduce its various characteristics with a great deal of



SOME OF THE HEIFERS IN BREEDING EXPERIMENTS AT HAYS.—FULL REPORT TO BE MADE AT MEETING ON THE STATION FARM APRIL 7

certainty. A variety so developed and specially adapted to a certain locality, is much more valuable than one lacking this careful breeding work. In speaking of varieties of corn, a common expression of those familiar with corn improvement is that it shows evidences of good breeding, meaning that the ears all possess certain characteristics that would identify them as belonging to a certain strain or type.

The one taking up corn breeding as suggested by our correspondent, would carefully study all these points and in planting his seed patch would use only such ears as conformed to the type selected. As his breeding patch grew and developed he would be studying it from day to day, noting the different characteristics of the plants as they grew. At the end of the season he would be in a position to select in the field ears of the type desired with a much greater certainty than when they were simply selected from the crib.

There are so many things to learn in breeding corn that the one who would take it up as a special study will find it becoming more interesting every day, and best of all, the results of the work will be of untold value to the younger farmers. We need many such men who will take up the work of corn breeding.

Alfalfa Choked by Grass.

We are frequently asked if a thin stand of alfalfa cannot be thickened.

The only way a thin stand of alfalfa can be successfully thickened is by giving it such cultivation as will kill grass and weeds and thus encourage each individual plant to grow as large a crown as possible. A thoroughly healthy alfalfa plant will send up a good many shoots, but the number of plants cannot be multiplied by sowing additional seed. In fact in every stand of alfalfa a few of the weaker plants are likely to die each year, thus reducing the total number in the field. Those that remain become larger, sending up more shoots, and the stand may appear to be thicker.

Those who have had experience with tame grasses like timothy or bluegrass, before trying alfalfa, are sometimes tempted to sow more seed on a thin stand. It is so much seed thrown away. The young alfalfa plants are very tender and cannot establish themselves among older plants. Many fields have been considerably thinned by the wet weather of last season, and if the plants that remain are too scattering the crab grass and foxtail are likely to choke out the alfalfa. The only remedy will be to endeavor to kill the grass as much as possible by cultivation, and if the stand is too much thinned it will be

necessary to plow it up, put it in corn for a year or two and re-seed.

In order to keep up the acreage of alfalfa on the farm it might be well to figure in advance on the possibility of a thin stand being plowed up and begin to make preparations for seeding another field in the fall.

Sudan Hay for Horses.

J. R., Gove County, asks if Sudan grass hay is a good feed for work horses. It is about all the hay he has stored and he wishes to avoid buying hay this spring if possible.

None of the experiment stations have reported on the value of Sudan hay for horse feed, although a number of them have given out the information that they were feeding it successfully to their farm work horses. Such reports have been given out from the Oklahoma Experiment Station and the Texas station. Both of these reports are favorable to its use for feeding work horses. They eat it greedily, with little waste, and keep in good condition.

While visiting the experiment station at Hays, Kansas, last spring, we noticed that this hay was being fed to work horses and mules, and so far as we could observe it was thoroughly satisfactory. At one of the military posts in the Southwest a test was made, and while no official figures were given out, one of the officers was quoted as saying they found it a thoroughly satisfactory roughage for army horses.

If the hay our correspondent has is bright and free from mold, we believe he can use it to good advantage in feeding his work horses this spring.

Does Alfalfa Harbor Insects?

A reader writes that he saw in a newspaper the statement that the value of alfalfa is greatly over-estimated because it harbors so many insect pests that prey on other crops.

This is a strange view to take of a crop of such immeasurable value as alfalfa. As a forage crop it is in a class by itself. No farm crop raised in Kansas has a greater net acre value. It produces 80 per cent more total dry matter than does corn, four times as much protein to the acre as corn, and three times as much protein as red clover. It even produces more digestible carbohydrates and fat than does corn, although the grain of corn furnishes its nutrients in a much more concentrated form and for that reason from the fattening standpoint it has a higher value than alfalfa.

Of the various insect pests, two of the worst we have to contend with—chinch bugs and Hessian flies—do not

feed on alfalfa and are not harbored by it. In no phase of their life history does alfalfa in any way benefit them or help them to tide over until some other crop is ready for them. Grasshoppers, army worms, and web worms, it is true, live in alfalfa and damage other crops also at times, but as compared with the wonderful capacity of the crop to produce feed value, any part it may play in harboring insect pests can be completely ignored.

Re-Seeding Patches of Alfalfa.

B. L. R., Coffey County, writes that there are a good many patches of alfalfa killed out in his field, apparently from the result of excessive moisture last season. He asks if it is practical to re-seed these scattering patches this spring.

This condition prevails quite generally over Eastern Kansas. Usually these places where the alfalfa has been killed are poorly drained. In ordinary years it is not noticeable, but in a wet year such places are sure to be in evidence if planted to alfalfa. It would be a good plan to make notes of these conditions with a view to properly draining them as soon as possible.

While spring seeding is not as generally successful in Kansas as is fall seeding, we believe in fields where such patches occur it would be worth while to re-seed them this spring. They cannot be farmed successfully to any other crop, and the sooner they are back in alfalfa the better. A good thorough disking and harrowing would be the best seed bed preparation. It will be impossible to get spring plowing sufficiently settled for a satisfactory spring seed bed.

A few days ago we met a man from Jackson County who has been very successful in re-seeding alfalfa and he informed us he is already making preparations to seed a number of such patches in his fields. He would not think of letting them lie idle.

Grass for McPherson County Upland.

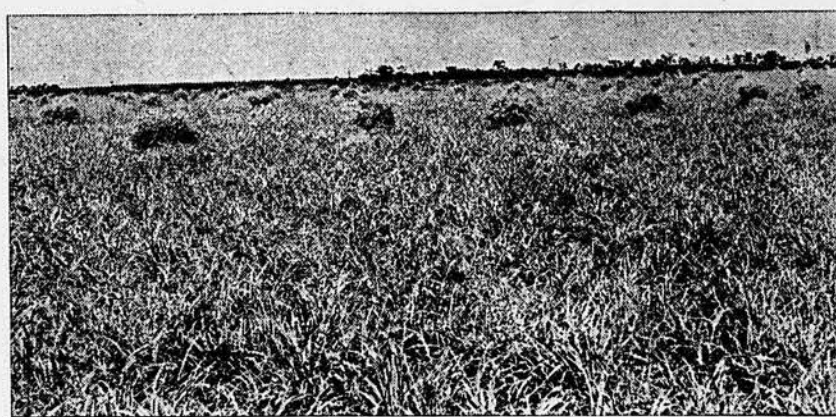
T. Q., McPherson County, would like to know what kind of grass he can sow on some red clay upland soil, and whether grass can be seeded after wheat has been removed.

Our correspondent has asked a difficult question. No tame grass has been found that is entirely satisfactory that far west in the state. Under specially favorable conditions orchard grass or English bluegrass might be fairly satisfactory, as for example on rich bottom land. We have seen English bluegrass growing in some places in the county, but it is better adapted to sections where there is a somewhat heavier rainfall. *Bromus inermis* will thrive on less rainfall, but it is not adapted to growing much farther south than the middle of the state. While it is a very hardy grass, it does not seem able to withstand hot weather. When once started it spreads underground by means of root stems and makes a very tough sod. It perhaps would be the safest tame grass to try. It is always important to test *Bromus inermis* seed for germination. A great deal of very poor seed of this grass was sold when it was first advocated and many failed with it because of this fact.

Grass could not be seeded successfully immediately after wheat has been removed. Land from which a wheat crop has been harvested is not only thoroughly exhausted of its moisture, but there is only a small amount of quickly available plant food on the surface. Grass must be seeded on soil that has been cultivated and tilled long enough to have developed some fertility on the surface. *Bromus inermis* can be seeded successfully in the fall, but if it is to follow wheat the stubble should be plowed as soon as the wheat is removed, and carefully worked until seeding time. The usual practice is to sow about twenty pounds of seed to the acre. It should be sown early in September providing moisture conditions are favorable. It would not be wise to sow the seed in a dry seed bed.

Doing without the thing that increases efficiency—because it is possible to do the work in a harder way—is not economy. Real economy consists in sifting out the unessentials and wasting nothing on these.

The busiest season for the farmer is also the busiest season for the farmer's wife. The conveniences which will lighten her work and expedite it should be given as much consideration as the implements to be used in the field.



THIS OUT SHOWS SUDAN GRASS FIELD IN M'PHERSON COUNTY THREE WEEKS AFTER CROP HAD BEEN HARVESTED FOR SEED

GRAIN SORGHUMS FOR FEED

Growing and Feeding These Adapted Crops Will Increase Farm Profits

By T. A. BORMAN

WHILE the grower of grain sorghums will be able to sell the grain of these at a price per bushel equal to the value of their feeding equivalent in corn, the greater profit will come through the feeding of both grain and forage. Except in the case of the most skilled feeder, the grain and forage of sorghums have not been held in the highest regard. It is my belief that this is largely because of lack of information as to their actual value as compared with other feeds, and also because of the failure to appreciate the necessity for the proper combination of the constituents of feeding stuffs to accomplish the purposes of the feeder.

SORGHUM GRAIN VALUES.

In general farm feeding operations, the value of the grain of sorghums may be regarded as the equal of corn. It is well established that in the feeding of all classes of live stock, the value of the grain of kafir is equal to 90 per cent that of corn—or 10 pounds of kafir is equal to 9 pounds of corn. Feeding trials and farm feeding experience place nearly the same value on milo. No feeding tests of feterita are recorded, but those farmers who have fed it give it equal rank with kafir and milo. Milo and feterita have a beneficial laxative effect which kafir does not possess. However, animals will get "off feed" on milo and feterita more easily than on the grain of kafir.

The composition of cane seed compared with grain sorghums, indicates about equal feeding value, but it is less palatable, and this is probably the most serious objection to it. Cane seed has a high value as poultry food, as has the grain of kafir, milo, and feterita.

PROTEIN GRAINS AND HAYS REQUIRED.

The grain sorghums are rich in carbohydrates—the constituents which produce fat and heat in the body. When fed alone they do not supply the protein necessary to enable the cow to produce milk in liberal quantities or the stock animal to make rapid or large growth or economical and profitable gains. In this respect the grain sorghums are not different from corn. The feeding problem for the sorghum belt farmer in producing a properly balanced ration for live stock is not different, therefore, than the problem which confronts the corn-growing farmer, except that in the corn belt grains and hays rich in protein, and which afford the necessary balance for the ration, are more easily produced. Alfalfa, red clover, sweet clover, soy beans, cowpeas, and Spanish peanuts are more or less adapted to the several sections of the sorghum belt, and can be successfully used in balancing the grains and roughages of the sorghums.

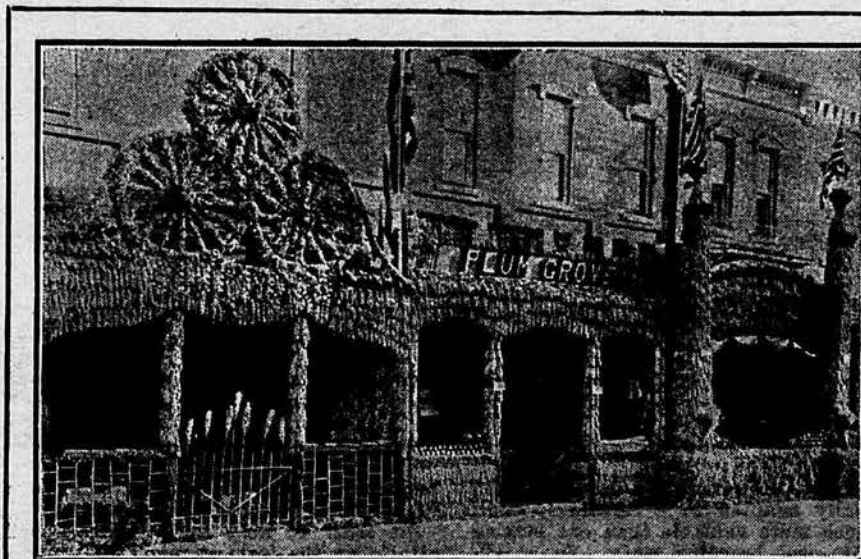
EXCHANGE OF FEEDING STUFFS.

There is little occasion for the farmer contributing to the miller for feed stuffs. However, if he cannot grow the protein needed, he can often make money by selling grain and buying protein concentrates. For example, if the farmer has only the forage and grain of kafir for feeding milking cows, he cannot supply the herd with the protein needed to enable the cows to produce milk to their capacity. In 56 pounds of threshed kafir reduced to meal there are 4.36 pounds of digestible protein, and at 60 cents a bushel such protein costs, in the ration, 14 cents per pound. In cottonseed meal at \$30 per ton, a pound of digestible protein costs slightly in excess of 4 cents. In other words, a bushel of kafir which can supply only 4.36 pounds of protein, will buy 15 pounds of digestible protein in cottonseed meal. This will give the reader the principle involved in the exchange of feeds and enable him to determine when he can afford to exchange grains grown on the farm for other feed stuffs.

PALATABILITY OF FEED IMPORTANT.

In a combination of feeds palatability must not be overlooked. Animals will not thrive on any ration unless it is relished. Harvesting at the right stage, proper curing, and protecting from damage by the elements, will preserve palatability. A variety of feeds adds to the palatability of a ration.

A good ration possesses succulence—that quality which makes the green forage of any crop more palatable and efficient than the cured forage. Succulent feeds are always relished. This is the condition which makes the silage of sorghums so much more palatable and which gives generally better results in feeding than the dry forage. Silage or succulent feeds keep the bowels in normal condition, the skin soft and the coat glossy, which are important because



TOWNSHIP EXHIBITS OF KAFIR AT BUTLER COUNTY KAFIR CARNIVAL, 1915
—IN THIS COUNTY GRAIN SORGHUMS ARE GIVEN HIGH PLACE.—ONE-FIFTEENTH OF STATE'S ACREAGE OF KAFIR AND MILO IN THIS COUNTY

they are indicative of such condition as enables the animal to make the best use of the feed consumed. This condition can best be maintained through succulent feeds, such as silage or beets or pumpkins.

Those laxative feeds common to the sorghum belt, and which tend to maintain a normal condition of the bowels, are: Alfalfa and cane hay, the grain of milo and feterita, soy beans, cowpeas, Spanish peanuts and linseed meal. The constipating feeds are the forage of corn, kafir, milo, feterita, prairie hay, the grain of kafir and cane, corn in small quantities, and cottonseed meal.

Various rations could be made from constipating feeds which would contain all the constituents needed for growth, flesh or milk, but such would give poor results.

PROTEIN FOR THE MILK COW'S RATION.

Many times the reader has heard it said that the grain and roughage of sorghums "dry" milk cows. The fact is that the cow cannot eat sufficient of the roughage or grain of these to supply the protein required to produce milk liberally. The 1,000-pound cow producing 22 to 25 pounds of milk per day requires about 5.2 pounds of protein, 13 pounds of carbohydrates, and one-half pound of fat. The following ration, common to sorghum-belt farms, illustrates the deficiency of protein in such ration and why it is not satisfactory in milk production:

	Protein, Lbs.	Carbo- hydrates, Lbs.	Fat, Lbs.
Cane hay, 20 lbs....	0.40	8.12	0.24
Kafir meal, 10 lbs....	0.78	5.71	0.27
Total nutrients....	1.26	13.83	0.51
The cow requires....	2.50	13.00	0.50

The ration below shows a protein hay with the grain of kafir supplies the required protein, and although slightly deficient in fat, heat and energy-forming constituents, this deficiency can be supplied by increasing the amount of kafir meal.

	Protein, Lbs.	Carbo- hydrates, Lbs.	Fat, Lbs.
Alfalfa hay, 18 lbs....	1.98	1.98	0.22
Kafir meal, 8 lbs....	0.62	4.56	0.22
Total	2.60	11.68	0.44
The cow requires....	2.50	13.00	0.50

With silage as the principal roughage, the following rations offer a suggestion. The deficiency in carbohydrates and fat can be supplied by the increasing of kafir meal. Cottonseed meal is used in the ration because if protein must be bought, this meal will supply it at the lowest cost.

	Protein, Lbs.	Carbo- hydrates, Lbs.	Fat, Lbs.
Kafir silage, 30 lbs....	0.18	4.47	0.06
Kafir head meal, 5 pounds	0.21	2.12	0.06
Cottonseed meal, 5 pounds	1.11	0.50	0.25
Sweet clover hay, 10 pounds	1.00	3.70	0.15
Total	2.50	10.79	0.52
The cow requires....	2.50	13.00	0.50
Kafir silage, 20 lbs....	0.12	2.98	0.04
Sweet clover hay, 20 pounds	2.00	7.40	0.30
Kafir meal, 3 lbs....	0.23	1.71	0.08
Total	2.35	12.09	1.50
The cow requires....	2.50	13.00	0.50

Of all farm live stock, the milk cow—according to her needs—is the poorest fed. This somewhat detailed reference to her ration is given, because in the area of kafir, milo and cane the small farmer needs to place a greater dependence upon the profitable feeding and milking of a few cows.

KAFIR AND SKIM MILK FOR CALVES.

For the skim-milk-reared calf, kafir meal has proven a good substitute for the fat removed from the milk. Calves should be fed whole milk until they reach the age of ten days or two weeks, at which time they begin to eat meal and roughage. At first put a little kafir meal in the calf's mouth after it has finished drinking. Soon the calf will eat the meal with a relish and skim milk may be gradually substituted for the whole milk. Four-weeks-old calves will require three-fourths to a pound per day, and eight-weeks-old calves one and a half to two pounds. Do not mix kafir meal or the meal of other grains with the milk, but permit the calf to eat the grain. Kafir meal is particularly adapted to feeding with skim milk because of its constipating effect, materially assisting in checking the tendency to scour. The meal of milo and feterita, being laxative, is not so desirable for feeding with skim milk. Whole grain may be substituted

for the meal as soon as the calf can eat it. When the calf eats readily, heads chopped into two or three pieces can be fed. In feeding the whole grain, there will be some waste, but this will be less with calves than with older animals.

GRAIN SORGHUMS FOR SHEEP.

The experiment stations of the grain sorghum belt have thoroughly established the value of kafir and milo as compared with corn in the production of mutton. Sheep feeders in Kansas report good results in feeding the grain of sorghums with alfalfa hay, and the feeders of Texas have had satisfactory gains from feeding the grain in the head with millet and cane hay as roughage. It is quite generally regarded that the sheep is better able to grind its own grain than are other farm animals, and the use of whole grain is recommended. Professor Henry, of Wisconsin, says it is true that "a sheep which cannot grind its own grain is not worth feeding."

KAFIR FOR HORSES.

For horses, kafir heads may be substituted for ear corn. Horses relish kafir in the heads more than in any other form. It is economy to chop the heads into two or three pieces with a hatchet or corn knife. Threshed kafir should be ground for horse feed. Ground heads are not relished by horses. The Manhattan, Kansas, Agricultural Experiment Station horses, doing heavy farm work, have been fed the same weight of kafir heads as of ear corn with entirely satisfactory results. This experience is verified by thousands of farmers throughout the kafir- and milo-growing sections. Young horses and those not working will maintain themselves in good condition on the roughage of sorghums which has a small quantity of grain.

There is no experimental data which has definitely determined the value of the head meal or kafir, milo, and other sorghums compared with the meal of the threshed grain. However, many feeders have for years been grinding heads, and the feeding results are such as warrant generally careful inquiry into the value of head meal and the practicability of using it.

Cowpeas Valuable Forage Crop.

Cowpeas will grow on almost any soil in Kansas when supplied with the necessary amount of moisture and given good culture. They are best adapted to open well drained soils of medium fertility, but will often grow on wornout soils without inoculation.

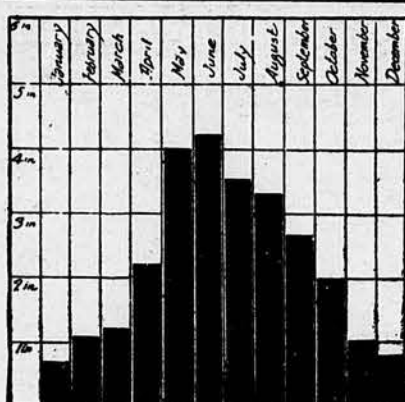
They can be recommended as a forage crop for some portions of Kansas where alfalfa cannot be grown successfully, and as a silage crop when sown with corn or sorghum. The value of cowpeas as a soil improvement crop is well known. They will grow on poorly prepared seed beds, but respond best to good cultural methods. They stand dry weather better than corn.

When sown with corn or cane, cowpeas make a high quality silage, but not so when sown alone. Such a mixture, however, is successful only on the best bottom lands of Eastern Kansas. The yield of silage from corn or cane and cowpeas is about equal to corn alone. The silage from the mixture is a better feed than corn alone on account of the protein content of the cowpeas. When grown for this purpose the corn and cowpeas are mixed in equal portions by weight and drilled in rows the first week in June. The drill must be set to drill as past as possible and the mixture of corn and cowpeas must be stirred in the drill box frequently to prevent uneven planting. Cowpeas are also a profitable soiling crop.

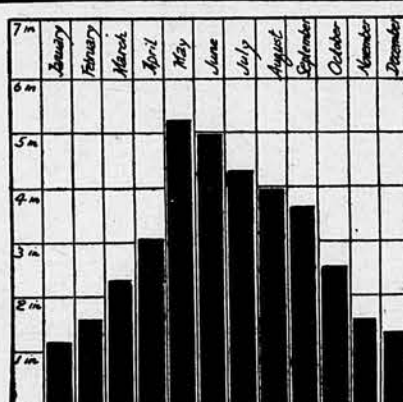
Cowpeas should not be cut for hay until the first pods are ripe. If cut before this the plants will be watery and hard to cure. If cut later there will be a heavy loss of leaves and the stems will be woody. If the cowpeas are wanted for seed they should not be cut until most of the pods are mature.

In Kansas cowpeas are an uncertain seed crop, but farmers can usually raise enough seed, however, to supply their own needs. Six to ten bushels is an average seed crop. The seed usually sells for about \$3 a bushel.

The farm is a factory and if run in a haphazard manner the results will be as disappointing as they would be under similar circumstances in a city factory. There is only one way to successfully operate a factory—it must be systematized and the manager must keep in close touch with all departments and know what is being accomplished.



CENTRAL THIRD OF STATE



EASTERN THIRD OF STATE

THESE CHARTS SHOW THE AVERAGE RAINFALL IN INCHES AND DISTRIBUTION BY MONTHS FOR EASTERN TWO-THIRDS OF KANSAS

GENERAL FARM NOTES

ONE of the great dangers to the permanence of cooperative buying is that we are inclined to buy more than we want because it is low priced. For instance, at local prices we might use about 300 pounds of shorts for the pigs, but as we are buying in car lots we order 1,000 pounds. "What a saving I have made," says the man. But has he saved? The 300 pounds at \$1.50 per hundred is \$4.50. He has bought 1,000 pounds at \$1.20, which will be \$12. He can buy one-half dozen brooms at a lower price, and has brooms lying about for a long time, and owing to having plenty on hand, more brooms than are needed are used in the year. These things have been brought to our attention by several people.

States Ready for Federal Road Law.

Forty-three of the forty-eight states will qualify for federal aid in roads under the Bankhead bill, recently reported favorably to the Senate by its committee on post offices and post roads.

The memorandum which accompanies the Senate substitute bill contains this reference to the phenomenal traffic growth:

"Backwardness in the building of public roads has been all the more marked by contrast with the enormous development of traffic. Within the brief period of about ten years the motor vehicle has been introduced and developed until it is now asserted that there are over 2,300,000 motor vehicles in use, or about one for every mile of public road. If these vehicles are estimated to average only 25 horsepower it would mean a total of over 57,000,000 horsepower brought into use on our public roads with a suddenness which has no parallel in industrial history. This new and domestic traffic has, by its peculiar effect upon road surfaces and its great strain upon bridges and road foundations, rendered infinitely more complex the problem of road construction and maintenance, which our systems of management had already proven utterly inadequate to meet.

"Ordinary horse-drawn traffic has also increased to such a point that we now speak of tonnage, not in millions, but in hundreds of millions, and of the ton mileage in billions. It has been estimated that to move the wheat crop alone in 1915 involved the hauling of more than 30,000,000 tons over the public roads at a cost of over \$50,000,000. Some conception of the immensity of our farm production and the consequent movement of farm products over the country roads can be gained from the estimate prepared in the Department of Agriculture that the production of corn, wheat, oats, potatoes, cotton and hay in 1915 aggregated 270,807,000 tons, while the total agricultural production for that year was valued at nearly eleven billion dollars."

Community Breeding in Missouri.

There are many things which can be done much better and more economically on a large scale than on a small one. It is almost as easy to advertise Shorthorn or Hereford cattle for an entire community breeding association as for an individual breeder. Even those things which each man must do for himself are done much better if the breeder is in constant touch with fifteen or twenty other men engaged in solving the same problems.

In order to take advantage of these principles the Harmony Shorthorn Breeders' Association was recently organized at Ravenwood in the extreme northwest corner of Missouri and the St. Francois County Hereford Association is well under way in the opposite corner of the state, while a more general feeders' and breeders' association is undertaking to advance live stock interests in Carroll County. The Harmony Association was organized with fifteen charter members who plan to have 150 Shorthorn cows by next fall. The cows are to be owned by the individual members, but the Association plans to buy a bull on the stock company plan. This should insure securing a much better animal than any one of the members could afford to own and make it easier to change in case a poor breeder should be secured. One of the guiding spirits in this Association is a rural minister who seems to have a good grasp on the situation, and the point of view which leads a man to believe that a man who is a leader of men on one day of the week may well work and plan with them on the other six days as well.

The St. Francois County Hereford Breeders' Association was organized in the fall of 1915 with twelve charter members in a county in which there were twenty-two Hereford herds and a number of other pure-bred herds. It has

held a sale at Jacksonville, Mississippi, for the sake of advancing and establishing business relations and a market for later years. As an outgrowth of this sale there is now a community breeders' association at Jacksonville which will undoubtedly send buyers to Farmington, where the St. Francois County Association will hold its sale next fall. At this sale there will not only be breeding stock offered by the various members of the Association, but also select cars of feeders to attract buyers of another class and show that the members of the association are willing to use the knife on animals that will not be kept for breeding purposes.

Such associations enable their members to attract more buyers and bigger buyers than could be attracted if many different breeds of cattle were being offered by men who had relatively small herds. It is easy for them to arrange combination sales without the necessity of shipping to central points or to hold sales on successive days in the same territory so that a buyer may not be compelled to make long trips between sales.

Location and Land Value.

Location is one of the most important of all the factors in determining land values. It proved even more important than differences in crop yield in a careful study of 650 farms recently made in Johnson County, Missouri. The American farmer is realizing this fact more keenly every day as his attention is turned from mere production of a greater number of bushels of grain or tons of hay, to the problem of getting to market. The buyer wants what he wants, where he wants it, and when he wants it, and part of the price paid by the consumer is paid for storage of goods until needed and for moving them to the point at which they are wanted.

The producer who is already nearest the market has a great advantage in this particular and consequently values his land at a higher figure than if he had equally fertile land farther from market. This is a matter of common knowledge and was quite clearly stated long ago by von Thunen, one of the early agricultural economists, who went further and stated that the land nearest to market would be devoted to the production of perishable but rather valuable things, such as truck crops and milk in the vicinity of towns and cities, while the bulky less valuable things, which can be transported fairly easily, would be grown a little farther out, and the durable crops of high value in proportion to weight and bulk, such as wheat or clover seed, which can be marketed at almost any time in the year, would be grown in a more remote zone.

Although the general truth of these statements has been known for some time it has remained for recent investigators to tell the prospective buyer just how much is the influence of a difference of one mile in distance from market in determining the value of land. This, of course, varies from locality to locality, but the Johnson County figures answer the question clearly for one locality and help to throw light on it for others.

The 79 farms within two miles of market had an average value of \$78.70 per acre as compared with \$70.20 per acre for the 183 farms from two to four miles from market; \$60.90 per acre for the 126 farms four to six miles from market; \$58.20 for the 113 from six to eight miles from market; and \$55.90 for the 149 farms over eight miles from market. The most rapid decrease occurred in the first six miles, after which the difference of a mile or two in distance from market made much less difference.

Study from a little different point of view showed that the 42 farms valued at \$100 or more an acre had an average haul of about two and one-half miles to market. The 62 in the \$800 to \$100 group had nearly three miles and the 275 in the \$60 to \$80 group five miles haul, while the 246 in the \$40 to \$60 group averaged six and one-quarter miles to market. The 25 worth less than \$40 per acre averaged five and one-half miles from market and were probably made up of land so much poorer than the others that quality of soil became the principal factor in determining value.—O. R. JOHNSON.

An opossum eats the head and neck of a fowl, and kills only one or two at a time. A mink bleeds his victim in the neck and sucks the blood, and will slaughter a dozen or more birds in a night. Both leave the carcass in the coop or house.

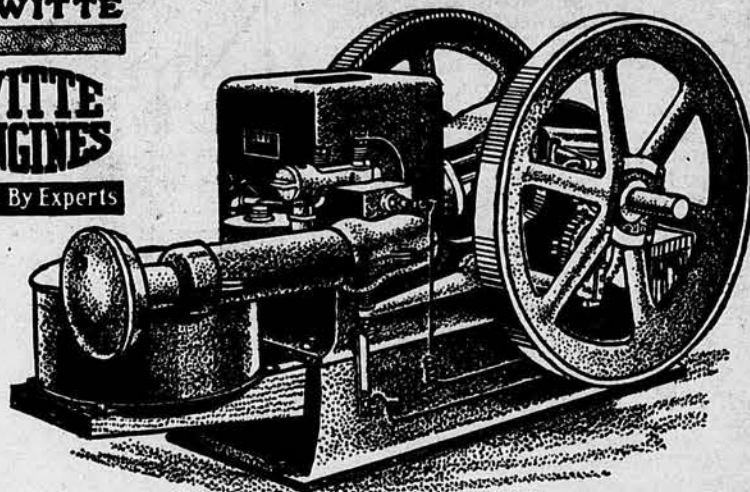
The newly broken colt should not be worked too hard this spring. Too much work just now may ruin him.



ED. H. WITTE

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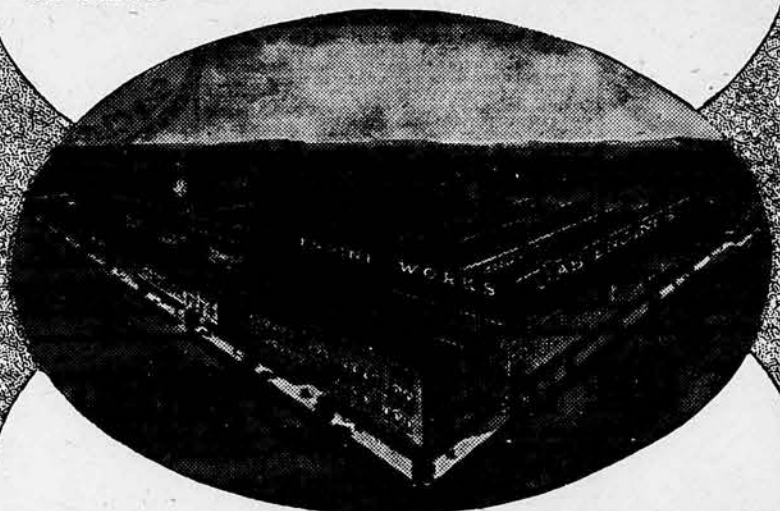
WITTE employees are experts—specialists. They have a special pride in sending out each WITTE engine in perfect condition. Each engine is thoroughly tested, adjusted and "tuned up," then crated and shipped *direct* to the buyer. No inexperienced hands have an opportunity to bother the engine between factory and buyer.

We want to tell you more about the WITTE factory and WITTE engines. Send us your name and address so that we can mail you, free, Mr. Witte's book, "How to Judge Engines."

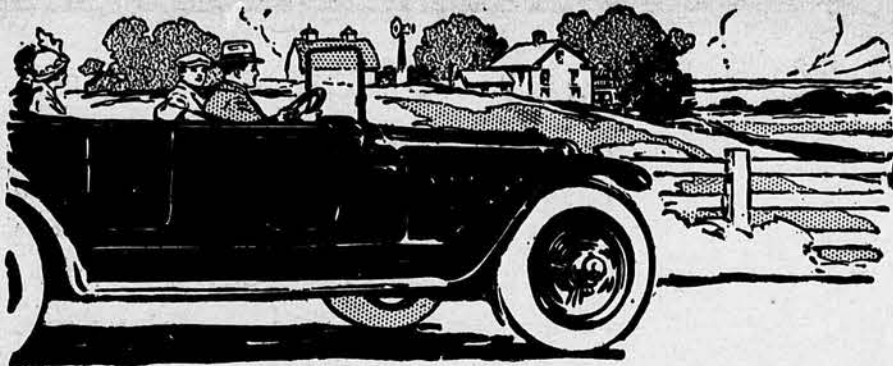
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The Standard Oil Company recommends Polarine for use in any type or make of standardized automobile engine in zero or summer weather.

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Use Red Crown Gasoline and get more power, more speed, more miles per gallon

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Clip the Udders and Flanks of your Cows. It insures clean milk, free from the impurities which otherwise drop in and cannot be strained out. Your cows will be healthier also.

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No expensive "side features" which add so greatly to the cost, and yet are of so little real value to the insured. Our rates are lower than those companies having the "side features," and justly so.

Several thousand of the best men and women in Kansas have carried our insurance for years. **THOSE WITH US LONGEST are our best friends.**

Rate at age 35, for each \$1,000.00 insurance, \$13.30; other ages in same proportion. Policies from \$2,000.00 to \$10,000.00, providing death, disability and old age benefits, issued to men and women (ages 20 to 50 years) on equal terms, except that the latter are limited to \$2,000.00 each.

More than \$1,500,000.00 in first mortgage farm loans many of them upon Kansas farms, are pledged to sustain our rates.

IT WILL PAY YOU TO INVESTIGATE.

GUARANTEE FUND LIFE ASSOCIATION
OMAHA, NEBRASKA.



Grass Fundamental to Live Stock Industry

ALMOST 30 per cent of Kansas is used for pasture. This land represents at the present time a valuation of 400 million dollars. It is practically unfit for cultivation, and can only be used for grazing purposes. These grazing areas are most valuable to the live stock business of the state. The permanence of the live stock industry is almost dependent upon these grazing lands.

Twenty-five years ago it cost \$3 a season to summer a grown steer with an allowance of three acres to the animal. Now the price on these pastures is from \$7 to \$8 a head for mature cattle, and at least four acres are required to the animal. For years the prevailing practice has been to burn off the old grass in the spring and stock pastures with all the cattle they would carry. A few pasture owners, with greater foresight, have been grazing with more care and judgment, and as a result have been able to prevent the deterioration that has taken place over the state generally.

All over Kansas grass lands have been going down in their capacity to support cattle. Instead of a luxuriant growth of bluestem and other valuable grasses, rag weed and various worthless plants have been taking possession of the ground. Two or three dry years coming together hastened this thinning out of the native grasses, and pasture owners have become much concerned as to the future.

A year ago Dean Jardine, of the Kansas Experiment Station, offered some suggestions for improving our native grass pastures, that appealed to the cattlemen and pasture owners because of the practical character of the plan suggested. The plan in brief, was to rotate the grazing of grass so that a portion of the pasture each year should have a chance to mature seed. By the ordinary method of grazing, all the choice plants of the whole area are continually kept cropped down and never have an opportunity to reach full development, while the inferior species grow to maturity, scatter their seed and gradually tend to crowd out the valuable grasses. This has been taking place to such an extent over all our grazing lands that the percentage of worthless plants has become much greater than those of value.

This deferred system of grazing, as it is called, is not merely a theory, but has been successfully demonstrated in the handling of range lands in the mountain states. Ranges that were practically worthless for grazing purposes twelve years ago, have been brought back by this system of handling until they are now supplying as much forage as when they were first used. There have been no accurate studies of the plant life found in our Kansas pastures, and until this is done it would be difficult to lay down arbitrary rules as to just how the grass land should be handled.

In offering this suggestion to Kansas pasture owners last year, Dean Jardine urged that they give this method of bringing back their pastures, a trial. The idea appealed to the cattlemen because it did not reduce very materially the number of animals that could be grazed during the season. They could

not afford to keep stock off these pastures for a whole season, but by simply deferring the turning on of stock on a portion of the pasture and grazing it down later in the season, there would be little reduction in the carrying capacity of the pasture.

In order to give the experiment station opportunity to study the problem minutely as it would work out under Kansas conditions, a pasture owner in Pottawatomie County offered the use of a typical tract of grass land for a three-year period. About one-tenth of this 1,000-acre pasture was fenced off last spring and no cattle were allowed on it until September 2. The rest of the pasture was grazed as usual with the exception of a small patch that had produced little or no grass for several years. This was enclosed and not grazed for the whole season. A large number of small plots were permanently staked off in various parts of these different tracts and the most minute study has been made of the kind of plants occupying them and their seeding habits. Some thirty varieties of plants useful for forage were identified during the season, and 10 that were worthless. All this has required work of the most painstaking character. A man from the experiment station spent much of his time camping in this big pasture during the grass season.

Last season was one of abnormal rainfall. This condition was not particularly favorable to this experiment. All the grasses made a remarkable growth. On September 2 eighty cows and their calves were turned into the protected area where there was a very rank growth of grass. Very careful studies were made of their grazing habits the first few days they were in this field, and much accurate and interesting information was secured. At the end of two months the vegetation that remained lay in a tangled mass on the ground. Such seed as had developed had been brought into contact with the soil. Germination tests that were made of these seeds showed that only a very small per cent would grow. This was in line with results of the work conducted in the grazing areas of the ranges in the mountain states. The first year that the deferred grazing was practiced the plants seem to have required all their energies in re-establishing themselves and failed to produce germinable seed. The second year a much larger per cent of the seed produced grew.

It will take at least two years more of close observation before any definite conclusions can be drawn. It is an experiment that should be watched most carefully by Kansas cattlemen or those interested in Kansas grazing lands.

How many bushels of corn must you raise on your land in order to pay six per cent on the money you have invested? This has been figured out as follows: A yield of 36 bushels to an acre on \$50 land; 42 bushels per acre on \$100 ground; 54 bushels per acre on \$200 ground; 60 bushels per acre on \$250 ground and 72 bushels per acre on land valued at \$375 per acre.

Bringing Back The Native Grass

SET aside enough pasture to carry cattle from the time the grass matures seed to the end of the grazing season. Defer the grazing of this area until the grass has matured its seed.

Graze closely for the balance of the season, thus planting the seed.

The next season defer grazing this area and pasture only moderately to avoid destroying seedling plants.

Badly over-grazed areas may acquire two seasons of deferred grazing to secure sufficient re-seeding.

When one portion of pasture is thoroughly re-seeded a second area can be set aside and brought back.

By providing for the maturing and planting of an occasional seed crop, vegetation can be kept in vigorous condition.

Live stock men of western ranges have adopted this system. Kansas' Experiment Station is now conducting a demonstration of the method on a typical tract of grazing land in Pottawatomie County.

LET'S STUDY BIRDS

Keep Eyes and Ears Open and Learn Their Secrets

THESE are the days that make us long for leisure time enough to tramp through the meadows and thickets for a visit with our winged friends. Many are already seeking nesting places for the season and while they hunt they sing and chirp among themselves in a way that makes the passer-by thankful for life and its opportunities which at this time of the year seem many.

Already we have seen many robins, several red birds, one pair of meadow larks, and one mourning or turtle dove. Of course, there are numerous sparrows—they seem to have stayed throughout the winter. Each morning we look about and listen for a new-comer. Even though we do not see one, our old acquaintances are there to greet us with their cheery calls and tell us the bursting of leaf and blossom buds is not far distant.

We hope many of our young readers have learned the joy of studying bird life. It never grows tiresome, for there is ever something new to be noted—either in habits, colorings, or song.

The building of a few bird houses will make closer neighbors of the birds. Many will show their appreciation of this protection by establishing their summer homes in the boxes. Others that prefer the swinging boughs, sturdy tree forks, or grassy meadows as the foundation for their nests in which to rear their young, will feel safer and more welcome when they see your invitation, in this form, to spend the season with you. But be sure not to violate this confidence if you would keep the birds near you. They are very quick to detect both friends and enemies, and once their harmonious life is disturbed they immediately break camp and seek a more congenial neighborhood. There are a few birds generally classed as nuisances, of which this is not true, but if you want to cultivate the friendship of the really desirable ones, make no uncertain sign that will lead them to question your attitude toward them.

Different birds have different characteristics and it is interesting to watch them in the several stages of home-making as the season advances.

Robins leave the impression of being very busy at all times, whether locating a nesting place, providing food for their families, or teaching the little ones to fly and care for themselves. They chatter and hop about quickly from early morn until dark, and yet always take time to be courteous and look you straight in the eye as you pass.

The meadow lark's chief pride seems to be his musical ability, and though we know they are good providers for their families, the thing that always comes to mind when we think of them, is that beautiful clear call that makes us feel—no matter how lonely the place may be—there is something to live for and that we still have much for which to be thankful. A few years ago we were given an overland trip by friends, from Eastern Kansas to Denver, Colorado. The one bird which we found throughout that 500-mile ride, was the meadow lark. And how welcome was its call as we crossed acres upon acres of prairie, and the miles between us and home lengthened.

The calls of the mourning dove, bob-white, and rain crow, bring us to a thoughtful mood, and if we have done anything we shouldn't do it is very apt to be remembered when either of these birds talks to us.

The kingbird is always in fighting trim, and his presence in the orchard means that all enemies will be closely policed.

The blue jay is also a fighter and a thief, but by his call—"thief"—he would lead you to believe he is keeping watch of the premises and reporting all culprits.

There are only a few of the birds that summer with us, and only a few of their habits. If we will but look and listen as we go about our work and play the next few months we will learn many things about many birds.

We wish every KANSAS FARMER boy and girl had the following bird bulletins: Farmers' Bulletin No. 54, "Some Common Birds in Their Relation to Agriculture"; and Farmers' Bulletin No. 513, "Fifty Common Birds of Farm and Orchard." These tell much of the habits of many birds, and in addition contain many bird pictures, the illustrations in the last named one being colored. Write Division of Publications, U. S. Department of Agriculture, Washington, D. C., for these.

It is quite worth while to know what the different birds feed upon, for then we know whether or not they are injurious to the farm crops. All this, and much more, is told in the bulletins.

We would be glad to have our young readers tell us of experiences they have had in studying birds and the things they have learned.

The friends the child makes in his reading have their part in shaping his character as much as do his playmates.

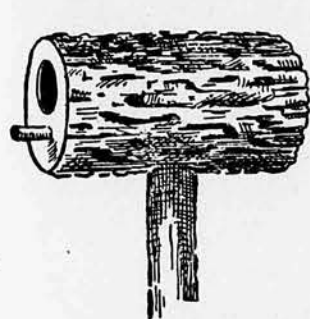


Fig. 1

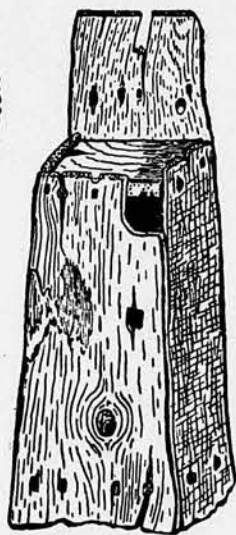


Fig. 2

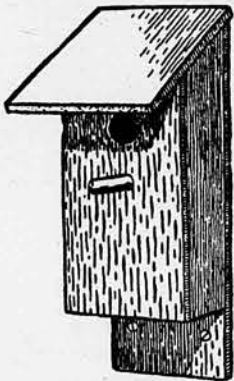


Fig. 3

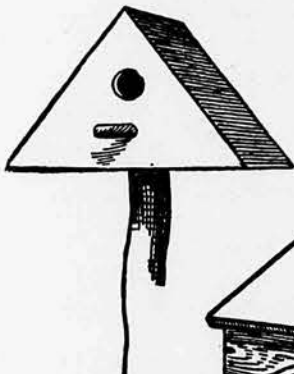


Fig. 4

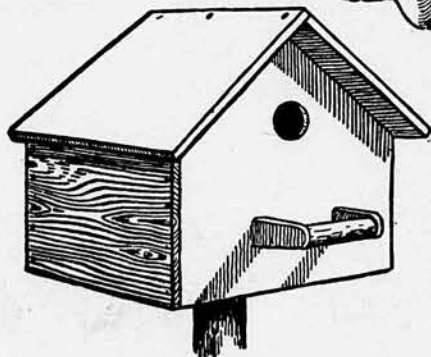


Fig. 5

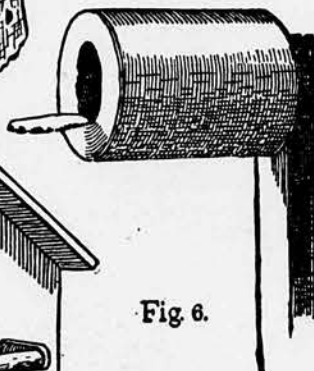


Fig. 6

BIRD HOUSES—1, SECTION OF HOLLOW LIMB; 2, ROUGH SHINGLES; 3, SHED-ROOFED HOUSE; 4, A-SHAPED HOUSE; 5, GABLED HOUSE; 6, TOMATO CAN

Have balmy spring at home during cold, raw weather!



Early spring chills and colds are inevitable with old-fashioned, drafty, uneven heating methods



The mild, delightful warmth of radiator heating makes every one happy and healthy

Real spring rarely sets in "for good" until it is nearly summer. The cold, damp, chilly days cause a lot of sickness and discomfort in homes which are not properly heated.

AMERICAN & IDEAL RADIATORS & BOILERS An IDEAL Heating outfit will show you its worth more forcibly during changeable, raw weather than at any other time. The IDEAL Boiler is made to give just the volume of heat to keep the house genially warmed and comfortable *all over*, without waste of fuel or everlasting tinkering with the fire. These IDEAL outfits are easily put in old or new farm houses. One charge of fuel lasts 12 hours or more during chilly spring days.

Get the heat that costs the least

Decide now to put in IDEAL-AMERICAN heat. Don't spend another winter without it. Safeguard your family's health. Get the Ideal outfit which will just suit your needs. Running water not necessary. Burn the inexpensive fuels of your locality and make your house a real HOME!



A No. 020 IDEAL Boiler and 262 ft. of 38-in. AMERICAN Radiators, costing the owner \$185, were used to heat this farm house, at which price the goods can be bought of any reputable, competent Fitter. This did not include cost of labor, pipe, valves, freight, etc., which vary according to climatic and other conditions. The IDEAL outfit is the only feature of the house which is never worth less than you paid for it.

Don't put it off

Write now—today—for copy of "Ideal Heating." It tells you all about the way to get the heat that costs the least.



IDEAL Boilers do not rust or wear out—no repairs.

Sold by all dealers. No exclusive agents.

AMERICAN RADIATOR COMPANY

Write to Dept. F-14 Chicago

Ponies Free

YES, a beautiful, gentle, little Shetland Pony like this sent free—the most wonderful playmate a child ever had. How can we do it? Why that is simple. Just send in your name and address and we will tell you the whole story—besides sending you pictures of many of the 364 Ponies we have already given away; pictures of the children riding and driving them; pictures of their homes, and letters from these children thanking us for the Ponies we have given them.

Little Flossie Meredith sent her name and we sent her "Pat."



Wouldn't you like to have a Pony, too?

Wouldn't you like to have your name entered in our next club, so you would stand the same chance to get a Pony as any other child? Of course you would. It doesn't cost a cent, and you might get one of these Ponies we are soon going to give away.

Send Your Name

The Farmer's Wife Pony Club
251 Webb Bldg. St. Paul, Minn.
I want a free Pony. Tell me how to get one, quick.
Name.....
P. O.....
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The Greatest Wonder of the Horticulture World.

Also fifteen million plants of other varieties of strawberries. We grow all other kinds of small fruit plants. Our Catalog is different from any you ever read and will interest you. It is free. Address

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Powerful—Simple—Safe

For all kinds of lifting. A twelve year old boy can easily hoist heavy loads. And the load holds in any position. It is completely controlled by means of the hand chain. Unaffected by weather it is always ready for use.

Built to last a lifetime

You will have hundreds of uses for a Yale Chain Hoist; during slaughtering for slinging hives or hogs; lifting sick or injured animals; for handling cylinders and pipe out of wells. Put your hoisting problems up to us. Ask for a catalogue.

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Don't buy those EXTRA HORSES

Save DISCING, HARROWING, ROLLING. Do all this work while you plow. Hitch a Kramers Rotary Harrow behind your plow—disc, level, harrow and pulverize as you go. Save extra teams right during the busy season. Produces a mole seed bed that germinates quickly—no clods or dry dirt to hold back your crops—no missing hills. Fits any plow, satisfaction absolutely guaranteed. Works in all kinds of soil—light draft, no extra horses required. The "Kramer" does more work than discing and harrowing the old way. Big FREE Illustrated Folder.



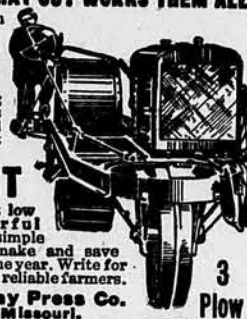
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COMPANY**
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THE TRACTOR THAT OUTWORKS THEM ALL

Will pull three 14 inch bottoms under any ordinary conditions. 25 H-P. Waukesha Motor—can be used for operating other machinery. 2 speeds; plows at 2 1/2 miles per hour—on road work 5 miles. Hyatt Roller Bearings.

LOW COST
High in quality but low in price. A powerful, sturdy, enduring, simple Tractor that will make and save money every day in the year. Write for special offer to a few reliable farmers.
Kansas City Hay Press Co.
Kansas City, Missouri.



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ECONOMY

12 1/2¢

Before you buy any more fence write for facts and full description on our 26 inch ECONOMY Hog Fence at 12 1/2¢. per rod. Many other styles and prices. WRITE NOW, to
Keystone Steel & Wire Co.
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\$13.50 Sweep Feed Grinder | **\$17.00 Galvanized Steel Wind Mill.**

We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.

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MAKE YOUR BIKE A MOTORCYCLE

at a small cost by using our Attachable outfit. FITS ANY BICYCLE. Easily attached. No special tools required. Write today for **FREE BOOK** describing the SHAW Bicycle Motor Attachment. Motorcycles, all makes, new and second-hand, \$35 and up.

SHAW MANUFACTURING CO.
Dept 140 Galesburg, Kansas.



VALUE OF HERD RECORDS

ON many farms the sale of cream or other dairy products is the principal source of revenue. On such farms the keeping of herd records is a necessity. It requires some extra time and labor, but the information secured from such records is worth far more than it costs to keep them. It is simply a business proposition. No one thinks for a moment that all the cows in his herd are equally profitable, but without production records he must treat them all alike. If he guesses at the relative profitability of the different cows, the guess is just as apt to be wrong as right. Some supposedly extra good cow may be fed a most wasteful ration, while another that is superior in productive capacity is being underfed. To be fed most profitably dairy cows should be treated as individuals.

Records are also of great importance in the matter of improvement. Every dairyman wants to improve his herd. He may be limited in capital and able to buy only a few grade cows. It costs money to go out and buy cows with records back of them. Those who have kept individual production records on their cows will not sell the good ones except at a price determined by their knowledge of just what they are able to do. The only way the man with limited capital can get this kind of cows is to keep records in his grade herd and by selecting from them breed cows of greater production. He must, of course, buy a pure-bred bull that comes of a family of producers. By saving the heifers from his best cows the standard of the whole herd can be gradually raised. It cannot be done, however, unless the milk is weighed from the individual cows. There must be no guess work as to which are the most profitable.

In feeding a bunch of dairy cows a daily milk sheet can be very useful. We have visited farms where all the cows were receiving exactly the same grain ration. Under such system of feeding some are sure to be overfed and there will be others that could profitably use heavier grain rations. It is not good business to feed into one machine more material than it can use with profit, and run another at less than its full capacity.

The keeping of a daily milk record may seem to be a good deal of trouble, but after once getting things fixed for doing it conveniently it will become a habit and the small amount of time it takes will scarcely be noticed. A half minute is plenty of time to hang a pail of milk on the milk scale, read the dial, and record the weight in the proper column of the milk sheet hanging on the wall close at hand.

A daily study of the milk record will tell the observant milker or feeder a good many things. For example, a fresh cow in the herd will be gaining each day in milk flow as the feed is increased. The feeder will be carefully watching this record, because by so doing the daily increasing of the feed can be stopped when it is apparent the limit of the cow's capacity has been reached. A sudden drop in the flow of some cow suggests an investigation to determine what was responsible and whether or not it was avoidable. If he locates the difficulty at once and takes measures to prevent its occurrence in the future, who can say the milk sheet has not been a money-maker by promptly calling attention to a thing of this kind?

It has been our experience that there is nothing that will arouse a keener interest in the business of milking cows than the weighing and testing of milk. Even milkers who are simply working for a daily wage will become interested in studying the milk sheet and making comparisons of the different cows.

A milk record is not complete without the butter fat test. Quantity alone does not determine the value of the product. It is simply one factor, the percent of butter fat being the other, and the two together will show how much butter fat each cow produces in a given period. By taking composite samples from the milk of each cow for a single day at the middle of the month, a very close approximation of the average butter fat test for the month can be obtained. Those who do not care to own a Babcock tester and test their own samples, can easily arrange with their cream station operator to make the tests for them.

There is another value from keeping

records that will not appear until the herd has reached the point where there is a surplus of stock to sell. A buyer is always impressed by the production records of the animal offered or those of its immediate ancestors. It is a most effective selling argument. We have in mind an instance where heifers due to calve in a few days were sold at a public sale of dairy cattle, on a basis of their photographs and their dams' records.

Amount of Grain for Cows.

Every dairyman is interested in the question of how much grain he can profitably feed cows giving milk. The rule commonly given is to feed a pound of grain for each three or four pounds of milk the cow is giving. It requires a somewhat heavier grain ration to produce rich milk than that lower in butter fat.

The Kansas dairyman is especially fortunate in having the best of roughage to feed. There is nothing better for cows than alfalfa and silage. They will produce a good flow of milk on these two feeds without any additional grain, and a great many cows do not receive grain rations regularly. On many farms it is a matter of turning alfalfa and silage into milk, giving no consideration to the possible capacity of the cows to use profitably some more concentrated feed in addition to all the roughage they can handle.

Grain feeding is largely a matter of relative prices of the feed and butter fat and the capacity of the cow. If grain and concentrates are very high in price and roughage plentiful and of good quality, heavy grain feeding might not be profitable. Under such circumstances more money would be made by using the roughage alone and not trying for maximum flow.

It is very seldom, however, that grain and concentrates are so high in price that some cannot be profitably fed. Fresh cows nearly always can use grain to good advantage. It is not only the present that is to be considered. If a heavy flow is kept up during the early months of lactation by the feeding of a reasonable quantity of grain, it will be easier to keep up the flow later. Heavy milkers sometimes lose flesh when they are fresh, and if they are allowed to run down during this period they cannot be expected to do well later.

We believe that under average conditions the rule commonly used is a good one to serve as a guide, at least. A little careful observation should show whether or not the grain is being fed at a profit. On farms where silage is used, this roughage sometimes gives out before the pasture season begins. Under such circumstances it is sure to require some additional grain if the milk flow is maintained. The cows will miss this palatable roughage, and it may be difficult to prevent their falling off even though considerable grain is fed.

While reckless feeding of grain is extravagant, it will usually be found that those who are making the most money milking cows are feeding liberally.

Watch Oleomargarine Legislation.

At a recent meeting of the National Dairy Union it was unanimously decided to instruct the secretary to put the Haugen oleomargarine bill into shape and have it introduced in Congress at once. The oleomargarine interests now have two bills in Congress, both of them having for their purpose the amending of the act relative to the coloring of this product. The object of these bills is plainly stated in the titles.

Looked at from every angle possible, the only conclusion we can draw from this insistence for the repeal of this act is that manufacturers of the imitation product want the right to color it so that it can be sold in direct competition with butter. This could have no other result than to give the oleo manufacturers control of the butter market, and real butter would have to sell everywhere in direct competition with the imitation.

This is not a manufacturers' fight alone. The producer of cream—the dairy farmer and every man who milks a few cows and sells cream, are interested. The National Dairy Union is making the fight in Congress, but it needs the support of every man producing the raw material. The way to make your member of Congress take notice is to write and tell him what you want. Congressmen are very sensitive to the demands made by the people who elect them.

COMPETITORS \$29.80
208 of THEM BEAT
"In competition with 208 separators in our district, our New Golden Harvest skimmer all other skimmers and left least amount of cream in skimmed milk."
J. W. Meyers, West Salem, Illinois

Gets All the Cream All the Time
Makes dairying more profitable. Skims 350 pounds per hour. Many great improvements not found in other separators. Sanitary Bowl. Cleaned in 3 minutes.

Golden Harvest Cream Separator
Fewer working parts. Extremely simple construction. No complicated parts to cause costly repairs. Ball bearing. Long wearing. So light running that child can operate it. Self-oiling—no mussy oil cups to fuss with. An improved separator at an immense saving. 60 Days' Free Trial. 20 Year Guarantee. Get all the facts about this better separator. Learn how it is making and saving money for other farmers. All told in illustrated Dairy Catalog No. 1115. Send for your copy today.

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SPECIAL PROPOSITION FROM NOW till GRASS—in addition to my new low prices. My way of opening new territory, as one separator sold in a neighborhood always sells from one to twenty-five more. EVERY GALLOWAY SEPARATOR is equal to 100 better than other separators selling for \$75 to \$85. Users say "way ahead of others." I only ask one thing—before you buy a separator of any make, kind or any price, get my big book; pick out the separator you want, try it for days, no time, at my expense. If you decide to buy it (you don't have to) I'll give you the choice of 5 open, fair and square selling plans and guarantee my separator for 10 years against defective workmanship and material and a \$25,000 bank bond backs every sale. You take no chances.

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Handsome, printed, beautifully illustrated in 4 colors. Tells all about my new 1916 Sanitary Cream Separator, how I build them, gives my 4 new low prices on 4 new sizes, also 5 BEST SELLING PLANS, cash or terms, etc. I'll also send my SPECIAL PROPOSITION ON 10,000 GALLOWAY SANITARY CREAM SEPARATORS. I'll send you a postal today. Separators are shipped from Waterloo, Kansas City, Council Bluffs, St. Paul or Chicago.

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A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for \$15.95. Skims warm or cold milk; making heavy or light cream. Bowl is a sanitary marvel; easily cleaned.

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TOWER'S FISH BRAND REFLEX SLICKER \$3
Keeps you dry and keeps you well.
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Kills Prairie Dogs, Ground Squirrels, G. Hogs, Pocket Gophers. Saves alfalfa. Experimental stations approve. 1400 tablets, P. P. \$1.25. Warranted. Mole Tablets, 75c. Ask Druggist or send direct.
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When Writing to Advertisers, Please Mention Kansas Farmer.

KANSAS FARMER DAIRY CLUB

Important Information for Those Desiring to Enroll

OVER seventy-five banks have now agreed to cooperate in helping to conduct the Kansas Farmer Dairy Club. Every one of these banks is offering to loan money to one or more boys or girls to be used in buying a cow for the club work.

APPLICATION FOR MEMBERSHIP

In applying for membership, be sure you are eligible. Only boys or girls 12 to 18 years of age can become members of the dairy club. To make application for membership, either sign and send to Albert T. Reid, president of Kansas Farmer Company, the coupon at the bottom of this page; or go to the banker in your town and tell him you want to become a member of the Kansas Farmer Dairy Club.

ARRANGEMENT WITH BANK

Applicants are not enrolled as members until all arrangements have been made with a cooperating bank. An agreement will be signed with the bank by the applicant and a note given covering the loan of the money that is to be used in buying the cow. Applicants have until June 1 to complete these arrangements.

BUYING THE COW

The next step is buying the cow. Any kind of cow can be purchased providing she is to freshen on or before September 1, 1916. As soon as the cow is secured, blanks which will be furnished are to be filled out—one for the bank, and one mailed to KANSAS FARMER. The member should save and study carefully the article on buying dairy cows on page 16 of KANSAS FARMER March 25 issue. Every article on the work of the club should be saved. Cut them out and paste them in a scrap book and they will be convenient for ready reference.

KEEPING OF RECORDS

The records to be kept will furnish the information that will be used in awarding the prizes at the end of the year. All required blanks will be furnished by KANSAS FARMER. The grain fed is to be weighed. Roughage and pasture will be estimated. The blanks furnished will give schedule of prices on farm-grown feeds and pasture. Purchased feed will be entered at actual cost, but in calculating final results for the purpose of awarding the prizes, a uniform price will be used for all feeds, these prices to be given on feed blanks furnished. Milk is to be weighed each milking. On the fifteenth day of each month a composite sample of the morning's and evening's milk is to be taken and sent to the Dairy Department of the Kansas State Agricultural College, Manhattan, to be tested for butter fat. At some time during the year the contestant will be required to send a bottle of milk to the Dairy Department of the Kansas State Agricultural College to be scored for quality.

MAKING REPORTS

Not later than the tenth day of each month the contestant is to furnish to the bank the reports for the previous month, showing, first, amount and value of feed used; second, total pounds of milk produced; third, butter fat test; fourth, total pounds of butter fat for the month. At the end of the year a complete report of the year's work is to be prepared—this to be a basis for the making of awards. There shall be three copies of all reports—one for the contestant, one for the bank, and one for KANSAS FARMER.

BASIS OF AWARDS

Total production for year... 0 to 30 points
Profit over cost of feed and interest... 0 to 30 points
Records and story of work... 0 to 20 points
Quality of product... 0 to 20 points

Marketing Dairy Products.

One of the big farm problems, and one that is very much discussed these days, is the marketing of farm products. The demand is for greater efficiency all along the line so that there will be less difference between what the consumer has to pay and what the producer receives.

We wonder if enough consideration is given the dairy cow as an agency for efficiency in marketing. The cow consumes the silage and alfalfa, the pasture grass, farm-grown feeds of various kinds, and from this great bulk of coarse material produces one of the most concentrated food products known. A good cow will consume in a year, two or three tons of hay, three or four tons of silage, a lot of pasture, a half ton of grain, and will make this into a product from which two or three hundred pounds of butter can be made. This is a wonderful condensation of raw material.

A ton of grain marketed might bring from \$18 to \$30, but it would carry with it from \$6 to \$8 worth of soil fertility. A ton of butter is worth \$600 to \$700 and does not remove to exceed fifty cents' worth of fertility from the farm. The dairy farmer has no immense tonnage of grain and roughage to haul to market. The marketing problem has been greatly simplified by the work of the cow and the farm has not been depleted of its producing power.

Feeding Young Calf.

The mistake most frequently made in the hand-feeding of young calves is giving too much milk at a time. The young calf running with the cow gets its milk at short intervals, and never becomes so hungry as to gorge itself. The dairy calf is usually taken from the cow about three days after birth. Some leave them with the cows even a shorter time or take them away at once.

When the hand-feeding begins Nature is a good guide to follow. The calf does not have a very large stomach, and for the first week a couple of quarts of warm, fresh milk at a feed three times a day, is enough. The night and morning feed should be fed as soon as milked, and that saved for the noon feeding should be warmed to the same temperature.

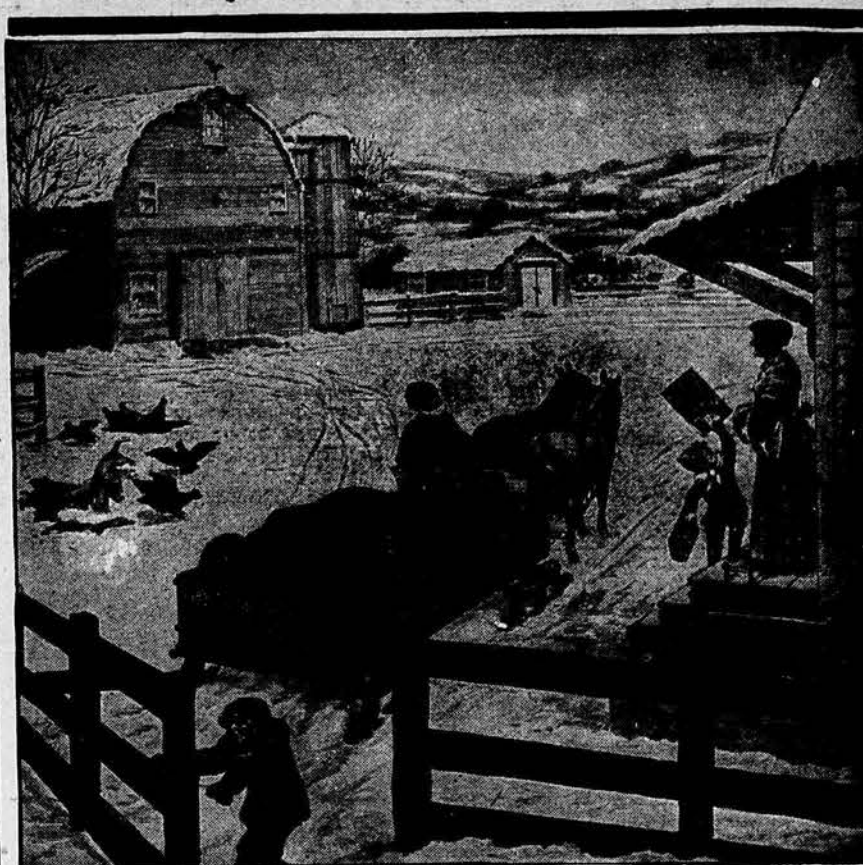
Overfeeding is sure to cause indigestion. To be safe, all increases should be made very gradually. The change to skim milk should not be made abruptly. The ideal method is to replace a half pint of whole milk with skim milk, and after a few days increase the quantity of skim milk until by the time the calf is four or five weeks old it is on a diet of skim milk alone, supplemented, of course, with some starchy grain, such as corn or kafir.

The well-bred calf can easily be so badly stunted during the first few months that it will be of little value in the herd later. Dairywomen cannot keep up their herds unless they become successful calf feeders, for they must of necessity raise their own cows.

As we see the street car company breaking in new motormen from day to day, on ten-dollar-a-week salaries, we are reminded that boys are still growing up in the country who feel that the city is the only place where there is a chance to get ahead.

Sweep up every particle of silage in the alleyway and give it to the cows at each feeding. Silage carelessly left at this time of the year will spoil quickly, producing bad odors, and if later fed it is likely to be harmful.

If the horses are slow to shed their coats, feed a little oil meal or use the horse clippers.



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- FARM NO. 2.** 480 Acres, Harper County, Kansas. 160 acres broke, 100 acres in wheat, 60 acres ready for spring crop, all good hard wheat land. \$25 an acre, cash.
- FARM NO. 3.** 160 Acres, 110 acres broke, 60 acres in wheat, 50 acres ready for spring crop; 50 acres mow land on creek bottom; all fenced, meadow cross-fenced; running water, well, granary and stock sheds; good hard wheat lands. \$25 per acre, cash.
- FARM NO. 4.** 74 Acres in Sedgwick County, Kansas. All broke, all fine alfalfa land; 6 acres in alfalfa, balance in wheat, was alfalfa; fenced; good house, well, barn for four horses, and usual out-buildings. Near station, 10 miles from Wichita. \$100 an acre. Balance of quarter in alfalfa and can be had for \$115 an acre.

WRITE TO H. N. HOVEY, CARE KANSAS FARMER, TOPEKA, KANSAS.

Send Your Name For Membership

The first step in becoming a member of the Dairy Club is to fill in the following coupon and mail to Albert T. Reid, president Kansas Farmer Company, Topeka, Kansas:

I desire to become a member of the KANSAS FARMER DAIRY CLUB and will follow all the instructions and report regularly as directed.

My name is.....

Address..... R. F. D. No.....

My parent's or guardian's name is.....

The bank we patronize is.....

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The Tung-Lok Silo consists of sections laid in layers—locking and interlocking—grooved and tongued to fit perfectly. Once in place—the Tung-Lok is up to stay—can't fall down—wind can't blow it down. You erect the "Tung-Lok" yourself—no "expert help" needed. No Hoops, No Guy Wires.

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KANSAS FARMER
TOPEKA, KANSAS



OIL MEAL FOR HORSES

SUBSCRIBER J. W., Russell County, asks if oil meal is a good feed to give work horses in the spring. Oil meal in reasonable quantities is a most valuable feed for horses and not only horses but all classes of stock. It is a good plan to keep some oil meal on hand all the time on a live stock farm. In addition to being very rich in digestible protein and other nutrients it seems to have a sort of medicinal or toning effect. For this reason a little oil meal is especially good for horses that are being put into condition for spring work. Horses that have gone through the winter on a small allowance of grain, or with none at all, must be handled with considerable care in the spring in order to get them up to a full grain feed and well hardened for work. They cannot be put on a heavy feed at once without trouble. A little oil meal at this time—from a handful to a pound daily—will help put them in shape quickly. The heavy winter coats must be shed and if they have been wintered poorly, getting rid of this winter hair seems to be a hard task. The feeding of a little oil meal seems to loosen the old hair and make it come away easily and the new hair comes on and the skin has a clean, healthy appearance.

It is important that work horses be brought up to a full feed as soon as possible if they are to do their best in the field. It may be possible to winter them on silage and roughage alone, but they cannot do hard work on such bulky feeds. While corn will probably be the bulk of the grain ration, a little oil meal is valuable all through the working season.

No single grain is better for the feeding of work horses than oats, but oats are usually scarce and high in price. A combination of corn, bran, and oil meal, in the proportion of 6:3:1, is almost a perfect substitute for oats and nearly always is cheaper. This combination is a standard grain ration for the work horses at the Kansas Agricultural College, and has been used most successfully for a number of years. It is especially well adapted to go with a roughage ration of prairie hay. Those using alfalfa as roughage may not need the oil meal through the whole season.

Oil meal seems to stimulate the digestion of other feeds and for this reason it has a value aside from the nutrients it supplies. It is always useful in feeding brood mares. Mares suckling colts require a feed rich in protein, and this grain mixture suggested for work horses is a good one for mares with colts whether they work or not. When not working the quantity should simply be lessened.

Sheep Shearing.

R. R. L., Shawnee County, who is having his first experience with sheep, asks when is the best time to shear.

There is no set time to shear sheep, but it should be done as early in the spring as the weather conditions will warrant. Usually sheep should not be sheared earlier than the first of April. As the weather gets warm they suffer

greatly with the heat, but of course during the month of April there are frequent cool spells and when sheep are sheared early they should not be exposed during a cold rain. Unless our correspondent is fixed to give his sheep proper shelter, it would be safer to defer the shearing until moderate weather has come to stay. Of course it is desirable to have the shearing done as early as possible in order to have it out of the way before the rush of corn planting and other spring work. Sheep always seem to thrive better after their heavy fleece has been removed, and where sheep are being full-fed for market late in the spring it is nearly always desirable to remove the wool in order that they may finish more rapidly.

The man who is shearing sheep should remember that wool is a staple product having a comparatively high value. It should not be carelessly handled. The work should be done in a clean place and the wool should be carefully tied with wool twine—not binder twine. The sisal fibers of the binder twine will get into the fleece and will make trouble later when they are woven into the cloth. Buyers of wool always object to fleeces tied with sisal twine and cut the price accordingly. After the wool has been removed it should be stored in a clean room such as an empty granary, and covered with old horse blankets or pieces of carpets if it is to be held long before selling.

Sheep are apt to be afflicted with ticks, and as soon as they are sheared they should be dipped. If this is not done, the ticks will all leave the ewes and go to the new-born lambs. A well kept farm flock that is dipped each year will soon be free from ticks.

Life History of Ox Warble.

A few weeks ago we gave some information relative to the ox warble. It was stated that about the only means of combating this was to destroy all the larvae so as to prevent any from reaching maturity and thus laying eggs to perpetuate the pest. Most of the grubs have now emerged if they were not destroyed and in due time the flies will be laying their eggs about the feet and legs of the cattle.

Some of the cattlemen express doubt as to the facts of the life history of this insect as it is reported by our entomologists. There are two species of the ox bot fly in this country. They are known as heel flies, and we have just learned from Prof. G. A. Dean, entomologist at the Kansas Experiment Station, that there is no question as to the identity of the fly laying the eggs that later develop into the ox warble. While the larva or grub is very large in proportion to the size of the mature fly, there are many such cases in insect life.

Professor Dean states that the very latest information relative to the life history of warbles is from some of our best foreign entomologists. These state that the little maggot when it hatches bores through the skin and works along underneath until it comes to the oesophagus or gullet. Here it is found as a



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This penetrating, soothing and healing ointment for all Sores or Wounds, Felons, Exterior Cancers, Burns, Boils, Carbuncles and all Swellings where an outward application is required. CAUSTIC BALSAM HAS NO EQUAL. Removes the soreness—strengthens the muscles. Price \$1.00 per bottle. Sold by druggists or sent by express prepaid. Write for Booklet L.

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a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

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will clean it off without laying the horse up. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2 per bottle delivered. Describe your case for special instructions and Book 8 K free. ABSORBINE, JR., antiseptic liniment for mankind. Reduces Painful Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Varicosties, Old Sores. Allays Pain. Price \$1 and \$2 a bottle at druggists or delivered. Manufactured only by W.F. YOUNG, P. D. F., 211 Temple St., Springfield, Mass.

Stack Your Hay The Easiest Way The Skyhawk



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When writing advertisers, please mention Kansas Farmer.

little maggot about a half inch in length. Later it continues its journey under the skin, finally locating along the back. In Kansas it arrives at this location about the last of December. By this time the larvae have arrived at the stage of their development when they require air and they make a breathing hole through the skin.

While there is no question but what the larvae bore through the skin at the place they have hatched, there is some question as to whether some of them may not be carried to the mouth by the licking of the animal and later be found around the oesophagus.

Even though stockmen refuse to accept these statements that the maggots travel along under the skin, they cannot fail to see the logic of systematically destroying the grubs. If no grubs are allowed to mature, there will be no flies to lay eggs, and in the course of time the warbles can be greatly reduced by systematically following this practice.

Navel Infection of Colts.

E. T. S., Pawnee County, writes that he will have some colts foaled this spring, and wants to know how to avoid navel ill or joint disease.

A great many colts die of this disease every year, and the beginner is wise in trying to learn how to avoid this serious trouble. It is caused by germs that gain access to the body through the navel cord at birth. These germs are usually found in dirty and unsanitary quarters. The first precaution is to have the box stall in which the mare is to foal, scrupulously clean and carefully disinfected with some good dip. If the weather is warm and pleasant the mares may be allowed to foal out in the open.

To avoid any possibility of navel infection, the cord should be washed at once with a 1-to-100 solution of creolin or a 5-to-100 solution of carbolic acid. It should then be tied about two inches from the body with a string saturated in iodine and the whole cord should be painted with iodine. It is a good plan to apply iodine every few hours during the first day. By following these instructions faithfully there will be little danger that any of the colts will be affected with navel ill.

Kansas Stallion License Law.

The purpose of the Kansas stallion license law is to give the mare owners of the state a means of knowing the breeding of each and every stallion that stands for public service. In order to do this the breeding of each stallion is investigated and a license issued according to his breeding. Four kinds of licenses are issued: Pure-bred, cross-bred, grade and scrub. This law has been in operation since 1910. During this time the unscrupulous stallion peddler, who formerly did over \$500,000 worth of business annually, has been entirely eliminated from the state through the operations of the stallion license law. During the year just previous to the passage of the Kansas stallion law, over 2,000 grade and scrub stallions were advertised as pure bred. One of the principal results of this law has been the creating of a very decided interest in better sires. This interest has resulted in an increase of 825 in the number of pure bred and a decrease of 1,211 in the number of grades and scrubs during the past five years.

Making Ewes Own Lambs.

At lambing time the ewes should be separated into little box-like areas if possible where they can lamb undisturbed. Two little gates, hinged together form an excellent device for making these lambing pens. One can start in the corner of the barn and make a pen by arranging these gates in the form of an "L." Have them provided with hooks.

Hook the next two to the first and so on forming a series of pens across the barn. Sometimes a ewe will not own a lamb. It is because the smell is foreign. Make her hold still until the baby gets its dinner a few times. Gradually the milk gives the lamb the smell the ewe must sense and she owns it.

Sometimes one lamb dies and one wishes the mother to nurse another. Skin the dead lamb. Cut holes where the legs come out. Put the hide on the orphan lamb and place with its desired foster mother. The ewe is deceived and soon owns the imposter and makes as much fuss over it as a real mother would.

Feeding Young Lambs.

The baby lambs have but one object in this world—to grow. It is the duty of the flockmaster to help as much as possible. To be born well, to be fed well, and to grow well is regarded by every lamb as an inherent right.

Experienced sheep feeders usually have a creep for the lambs so the ewes cannot eat the feed intended for the lambs. This can be easily and cheaply made and the lambs will soon use it to eat the feed put in for them. This is usually made of slats wide enough apart to let the lambs through. A low flat-bottomed trough is placed in the creep to hold the grain, bran, etc., for the lambs.

For the first two or three weeks the lambs will require no other feed than the milk of their dams.

Feed the ewes well. That means much milk. Much milk means much lamb fat and quick growth. Give alfalfa or clover, a pinch of corn, some ground food and plenty of clean water. Turn on to grass as soon as possible.

It was found at the Wisconsin experiment station that lambs fed grain up till they were ten months old reached a given weight four to seven weeks sooner than if no grain was fed before weaning time. This shows the importance of a grain ration for young lambs. In the experiments with the various grains for unweaned Shropshire lambs for a period averaging ten weeks .3 to .4 pounds of grain was eaten daily. It required the following amounts of grain to produce 100 pounds of gain on the lambs: Wheat bran, 71 pounds; corn meal, 74 pounds; whole oats, 78 pounds; cracked peas, 81 pounds.

The conclusion was that unweaned lambs that go into the breeding flock should receive feeds like oats and peas, wheat or wheat bran—feeds somewhat high in protein. Corn was preferred for lambs to be fattened for the butcher, since this grain has a tendency to produce a fat carcass.

Pasture is necessary for economical sheep raising. The lambs will need exercise and green food and nothing will take the place of the pasture for them. If the permanent pasture is not sufficient grazing crops may be needed.

In some instances it may be advisable to plant soiling crops to supplement the pasture. For this purpose corn, cane, kafir, alfalfa or rape may be used.

The bankers of Tonganoxie, Kan., have taken up the idea of supplying the capital necessary to bring in some high grade dairy heifers to be sold to dairymen of that community in need of better stock. They have counseled with P. H. Ross, county agricultural agent, and as a result the assistance of Professor O. E. Reed has been secured to help select the heifers.

A most excellent mash for horses may be made by mixing two quarts of oats, one of bran, and a half pint of linseed meal. The mixture is scalded, covered and allowed to rest for five hours.

Yes, I Guarantee It Will Rid Your Sheep of Scab, Ticks, etc.

Gilbert Hess, M.D., D.V.S.

Dr. Hess Dip and Disinfectant is sold under a money-back guarantee to do that, and more, and my dealer in your town, whom you know, backs up my guarantee. My Dip is a positive lice killer. Cures skin diseases, destroys germs and foul odors. You need my Dip for dipping your sheep and hogs, disinfecting hog pens, stables, poultry houses, troughs, etc.

Dr. Hess Dip and Disinfectant

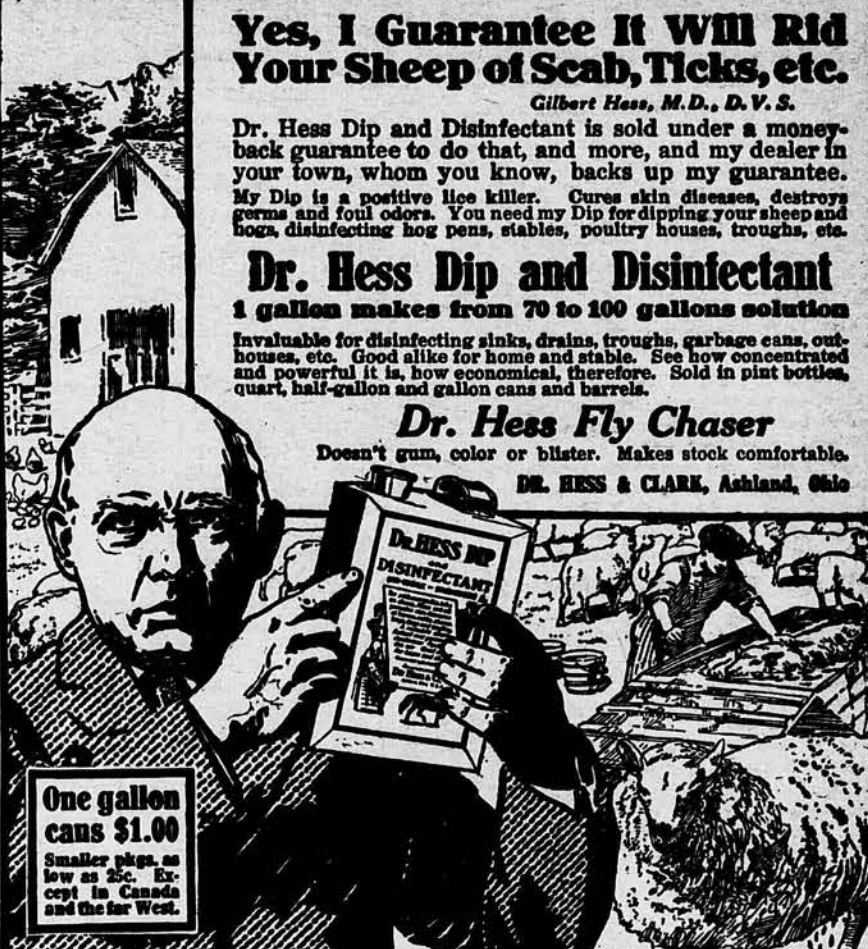
1 gallon makes from 70 to 100 gallons solution

Invaluable for disinfecting sinks, drains, troughs, garbage cans, out-houses, etc. Good alike for home and stable. See how concentrated and powerful it is, how economical, therefore. Sold in pint bottles, quart, half-gallon and gallon cans and barrels.

Dr. Hess Fly Chaser

Doesn't gum, color or blister. Makes stock comfortable.

DR. HESS & CLARK, Ashland, Ohio



One gallon cans \$1.00

Smaller pkgs. as low as 25c. Except in Canada and the far West.

Take No Substitutes

Don't let anyone persuade you to accept an imitation of the genuine Martha Washington Comfort Shoe. No other shoe will give you so much real comfort and lasting wear.

Mayer

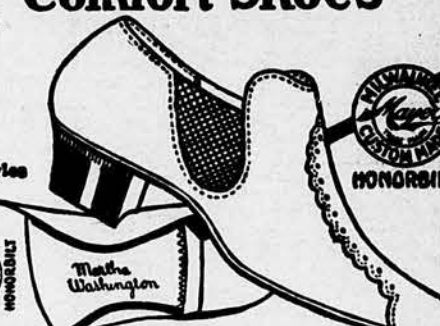
Martha Washington Comfort Shoes

Wear these great shoes and free yourself from the annoyance of tired, aching, burning feet. They fit like a glove.

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

We make Mayer Honorbilt Shoes in all styles for men, women, children; Dry-Box wet weather shoes; Honorbilt Cushion Shoes.

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FREE GOVERNMENT LAND

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

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

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

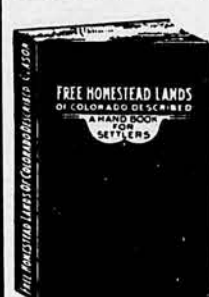
This Book Describes The Lands

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

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

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

KANSAS FARMER, TOPEKA, KANSAS




GOOD COWS ARE MONEY-MAKERS IF GIVEN PROPER CARE.—THIS SCENE ON FARM OF J. H. LOMAX, DONIPHAN COUNTY, KANSAS.

HUNDREDS MORE EGGS EVERY MONTH

OF THE YEAR WITHOUT LICE OR MITES

Don't let the lice and mites rob your laying flock of the strength and vitality that should be put into egg production. Give your hens a clean, wholesome, well-ventilated, sanitary lice and miteless nest in which to lay. The increase in egg production in this nest is enormous.

Our Special Advantages

over any other steel nest is in the construction, light, size and ventilation.

Each nest has ten square inches more room, inside, than any other steel nest on the market.

It is fastened together with heavy, substantial bolts and nuts. It is easy to assemble and absolutely rigid and permanent when set up.

It is entirely complete at prices here quoted, having full metal back, top, bottom, ends, partitions, doors and perch or running board.

The perch or running board is an advantage, because hens go easily to the next nest without disturbing a hen already laying.

A Solid Complete Steel Back

is included with each nest at the prices given below. We will not ship nests without backs.

The doors are so hung as to give air and light space entirely around the door on three sides as well as through the openings in the door.

It is the last word in steel nest construction and besides all these advantages—is sold for less money. These low prices are possible because our factory turns out from 8,000 to 12,000 complete sets every season. More than all other factories combined.

THIS IS THE LATEST-LARGEST-STRONGEST STEEL NEST ON THE MARKET



AND IT COSTS YOU LESS

PRESCOTT'S IMPROVED

"MITE-LESS" HEN'S NEST



More Expensive But Worth More. Made round on top so that hens cannot roost and foul the nest. Each nest completely partitioned, roomy, sanitary and inviting to the hen. Easily removed from the poultry house and can be entirely burned out without the slightest injury. Made only of galvanized steel. Put together with heavy bolts and nuts. Portable, light, roomy, but very substantial and should last a lifetime.

1 set of 8 nests, \$6.00; without legs, \$5.00
1 set of 6 nests, \$4.00; without legs, \$3.10
1 set of 4 nests, \$2.00; without legs, \$1.50
Satisfaction guaranteed or money refunded. Order now or write for literature.

FREE

We will send you, absolutely free, a successful and thoroughly reliable formula for making poultry louse powder at home. We will not accept one cent of your money for this formula. All we ask is that you write us fully giving the number of chickens and hogs on your place. Write and mail today. It is easy to keep your poultry free from lice and mites by its use.

Read What Our Users Say

Prescott Sales Co., Kansas City, Mo.—Please find enclosed check for \$6.00 for which send me two more sets of six. Also catalog on other styles. I like these nests because they have backs. Respectfully yours, D. F. Diehl.

My honest opinion of the "Mite-less" Hen's nest is that they are sanitary. They are roomy enough for laying hens and deep enough to prevent them from scratching out the litter. And best of all they are complete with backs. Respectfully yours, Mrs. Chris Smith.

Regarding your "Mite-less" Hen's nests, I frankly say I would not be without them for twice the money. I have saved many hours of work since I had them. No more white-wash, no more insect powder, no more dirt. As soon as I put a new addition on my coop you will hear from me for about five or six sets of the No. 8. Yours very respectfully, Alex A. De Bore.

Enclosed please find check for \$37.75 for which send nests. I like your nests immensely. Respectfully, Mrs. Mike Hendel.

About a year ago we ordered and received one of your "Mite-less" Hen's nests and we like it very much. Yours truly, D. B. Unruh.

Guaranteed For 10 to 20 Years

You can order direct from this advertisement or write for our literature. Louse season is here and you should have this nest in your poultry house at once. Every nest is absolutely complete, made of 26 gauge steel with two coats of black asphalt louse-proof paint, or heavily galvanized as you prefer. AND remember these prices include complete nests with backs, put together with nuts and bolts, absolutely complete and made like a steam boiler.

1 Set of 8 Nests \$4.00. 2 Sets \$7.50.
1 Set of 6 Nests 3.00. 3 Sets 8.50.
1 Set of 4 Nests 2.75. 4 Sets 9.50.

Special Prices and Prepay Freight Offer

Don't wait a minute. Get these nests now. Get the big egg production started at once and keep it going. Nests without lice and mites will add 20% to 100% to your poultry profit. Order from our answer this advertisement and we will prepay the freight on orders of \$7.50 or over. If you prefer galvanized steel add seven cents per nest. Order or write today and mail to

PRESCOTT SALES & MFG. CO.

Room 10, 3908 Bell Street KANSAS CITY, MO.

HOME MADE BROODERS

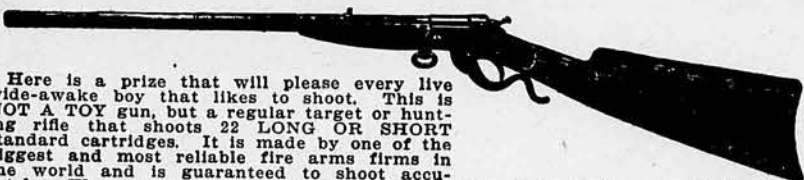
With warm medicated dirt floors. Saves baby chicks. You can change any old brooder or make one of these from an ordinary box. We will send this information absolutely free, also tell you

WHY CHICKS DIE IN THE SHELL

Just send names of 5 or 10 friends who use THE NAMES. Send them today.

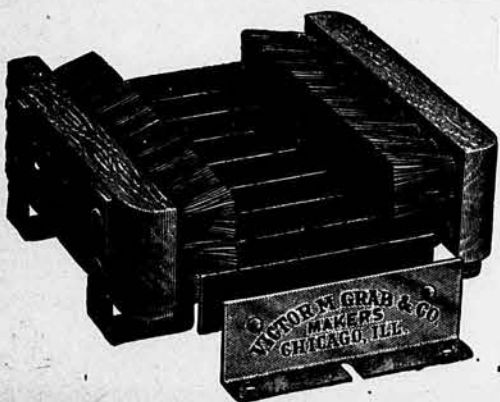
RAISALL REMEDY COMPANY., Blackwell, Oklahoma

BOYS THIS CRACK SHOT RIFLE Will Be Given As a Prize! FREE



Here is a prize that will please every live wide-awake boy that likes to shoot. This is NOT A TOY gun, but a regular target or hunting rifle that shoots 22 LONG OR SHORT standard cartridges. It is made by one of the biggest and most reliable fire arms firms in the world and is guaranteed to shoot accurately. We are going to give away several hundred of these fine guns to boys who will get only four one-year subscriptions to Kansas Farmer at \$1 each, the regular subscription price. You can get them in half an hour. We pay express charges, so the gun don't cost you a cent of your money. You can get two three-year subscriptions at \$2 each, just so you send a \$4 club. Address your order to

KANSAS FARMER, 625 Jackson Street, Topeka, Kansas



FOOT SCRAPER

Keep Your Wife Good Natured

Stop tracking mud and dirt into the house. See the brushes. Handy, adjustable to any size boot or shoe. One of these household necessities will be sent to you, postage paid, on receipt of \$1.00 to pay for one year's subscription to Kansas Farmer, and only 25 cents extra to pay for packing and postage—\$1.25 in all. Offer open to new or renewal subscribers. If you are paid in advance, time will be extended one year. Address

KANSAS FARMER
TOPEKA, KANSAS



Skim Milk For Chicks

WE have written in late issues, of the great value of milk in egg production, and now want to emphasize its good qualities in raising chicks.

One of the most important things in poultry raising is to keep the chicks growing right along from the first day they are hatched. Many times during the spring they will seem to stop growing, and have trouble about feathering out. The trouble is that they lack certain elements in their food. Now milk in any form is good for chicks and older birds. Milk contains ash, protein, nitrogen free extract, and fat. There is, of course, some little difference whether it is whole milk, skim milk or clabbered milk. However, milk in any form may be fed to the chicks with good results. The whole milk may be fed to the chicks for a time, until they get so large that they drink more than you feel that you can afford to pay for. Then skim milk may be substituted. The little chicks may be fed milk in one of the small drinking fountains used for water. They should have both milk and water before them. Where chicks have free access to milk during the first few weeks, they grow more rapidly than chicks of the same hatch that are not fed milk in any form. A little milk fed in this way for the first couple of months will make fine, plump broilers, of the sweetest taste imaginable.

The skim milk may also be used in the making of the mash for the chicks. The regular ingredients of the mash should be put into the mixing trough and the skim milk poured in, and the whole thoroughly mixed. This mash should be fed once a day, preferably at noon, and then they should be given just enough for the meal and no more. If it stands around it becomes sour and tainted. Take away any that is left over. In a short time you will know how much to feed them so that they will eat it up clean.

Wherever skim milk is plentiful it should be used in the poultry yard all the year round. The laying hens will enjoy the mash better if it is mixed with milk. They are very fond of clabbered milk and will eat it greedily. Milk that is left over from the table should be set aside to clabber. Then it may be poured out into a dish and given to the hens. This helps to make eggs and gives a change in the regular diet.

The farmer who has plenty of skim milk should make a business of giving some to his chickens as well as to his pigs. The milk has a feeding value that cannot be overestimated. Try it on your flock, and especially with your chicks this spring, and you will be pleased with the results.

Those who have not the skim milk can buy it from creameries or from farmers who make their own butter. Now and then the milkman will be able to supply you, as he probably skims the milk left over, using the cream to make into butter. In lack of skim milk, buttermilk would be a good substitute. We saw buttermilk advertised in our daily paper lately at 1 cent per gallon. Just think of it—ten gallons of such excellent chick and hen food for only a dime.

April is the month of changeable weather, and great vigilance must be exercised in looking after the young chicks.

See that the chicks are kept indoors during wet and stormy weather. They cannot stand the great variations in weather conditions that old birds can.

This is the season for hatching chicks and you should send off for a setting or two of pure eggs so as to improve your flock and infuse new blood into it.

Little chicks need grit just as much as do the older ones, only it needs to be of the proper size and fed in proper quantities. The first feeding of grit should be in the form of finely ground egg shells. The shells from which the chicks have just emerged are better than any others, for they are dry and brittle, and will break into minute pieces when crumbled in the hand. Some people in making a johnny cake for the chicks use the infertile eggs from the incubator, and mix up shells and all. This is to give them grit in their food. But in addition to this they should have crushed egg shells. The chicks will pick these

pieces up and it will help to grind up the food that they will get for the first few days. Later on they can be fed a limited amount of chick grit. Finely sifted oyster shells and ground bone can also be given for grit and lime for bone building. Chicks should also have charcoal of small size. It is very good for the bowels, and keeps them in a normal state. This charcoal will absorb noxious gases which form, and many times is helpful in this way. After the chicks are a few days old the charcoal may be fed with their dry feed.

One great cause of mortality among chicks is caused by overfeeding. The person in charge wants the chicks to do well and to grow rapidly. He feeds them all they will eat every little while, with the result that their appetites are impaired, and they are soon troubled with indigestion. The crop of a small chick will not hold much more than a thimbleful, and this cropful will last the chick for a long time; so when you force more feed down them than they can digest, and laugh with delight at the full crop, you are doing them an irreparable injury. They will stand this for a time, but after a while a lot of them will be off their feed and moping around. You will wonder what the trouble is, since you have fed them so liberally and they have eaten so well. The trouble has been, you have fed them too much. It pays to keep their appetites keen, just so they will act as though they were hungry every time you go to feed them. They will be eager for every meal and will appreciate their food. Young chicks do not need to be fed all the time. They need rest and warmth as much as feed, and you must allow them time for the food to assimilate. At night it is well to give them all they will eat, in order that they may have a full crop for the night. This food in the crop gradually passes into the gizzard, and by morning the crop and gizzard will be pretty well emptied. Keep these things in mind, and do not overfeed through kindness of heart.

When eggs are being produced for market purposes, it is well to make a point of keeping the nests clean. Dirty eggs are in a class by themselves, and do not command as large a price as clean ones. Where straw is used for nesting material, see that it is clean and bright. The nests should be cleaned out quite frequently and sprayed with some disinfectant. The nests should be so covered that the hens cannot roost on the sides and dirty the straw in the nest. If a slanting cover is placed of the nests it will do away with all roosting on the edges of the nest boxes. It is well to grade the eggs according to size. The pullet eggs will be forthcoming at this time of the year, and they should not be placed with the large eggs. Put them in a class by themselves and sell as pullet eggs. You will probably have to take a little less for the first crate or so, but after a time they will be large enough to go with the regular eggs. Remember that when you send a mixed lot of eggs to a commission house, that they will all go at the price of the poorest in the lot; whereas if they are graded you will be paid according to the different grades. When sending eggs to private customers, have the boxes clean, and the eggs packed so as that they will present a good appearance when the box is opened. There are many little quirks to the selling of fresh eggs that will mean more or less money according to the way they are handled. You might as well make money this way as any other way.

Chick size grit and fine charcoal should be kept before the young chicks at all times.

Feeding Little Chickens.

The little chick, whether naturally or artificially hatched, should not be given anything to eat until it shows signs of being decidedly hungry, which will usually be in about 36 to 48 hours. One of the first feeds that the young chick should receive is fine sand or commercial grit and a good drink of sour milk or buttermilk if possible. More digestive troubles in incubator chicks are caused from a lack of grit than any other one thing.

One of the essentials in maintaining good digestion is a liberal supply of

May I send you that free Picture Book about Eastern farmers in winterless California?

Last fall I personally escorted two trainloads of Eastern farmers on a special rail and auto trip, inspecting first hand hundreds of California's farms and orchards.

What they saw and what they said has been put into a book—mostly pictures.

You will enjoy reading this book, which is written by real farmers for farmers.

It's free—write for a copy.

The Santa Fe has no land to sell. Its mission is to help populate the districts along its lines with thrifty farmers who grow things.

That's why we want you.

That's why we help California advertise herself.

California has no winter. Cattle and chickens can forage outdoors every month. The man in overalls can work outdoors every day, in comfort. You and your family will live longer there than back East, and make more money, too.



Let me help you plan your trip. Reduced excursion fares this Spring and Summer on the Santa Fe. Ask for the book.

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4 ALADDIN \$899

Profits Saved on the Lumber, Millwork, Hardware and Labor. All material cut-to-fit. Complete homes shipped anywhere, fast freight. Send stamps for big catalog p202

ALADDIN HOMES The Detroit Home Co. Bay City, Mich.

No More White Diarrhoea

"I am sixty-one years of age and have been raising poultry ever since I was seventeen. I never had much trouble except with White Diarrhoea, and sometimes I have lost my entire incubator hatch with this dread disease. Last year I read a lot about Chictone but thought it would be no more help than some others I had used. However, a friend told me what it had done for her, and that it was a very effective remedy, with not a bit of poison in it, so I sent a dollar money order to The Wight Company for two 50c boxes, and I want to say the result was wonderful. I used it about eight weeks, raised over 600 chicks and never lost one. I didn't even have a droopy one in my flock and I will never try to raise another hatch of chicks or turkeys without Chictone. It made my work a pleasure and I know it was the cause of my good success."—Mrs. H. E. Blythe, Unionville, Mo.

Chictone gets results! Resolve today that you will save your chicks from White Diarrhoea. Chictone is guaranteed to save 90 per cent. There are lots of substitutes, but there's only one Chictone. Chictone is not a poison. Sold in 50c boxes. Delay is dangerous. Order today from

THE WIGHT CO., Dept., 182, LAMONI, IA.

Feed more oats and alfalfa and less corn now, as corn lacks sufficient muscle making protein for the working horse.

either sour milk or buttermilk. In a few hours after the sand and buttermilk has been fed, a very small quantity of hard boiled egg—including the shell, chopped fine and mixed with bread crumbs or rolled oats may be given. A good proportion is one part egg and five parts bread crumbs or rolled oats.

On the second day equal parts of cracked wheat and corn should be scattered in a litter. At the same time a mash consisting of 18 parts corn meal, 21 parts wheat bran, 4 parts bone meal, and 2 parts of granulated charcoal should be given. The charcoal is not a feed, but acts as a regulator. The mash should be fed in shallow troughs that are kept scrupulously clean. If chicks have a free range this mash may be kept before them at all times. If, however, they are confined to small pens, only what they will clean up in about 20 minutes should be given them.

During the first week or ten days it is best to feed five times a day, after which time three times daily is sufficient. As soon as possible whole wheat and whole kafir should take the place of the cracked grains. Whole kafir is a splendid feed for young chicks.

Where an abundant supply of sour milk is not available it will be found necessary to add one-half pound of corn and meat scrap to the dry mash after the first week. This should gradually be increased to four pounds at the end of the fourth week. When the hatch is brought off early and there is not an abundance of green shoots, it will be found beneficial to feed an onion once or twice daily.—N. L. HARRIS, Kansas Agricultural College.

Money in Turkeys.

For those who are favorably situated for raising turkeys, a more profitable side line can hardly be found. Given plenty of range where the turkeys can find grasshoppers and other insects, green vegetation, the seeds of weeds and grasses, waste grain, acorns and nuts of various kinds, the cost of raising them is very small and the profits large. Grain and stock farms are particularly well adapted to turkey raising, and it is on such farms that most of the turkeys are found. Little has ever been done in the way of raising turkeys in confinement, and where it has been tried the results have been discouraging. Plenty of range is essential to success in turkey raising.

In selecting turkeys for breeding, the most important factors to be considered are vigor, size, shape, bone, early maturity and color of plumage. The body should be deep and wide, the back broad, and the breast round and full. The head should be of good size and of a clean, healthy appearance. A strong, well-made skeleton is shown by thick, sturdy shanks and straight, strong toes. It should be the aim of every turkey raiser to have a flock of pure-bred turkeys, even though they are sold at market prices. The male at the head of the flock should by all means be a pure-bred of the best type obtainable. The male is one-half the entire flock, and by continually selecting the best females of a similar type and mating these with a pure-bred male, one can soon have a flock of uniformly large, early-maturing, strong-boned, long and deep-bodied turkeys of the same color.

Fifteen turkey hens can safely be mated to a vigorous tom. If twenty-five or thirty hens are kept, two toms should not be allowed to run with them at the same time, but one should be confined one day and the other the next. When two toms are allowed to run together during the mating season, they fight badly and the stronger does practically all of the mating.

Turkey hens are wont to "steal" their nests in hidden places, such as a patch of weeds, tall grass or thick brush, and often wander a half mile or more from home before they find locations that suit them. To find these stolen nests often proves to be a long and tedious task, the usual method being to follow each turkey hen as she separates from the flock and starts toward her nest, care being taken that she does not know she is being followed. A much easier and quicker method than this is to confine the hens early some morning soon after they have come down from roost and let them out late in the afternoon. Those that are laying will then head for their nests in order to lay the eggs they have been holding.

If many turkeys are kept, the use of a breeding pen will be found a great convenience. This pen should cover a sufficient area to allow the turkeys some exercise, an acre for fifteen birds being none too large. A hog-tight wire fence three feet high will hold most turkeys, and if any persist in flying out, the flight feathers of one wing should be clipped. Nests should be scattered about the

pen, those which turkey hens take to most readily being barrels turned on their sides and nests shaped in them with straw.—Department of Agriculture.

Success With Incubator.

Most people are too easily satisfied in hatching with incubators, thinking if they get a sixty per cent hatch they are doing very well. They should realize that if they have a poor hatch they will usually have poor chicks, too weak to live. The same thing that caused the poor hatch caused the weak chicks. You might just as well have a ninety per cent hatch, or even better, as to care for a lot of soiled, untested eggs for three weeks, in a careless way, only to have a few chicks to show for your labor and expense. It would be much better to take off two well cared for hatches and then quit, than to run your incubator all summer, tending it in a careless way, with a loss of more eggs than chickens hatched, and losing many that do hatch in the first two weeks from bowel trouble.

I will tell you how I operate my incubator, as I have had extra good success. I attribute my success largely to the fact that I keep my trays full of hatchable eggs all the time. I select the eggs before putting them in the machine, to be sure no imperfect eggs go in. There are many imperfections on the inside of the shells and in the egg itself which it is impossible to detect without the magnifying lens. With this I am able to detect every defect at a glance. I test again in thirty-six hours, taking out all the infertile eggs before they are injured. I try to keep my lamp clean and well trimmed, using the very best oil. Keep the temperature at from 102 to 103 the first two weeks, from 103 to 104 the last week, and never exceed 104 at any time.

I use no moisture except that which the incubator provides, until the hatch is well advanced. Then I sometimes lay a warm, wet towel over the eggs, if it seems necessary, which may easily be determined.

I look out for dead germs all along the way. These, if left in the incubator, will spoil the hatch by poisoning the chicks that otherwise would have been strong and healthy. Dead chicks in the shell will have the same effect on the good eggs in the incubator that decayed apples have in the midst of good ones. They throw off a poisonous gas which is responsible for so many chicks being dead in the shell at hatching time, and the bowel trouble so common in the incubator chicks, for which the incubator is not to blame.

I arrange in some way to fill every vacancy made by testing out unhatchable eggs. I set a couple of hens at the same time I start the incubator, to draw from in refilling the machine, or when I have as many as five hundred eggs incubating at the same time I start a small incubator just to draw from. In this way my trays are full of live chicks at hatching time, and I feel amply rewarded for my trouble in caring for the little lives I have made myself responsible for.

I feed cracker crumbs or bread crumbs in about forty-eight hours, giving them cold water and grits first, last and all the time. They should have a dish of wheat bran before them all the time. Bran, to a chick, is what hay is to a horse. I lose a very small per cent of chickens hatched. Three different times I hatched every chick but one.

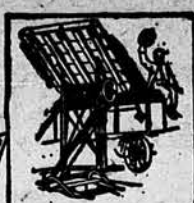
At one time I hatched eighty brown turkeys from eighty-one eggs, tested out six, infertiles, at beginning, which I replaced with fertile eggs. Infertile eggs do not poison the air, but if they are left in they are very misleading, as you are liable to lay the thermometer on one of them and they being cold eggs bring the mercury down and you turn your blaze up, overheating the live eggs.

This very thing causes more trouble than any other, in incubator work. Test out infertiles just as soon as possible, watch for dead germs all the way along, and your trouble in hatching and raising your chicks is largely over.—MRS. DON WILLS, Oklahoma.

How I Save Little Chicks.

Dear Sir.—I used to lose about two-thirds of my chicks every year with bowel trouble. This year I sent a 50-cent money order to the Hammer Remedy Co., K-1 Lamoni, Iowa, for a box of Inomal Chick Remedy, and since using it haven't lost a chick. I now have 85 chicks three weeks old, and four of them weigh a pound. I wouldn't try to raise chicks another year without this remedy.—MRS. RALPH CLEMENTS, Neenah, Wis. —[Adv.]

It pays to shelter all live stock in spring. Even in spring and summer, the hot sun and cold rain use up the animal's energy.



Great invention, perfect working device for loading manure. Costs little—boy can operate it and put hundreds of dollars worth of manure on your land keeping barns and pens cleaned quickly every day. The Anderson Manure and Dirt Loader will load into wagon with horse power anything that can be scraped with team or road scraper. One man and team can load up to fifty tons in ten hours. Hundreds in use—thoroughly tried and sold under positive money-back guarantee. Price now \$58 for few remaining. On account of advancing price of materials when present stock is exhausted, next loaders will sell at \$67.50. The Anderson Fork Scraper will handle anything you can pick up with a fork.

Post card will bring free descriptive circular.
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Will Make Every Trip to Town Profitable. Attached to the rear of your auto. Quickly and easily detachable. Will carry from 800 to 1,000 pounds. Best for hauling farm products, hogs, calves, grain, etc. Standard Trailer, \$48.50.

Write for information and prices.
RUSSELL H. CLARK & CO.
Manufacturers of Truck and Delivery Bodies, Auto Tops, etc.
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140 EGG INCUBATOR CHICK BROODER

Both made of Both \$10

Each is made of Calfr. Redwood. Incubator is covered with asbestos and galvanized iron; has triple walls, copper tank, nursery, egg tester, thermometer, ready to use. Write for FREE Catalog Now. Model 140 Incubator Co., Dept. 51 Topeka, Wis.

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Little Talks to Housekeepers

Helpful Hints Here for the Women Folks of the Farm

For what are men better than sheep or goats That nourish a blind life within the brain, If, knowing God, they lift not hands of prayer Both for themselves and those who call them friend? For so the whole round earth is every way Bound by gold chains about the feet of God. —Tennyson.

Save the strip removed in order to make new table linen even. When it is necessary to darn the linen use for this work threads pulled from the strip.

In the man whose childhood has known caresses there is always a fiber of memory that can be touched to gentle issues. —George Eliot.

Mother's Spring Hat.

The time for spring millinery is here. Don't neglect this matter until the day when it is simply too hot to wear your winter hat, then get out your last summer's one—perhaps the one worn many seasons—and wear it, excusing yourself by saying you go so little it will do another year.

If you cannot remember just when it was you bought your last hat, do the unusual thing and have a new one this spring. If you wore it only last year,

take it to the best milliner you know and have it freshened or changed. Plan for this bit of personal business and arrange your hair prettily, then select the new hat or have the old one remodeled to fit.

This is a little thing, but it is surprising how a new or freshened bonnet or dress will add to the enjoyment of the new season.

Poultry Earnings.

Although on most farms the revenue from the chickens pays a large part of the household expenses, little is known of the actual profit they contribute on the individual farm. The flock is usually the farm woman's enterprise and is not considered seriously by other members of the family.

A year's record of the feed consumed and other incidental expenses, and of the earnings of the poultry, will furnish a very interesting study. With this record showing how vital a part the chickens have in the farm operations, they will be accorded more credit—and it may be that some of the work in connection with them will be more cheerfully done by the men than heretofore.

FASHION DEPARTMENT — ALL PATTERNS TEN CENTS

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



No. 7606—Ladies' Dress: Cut in sizes 36 to 44 inches bust measure. This pretty waist is very full in both front and back, the fronts opening over a soft little vest. There is a high flare collar at the back of the open neck and the sleeves are quite full from the shoulder to the wrist. No. 7612—Children's Set: Cut in sizes 1, 2 and 3 years. In this set we have a pair of rompers made with opening down the back and across the waist. There is also a petticoat, with tab in envelope style, and there is a pair of drawers which button along the inseam. No. 7588—Ladies' Corset Cover: This dainty garment may be made of plain material or of embroidered flouncing, as shown. It is made without shoulder seams and a single length of embroidery is used, crossing over in front and back in surplice style. No. 7610—Ladies' Apron: Cut in sizes 34 to 44 inches bust measure. This apron is for all practical purposes a dress. It is in bungalow style, made with waist and skirt, the sleeves of raglan type, the front and back of the blouse plain, with bias front closing. The skirt has four gores. No. 7602—Ladies' Skirt: Cut in sizes 22 to 34 inches waist measure. Walking skirts are now made plain and the model shown is ideal for general use. It has four gores, that of the front arranged as a plain panel. The skirt fits neatly around the body and has either raised or normal waistline. No. 7633—Ladies' Dress: Cut in sizes 34 to 42 inches bust measure. The blouse of this attractive dress closes far over at the side of the front. The open neck shows a small shield and has a square collar tapering to narrow bands in front. The skirt is a one-piece gathered model.

The record need not be a complicated one. It should show the amount of feed, charged at market prices, and any other expense incurred in growing and caring for the flock. It should also show the returns for all poultry products sold. In addition to this, credit should be allowed for poultry products used by the family, and these should be charged at market prices.

This simple record will not require a great deal of time, and the satisfaction of knowing the profitableness of the flock will more than offset the work entailed.

Baked Prunes.

Wash the prunes and put them in a bean jar, barely covering them with hot water. Add sugar to taste, a few cloves and the rind of half a lemon. Bake slowly, with the cover on the pot, until the prunes have become almost candied. Serve cold with whipped cream.

Garden Plots for Little Folks.

Where there are very small children in the family, a separate small plot should be set aside for their play gardens. If they have their own vegetable which they are free to pull up, examine, or treat as they please, they are less liable to conduct their juvenile botanical experiments in the real garden.

English Rocks.

1 1/2 cupsful brown sugar
3 eggs, well beaten
1 cupful butter, or part lard
1/2 cupful milk
1/2 pound chopped raisins
3/4 cupsful flour
1 1/2 pounds English walnuts—before shelled
1 teaspoonful soda
1 teaspoonful cinnamon
pinch of salt
Mix well and drop with spoon.

Government Bulletins Helpful.

The person who is always wanting to know and who is seeking surer methods of accomplishing the work at hand, is bound to succeed.

There are opportunities for advancement along all lines. This is just as true of the business of home-making and housekeeping as of any other vocation. To be big enough for the job it is necessary that we be ever on the lookout for practical helps and suggestions, that we be observant, alert, open-minded, absorbing all that is worth while to our purpose.

Among the many helps that have come my way, few have given me more practical information—the kind I could apply in accomplishing the every-day tasks—than the bulletins sent out by the government. These are free for the asking, compiled for our benefit, and as we help pay the taxes and assessments levied for the purpose of carrying on such work, I feel we ought to profit by it. The bulletins cover a wide range of subjects pertaining to farm and home life.

As this is garden and chicken time, why not send for those relating to this branch of work? Ask for the following: The Home Vegetable Garden, No. 255; The Home Fruit Garden, No. 154; Beautifying Home Grounds, No. 185; The Propagation of Plants, No. 157; Standard Varieties of Chickens, No. 51; Poultry Management, No. 287; Natural and Artificial Brooding, No. 624; Information on Turkey Raising, No. 200; Ducks and Geese, No. 64; Incubators and Incubation, No. 236.

I have found so much use for my bulletins on poultry management and turkey raising I have almost worn them out. Another that has been of much service to me is No. 359, which tells how to can vegetables so they will keep. Bulletin No. 203—Canned Fruits, Preserves, and Jellies—gives many helpful ideas concerning the putting up of fruits for winter use.

Others on cookery worth having are: Meats, Their Composition and Cooking, No. 34; Cereal Breakfast Foods, No. 249; Eggs and Their Uses as Food, No. 128; Poultry as Food, No. 182; Preparation of Vegetables for the Table, No. 256; Cheese, its Economical Use in the Diet, No. 487. Modern Conveniences for the Farm Home, No. 270, should interest every woman, as should also No. 155, which tells how insects affect health in rural districts. The young housekeeper who has trouble with her bread should write for No. 389, Bread and Bread-Making.

If the house or other buildings need a new coat of paint and you can't get John interested, send for Bulletin No. 474, Use of Paint on the Farm.

All of the above mentioned bulletins and many more just as valuable may be secured by writing to the Editor and Chief Division of Publications, Washington, D. C.

If there is a baby in your home you will do well to send to the Chief of Children's Bureau, Washington, D. C., for the little booklet, Infant Care. Also ask the Public Health Service Department for Public Health Bulletin No. 138. Just as well have a library worth while

when it is free for the asking. You will be the wiser for it.—MRS. C. K. TURNER, Meade County, Kan.

The above shows how workable the bulletins of the federal government are. There may be other bulletins than those named by our correspondent, that would be of interest to you. By writing the Division of Publications, Department of Agriculture, Washington, D. C., for a list of available bulletins, and then reading the list, you can know whether or not there are others you would like to have. The same office sends out a monthly list of publications, and by requesting that your name be put on that list you can keep in touch with new pamphlets. The federal and state departments are maintained for the convenience of the people, and the extent to which we share the benefit depends wholly upon our own effort. When it requires only a request on our part, it seems too bad that not more are receiving these practical bulletins.

Listless Parents.

Have you ever watched a mother in a public place, answering her child with "yes," "no," or "I guess so," in a listless sort of way, without even turning her eyes from her paper, book, or whatever else may be attracting her attention at the time? Have you noticed the puzzled

look of the child as he asked the questions and received so little satisfaction in the mother's answers? Did it not cause you to wonder whether or not he would always find so little response in his mother regarding his childish investigations and questionings? Did you not long to sit down beside the little fellow, show an interest in the things of his childish world, and at least encourage him in his investigations, even though you could not give him a complete and lucid explanation of every problem he presented?

Few things are more interesting than the opposite of this mental picture we have just sketched. On a recent trip we sat near a young woman and her son of about eight years. From their conversation it was plain they were from another part of the country and as the train puffed on many new things came to the child's notice. He and his mother studied them together and she very carefully told him of those about which she knew, and the others they talked over and decided "Daddy" would be able to tell all about them when they reached home. It was a wonderful journey for the child, and the mother's interest and pleasant way left no question in our mind as to her enjoyment of this fellowship with her son.

Coaching in the unfolding of the wonders and mysteries which daily come to

the child's notice, cannot be done so well or so knowingly by anyone else as the child's mother. This does not depend so much upon her unfailing ability to answer his questions and lead authoritatively in the research work of the unknown, as upon her encouragement of his questions and allowing her interest to deepen with his as he leads the way on new paths of thought and study.

Washing Fluid.

Everything that lightens the work of wash-day lengthens life. Last summer while visiting at the home of a friend, we came into possession of the following washing fluid recipe which she has used for twelve years with no injurious effect upon the clothes. One pound potash, one ounce salts of tartar, one ounce lump ammonium chloride; put these in an earthen jar and pour over them one gallon of boiling water. When cool, put in jug or bottle and keep corked.

Use one cup of the fluid and one bar of soap to a boiler of water. Let the water get hot, then put in clothes—dry—and boil twenty minutes.

The use of this fluid will save much of the hard work ordinarily necessary to get the clothes clean and white. Very little rubbing is required, and this only on the coarser things which receive hard wear.

12 Grafted Apple Trees

Given FREE!



3 GENUINE DELICIOUS
This apple has, ever since its introduction, secured and maintained the highest price ever paid for any apple. A beautiful deep red, shading to golden yellow at the blossom end. Of wonderful flavor and aroma.



3 STAYMAN WINESAP
Deep, rich red in color, it is a marked improvement over the old Winesap, both in appearance and quality. It is a universal favorite in all markets.



3 JONATHAN
The Jonathan is liked by everyone. Its deep wine color apparently reflects its rich winey flavor. Invariably in good demand at high prices.



3 WEALTHY
One of the first really good apples of the season, and a general favorite, especially for eating out of hand.

This Home Orchard Collection

CONSISTING OF

12 Grafted Apple Trees

Given with Kansas Farmer This collection of Twelve Grafted Apple Trees which we want to send you, consists of three trees each, of four varieties of proven merit. They are hardy, will thrive anywhere, and provide a nice succession of quality fruit.

INCLUDING THREE GENUINE DELICIOUS, THREE STAYMAN WINESAP, THREE JONATHAN AND THREE WEALTHY

These Trees are genuine grafted stock, guaranteed true to name, sound and healthy. We have arranged with one of the largest nurseries in the country for a supply of these grafted trees, and we want to send you a set of twelve. Whether your place is large or small, these twelve trees will find a place, and add to its beauty and value.

Early Maturing Varieties such as these four grand varieties, mean that you will have fruit from this orchard in just a few years. In three years you should have some apples from these trees; in five years you should have an abundance. No better varieties could be found for a Model Home Apple Orchard than the four in this collection.

Complete Instructions are sent with each set of twelve trees, practical, simple directions that explain just how to plant and take care of these twelve trees. By following these instructions you will have, in a few years, an orchard that will prove a constant source of pleasure and profit to you.

Our Offer is made possible by a comparatively new method of propagating the apple tree. Instead of the slow, laborious method of "budding" a "seedling" apple tree to obtain the variety desired, a much quicker method is now employed. Healthy, vigorous branches are clipped from trees selected for their size and yield. To each of these branches a strong root from a tree of the same type is carefully grafted, and the little tree, thus complete, is ready to be set out. The twelve little trees we send you are all produced in this manner. They take root at once, make thrifty growth, and develop into large, heavy-bearing orchard trees as soon or sooner than a large tree set out at the same time. These little trees are about a foot long, and the thickness of a lead pencil. You could not secure trees of better quality, or trees that would come into bearing quicker, if you were to pay a dollar apiece for them. Thousands of trees are sold every year and sent packed in damp moss at the proper time for planting.

How to Get These Trees

If you will send only \$1.00, and 15 cents extra for handling—\$1.15 in all—we will enter or renew your subscription to KANSAS FARMER for one year and send the TWELVE (12) Apple Trees postpaid to you; or, if you will send \$2.15, we will renew your subscription two years and send KANSAS FARMER one year to some new subscriber you may name, and send you the trees. As the demand for these trees is enormous, you should take advantage of this offer at once. We reserve the right to refund money after the supply is exhausted.

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These twelve grafted apple trees are packed in sphagnum moss, are well wrapped in heavy oiled paper, and securely tied. They will stand the longest trip by parcel post, and arrive in perfect condition for planting.

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FINE S. C. WHITE LEGHORN EGGS—Hundred, \$3. Will Tonn, Haven, Kan.

SINGLE COMB WHITE LEGHORN EGGS. T. N. Smith, Route 2, Chanute, Kan.

ROSE COMB BROWN LEGHORN EGGS—Heavy laying strain. M. E. Hoskins, Fowler, Kan.

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SINGLE COMB BROWN LEGHORNS—Wittman, the great laying strain. Eggs, \$3 per hundred. Rosa Simpson, Palmer, Ill.

SINGLE COMB BROWN LEGHORN EGGS, \$3 per hundred. Good layers. Sadie Litton, Peabody, Kan.

ROSE COMB BROWN LEGHORN EGGS, fifteen, \$1; thirty, \$1.50; hundred, \$4. Mrs. Frank Seaman, Cedar Vale, Kan.

SINGLE COMB WHITE LEGHORNS EXCLUSIVELY. Farm range. Eggs, \$3 per hundred. Henry Richter, Hillsboro, Kan.

SELECT SINGLE COMB WHITE LEGHORNS. Eggs, \$4 hundred. Mrs. Frank Odle, Wamego, Kan.

SINGLE COMB BROWN LEGHORN EGGS, \$3 per hundred. H. M. Schoepflin, Route 1, Osage City, Kan.

EGGS, \$1.00 SETTING, \$5.00 HUNDRED. Pure Barron White Leghorns. John Ball, 280 West Locust, Dubuque, Iowa.

SINGLE COMB WHITE LEGHORNS EXCLUSIVELY. Eggs, \$5 per hundred. Mrs. J. G. Olson, Dwight, Kan.

FOR SALE—SINGLE COMB WHITE Leghorn eggs, \$3 per hundred. Mrs. C. C. Cole, Levant, Kan.

HEAVY LAYING SINGLE COMB WHITE Leghorns, fifteen eggs, \$1; 100, \$4. I. H. Gnagy, Pretty Prairie, Kan.

SINGLE COMB WHITE LEGHORNS—Winter layers. Stock and eggs. Eleonora Poultry Ranch, Brighton, Colo.

SINGLE COMB BUFF LEGHORNS—Thirty eggs, \$2; 100 eggs, \$4.50. J. A. Reed, Lyons, Kan.

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

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PURE SINGLE COMB BROWN LEGHORN eggs, hundred, \$3. Eighth year. Mrs. D. A. Wohler, Hillsboro, Kan.

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WELDAY'S STRAIN SINGLE COMB Brown Leghorns. Prize winners. Grand layers. Choice eggs, 75c for fifteen. John W. Moore, Hendrickson, Mo.

SINGLE COMB WHITE LEGHORNS EXCLUSIVELY. Eggs, fifteen, \$1; hundred, \$5. Fertility guaranteed. Sunnyside Egg Farm, Box C, Hallowell, Kan.

"HARDSCRABBLE" STRAIN OF S. C. W. Leghorns. Bred eleven years from the best layers. Eggs guaranteed 90 per cent fertile. Write for particulars, stating what you need. E. M. Wheeler, Jefferson, Kan.

SINGLE ROSE COMB BROWN LEGHORNS, large vigorous prize stock, bred to lay. Eggs, \$1.50, fifteen; \$3, fifty; \$6, 105. Eggs that produce layers, winners. M. Earnshaw, Lebo, Kan.

SATISFACTION STRAIN OF ENGLISH White Leghorn hatching eggs, \$1.50 per setting, \$7 per hundred. Satisfaction guaranteed on shipments. Sidney Williams, Route 5, Box 6, Springfield, Mo.

PURE SINGLE COMB WHITE LEGHORN EGGS. Young-Frantz-Yesterfeld strains. Fifteen, \$1; hundred, \$4. Chicks, hundred, \$10. Satisfaction guaranteed. Mrs. C. G. Cook, Lyons, Kan.

LEGHORNS.

SINGLE COMB BUFF LEGHORN EGGS, \$4.50 per hundred. Satisfaction guaranteed. Alf Johnson, Leonardville, Kan.

SINGLE COMB WHITE LEGHORN EGGS for hatching, \$4 per hundred, \$1 per setting. Heavy laying, high-scoring stock. Harry Givens, Madison, Kan.

ROSE COMB BROWN LEGHORNS EXCLUSIVELY. Eggs, per setting of fifteen, \$1; per fifty, \$2.50; per hundred, \$3.50. Twenty years careful selection. P. H. Mahon, Route 3, Clyde, Kan.

SINGLE COMB WHITE LEGHORNS—Winning stock mated with winning male. Des Moines, 1914. Eggs, this mating, \$3.50, fifteen. Eggs from stock with egg records of 200 to 250, \$5, fifteen. Range eggs, \$1.50, fifteen. All stock trap-nested. F. Lefebvre, Scammon, Kan.

S. C. WHITE LEGHORNS—CYPHERS, Wycoff and Dr. Hess bred-to-lay hens mated to Tom Barron cockerels; sires and dams imported. Have assembled the best laying stuff I can find. Fifteen eggs, \$1.25; thirty, \$2.25; hundred, \$4.25, f. o. b. J. L. Stratton, Ottawa, Kan.

LAKEVIEW POULTRY FARM OF PEERLESS D. W. Young and Barron strains of S. C. White Leghorns, bred to win and lay. Won at Fredonia, Kan., 1915, six firsts, \$15 cup for best birds in show in strong class; Topeka, second cock, first, third cockerel, first, third pullet. Write for prices. Eggs in season. A. K. Sell, Fredonia, Kan.

PLYMOUTH ROCKS.

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"ARISTOCRAT" BARRED PLYMOUTH Rock eggs, farm stock, headed by pedigreed cock, \$1.50 setting; \$5 hundred. Mrs. B. A. Scofield, Route 8, Ottawa, Kan.

BARRED PLYMOUTH ROCK EGGS, FIFTEEN, 75c; hundred, \$4. Mrs. John Shearer, Frankfort, Kan.

PURE-BRED BUFF ROCKS—EGGS, \$1.00 per fifteen or \$3.00 per fifty. Gust Freilburg, McPherson, Kan.

PURE-BRED BARRED PLYMOUTH ROCK EGGS, \$1 per setting, \$5 per hundred. Mrs. Thos. VanOrsdol, Route 11, Silver Lake, Kan.

EGGS FROM PRIZE WINNING BUFF ROCKS, \$1.50 setting. C. S. Hart & Sons, Milan, Mo.

WHITE ROCK EGGS, \$5.00 HUNDRED, prepaid. Photo free. Mrs. John Ramsey, Fort Scott, Kan.

WHITE ROCKS, SIZE AND QUALITY. Eggs, fifteen, \$1; fifty, \$3; hundred, \$5. G. M. Kretz, Clifton, Kan.

BARRED ROCKS, RHODE ISLAND REDS—Eggs for hatching. Large egg-laying strains, fertility guaranteed. Write for booklet. Thos. Leftwich, Winfield, Kan.

BARRED ROCKS EXCLUSIVELY—Large boned yellow legged good laying strain. Eggs—Fifteen, \$1.50; hundred, \$7. M. E. Lane, Clinton, Mo.

WHITE ROCKS—MY BEST WINTER layers mated with Fishel cocks. Eggs, \$1, fifteen; \$4, hundred. Mrs. Clifford Hutchinson, Wetmore, Kan.

EGGS—BARRED ROCKS. BRED TO win and lay. If you want beauty and utility combined, write. Mrs. Clarence Dearing, Palmyra, Mo.

BUFF ROCKS—FOURTEEN YEARS' SUCCESSFUL breeding. Utility eggs, \$2 per fifty, \$4 per hundred. Mrs. Homer Davis, Walton, Kan.

EGGS, \$3 PER FIFTEEN, FROM SIX varieties Plymouth Rocks—Barred, White, Buff, Columbian, Partridge and Silver Pencilled. Favorite Poultry Farm, A. P. Moore, Prop., Stafford, Kan.

BARRED ROCKS—SEVENTY-ONE PREMIUMS, Topeka, Manhattan, Clay Center, Denver, cockerel matings. Eggs, Pens 1 and 2, fifteen \$3, thirty \$5; Pen 3, fifteen \$2. Miss Mattie A. Gillespie, Clay Center, Kan.

WHITE ROCK EGGS—STATE SHOW winners, only \$1.00 fifteen, \$5.00 hundred. Baby chicks, 10c. Mating list with records free. Nellie McDowell, Route 1, Garnett, Kan.

EGGS FROM HEAVY LAYING HIGH-scoring Barred Rocks. Champion cock at our big North Missouri show. Write for prices. Clarence Ragsdale, Route 3, Moberly, Mo.

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

PLYMOUTH ROCKS.

BUFF ROCK EGGS FROM PENS AND range. Geo. R. Scherman, Olathe, Kan.

WHITE ROCK EGGS, \$3 PER HUNDRED. Nora Lamaster, Hallowell, Kan.

RINGLET BARRED ROCKS—BEST blood lines. Satisfaction guaranteed. T. J. Embury, Baxter Springs, Kan.

BARRED ROCK EGGS FROM SELECTED farm flock, thirty, \$1.50; hundred, \$4. Catharine Beightel, Holton, Kan.

WAGNER'S BARRED ROCK EGGS, \$1.50, \$2. Three matings. Circular free. Mrs. E. C. Wagner, Holton, Kan.

EGGS CHEAP, \$3 PER HUNDRED FROM my heavy laying winter strain of Barred Rocks. Earl Summa, Gentry, Mo.

BUFF ROCK EGGS, FRISCO WORLD'S Fair championship stock, \$1.50 and \$3 per fifteen. C. R. Baker, Box F, Abilene, Kan.

PRIZE WINNING BARRED ROCKS—Write for mating list. It will tell you all about them. Mrs. Chris Bearman, Ottawa, Kan.

EGGS FROM BLUE RIBBON BARRED and White Rocks, \$1 to \$3 for fifteen. Write for mating list. Fine cockerels and pullets for sale. H. F. Hicks, Cambridge, Kan.

PARTRIDGE ROCKS, STOCK AND EGGS, pens 1, 2, the males and females constituting these are direct from originator. Sol Banbury, Pratt, Kan.

BARRED ROCKS, AMERICA'S BEST strains. Yard eggs, fifteen, \$2; range, fifteen, \$3 per fifty, \$5 hundred. A. G. Hammond, Vinland, Kan.

THREE EXTRA FINE PENS BARRED Rocks—Eggs, \$3 per fifteen. First hen at Topeka, Hutchinson and Ellsworth. C. D. McIlreath, Lorraine, Kan.

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

LINDAMOOD'S BARRED ROCKS—BOTH matings. Better than ever. Silver cup and sweepstakes winners. Eggs from pens, \$3 and \$5 per fifteen; utility, \$5 per hundred. Circular. C. C. Lindamood, Walton, Harvey County, Kansas.

BARRED ROCK EGGS, FIFTEEN, \$2; hundred, \$8. Christina Bazil, Lebo, Kan.

UTILITY BARRED ROCKS AT BER-muda Ranch. Eggs, fifteen, \$1; hundred, \$4. Frank Hall, Toronto, Kan.

BARRED PLYMOUTH ROCKS—FARM-bred, beauties. Eggs, 4 cents each. Mrs. W. C. Bocker, Solomon, Kan.

BARRED ROCKS—C. A. HAWK'S STOCK, fifteen eggs, \$1.50; hundred, \$7.50. Wm. L. Shelly, Route 1, Atchison, Kan.

WHITE ROCKS, PURE-BRED, FARM range. Eggs, fifteen, 75 cents; hundred, \$2. H. F. Richter, Hillsboro, Kan.

BUFF ROCKS—EGGS FOR HATCHING. Prices reasonable. Mrs. Wm. Small, Wilson, Kan.

BRADLEY STRAIN ROCKS—EGGS, FIFTEEN, \$1.50. Mrs. W. G. Prather, Eureka, Kan.

PRIZE WINNING BARRED ROCKS—Eggs from pens, \$3 per fifteen; farm range, \$4 per hundred. Fertility guaranteed. Ed Schmidt, Route No. 3, Geneseo, Kan.

"RINGLET" BARRED PLYMOUTH ROCK EGGS, thirty for \$2, 100 for \$5.50; carefully selected and packed. Early chicks pay best. Harper Lake Poultry Farm, Jamestown, Kan.

FOR QUICK SALE—BUFF ROCKS. Eight females and one male. Good show birds or breeders, well mated. Price, \$20. Favorite Poultry Farm, Stafford, Kan.

BUFF AND WHITE ROCK EGGS, Hutchinson and Topeka champions. Fifteen eggs, \$1; hundred, \$5. W. H. Beaver, St. John, Kan.

BUFF ROCKS—GET THE BEST GOLD Nugget strain, never defeated. Eggs from three grand pens. Fifteen, \$1.50; fifty, \$3.50. Abram Troup, Logan, Kan.

WEIGHER-LAYER BARRED ROCKS—106 premiums. Flock eggs, \$1.25 fifteen, \$6 hundred. Pens, \$2 to \$7.50, fifteen. Wm. Opfer, Clay Center, Kan.

QUALITY BARRED ROCKS, PULLET mating. Satisfaction guaranteed. Eggs—Utility, \$4 a hundred; pens, fifteen for \$4. R. D. Ames, Walton, Kan.

BARRED ROCKS—EGGS FROM LARGE vigorous range birds, heavy laying strain, setting, \$1; hundred, \$5. S. R. Blackwelder, Isabel, Kan.

EGGS—WHITE ROCKS, PRIZE WINNERS, Fishel direct. Fifteen, \$1.50; hundred, \$5. Buff Orpington Ducks, twelve, \$1. Toulouse geese, 25c. Mammoth Bronze Turkey, 35c each. Etta Dowling, Reasnor, Iowa.

BARRED ROCK, WHITE WYANDOTTE, Single Comb White Leghorn, Pekin, Rouen, Fawn and White Runner Duck eggs, \$1.25 per setting, postpaid. Fancy stock, good layers, satisfaction and fertility guaranteed. Earl Summa, Gentry, Mo.

You will find a lot of bargains on Kansas Farmer's Classified Advertising Page this week. Don't fail to carefully read that page.

WYANDOTTES.

PRIZE BUFF WYANDOTTES—FIFTEEN eggs, \$1.50. G. Kittell, Newton, Kan.

PURE SILVER WYANDOTTES—100 eggs, \$4. Mrs. J. W. Gause, Emporia, Kan.

WHITE WYANDOTTE EGGS, \$5.00 PER hundred. Dr. O. F. Searl, Solomon, Kan.

WHITE WYANDOTTE EGGS—SEND FOR catalog. B. M. Stephenson, Cawker City, Kan.

WYANDOTTE EGGS FOR HATCHING from big, fine prize winning stock. Order early. V. Alexander Grant, Emporia, Kan.

WHITE WYANDOTTE EGGS—PEN, FIFTEEN, \$1; thirty, \$1.50. Mrs. John Jevous, Wakefield, Kan.

PARTRIDGE WYANDOTTES—EGGS, \$1 per fifteen. Splendid layers, beautiful fowls. Mrs. Zachery Taylor, Marion, Kan.

WHITE WYANDOTTE EGGS FROM utility and show birds. G. D. Willems, Inman, Kan.

EXTRA GOOD WHITE WYANDOTTES—Regal strain. Fifteen eggs, \$1.50; thirty, \$2.50. M. L. VanOrnam, Superior, Neb.

"BEAUTIFUL" SILVER WYANDOTTES, \$1.50 to \$5. Eggs, fifteen, \$1.50; hundred, \$6. Mrs. Edwin Shuff, Plevna, Kan.

PARTRIDGE WYANDOTTE EGGS, \$1.00 for fifteen, \$3.00 for fifty. No better ones at any price. Geo. Guilford, Centralia, Kan.

R. C. BUFF WYANDOTTE EGGS, \$1 FOR fifteen. Baby chicks, 15c each. G. G. Wright, Langdon, Kan.

WHITE WYANDOTTES—EGGS, PEN, \$1.50 setting; utility, \$4 hundred. Mrs. J. W. Johnson, Cedarvale, Kan.

COLUMBIAN WYANDOTTES—PRIZE-winning stock, \$1.50 for fifteen eggs. Breeding stock for sale. Mrs. R. L. Hammond, Hope, Kan.

TWENTY-FIVE YEARS A BREEDER OF Silver Laced Wyandottes and Barred Plymouth Rocks. Fine birds for sale. Wm. Nellers, Cascade, Iowa.

WHITE WYANDOTTES—EGGS FOR HATCHING from pure white, carefully mated, farm range birds; heavy laying strain; \$4 per hundred. George Guthrie, Exeter, Neb.

WHITE WYANDOTTES—EGGS FROM birds of best strain in state, \$1 setting, \$5 hundred. Cockerels, \$1.25. I. B. Pixley, Wamego, Kan.

GOLDEN WYANDOTTE EGGS FOR SALE from high scoring stock; fifteen for \$1 or 100 for \$4.50. Mrs. Della B. Bilson, Eureka, Kan.

WHITE WYANDOTTE EGGS FROM prize winning stock, \$1.80, thirty; \$4.50 hundred. Some choice cockerels for sale. Mrs. Will Beightel, Holton, Kan.

PURE-BRED SILVER WYANDOTTE EGGS, \$1.50 per setting of fifteen; five settings for \$6. Mrs. S. L. Hill, Burlington, Kan.

EGGS—SILVER LACED WYANDOTTES, fifteen, \$1; fifty, \$3. Rouen, Pekin and Muscovy duck eggs, eleven, \$1. Fred Kucera, Clarkson, Neb.

SILVER LACED WYANDOTTE EGGS for hatching, \$1.50 per fifteen, \$5 per hundred. Good pure-bred cockerels left. Mrs. Mike Heesch, Randolph, Neb.

WHITE WYANDOTTES—REGAL STRAIN—Extra layers. Males from Martin's. Eggs, lots to suit. Stock for sale. Mrs. C. C. Brubaker, 709 East Euclid, McPherson, Kan.

SILVER WYANDOTTE EGGS, \$1.00 PER fifteen, \$5.00 per hundred, from good individuals of splendid breeding. Mrs. Cecile McGuire, Pratt, Kan.

ROSE COMB WHITE WYANDOTTES—Show quality and heavy egg strain, fifteen eggs, \$1; fifty, \$2.50; hundred, \$4.50. Safe arrival and satisfaction guaranteed. Garland Johnson, Mound City, Kan.

ROSE COMB WHITE WYANDOTTES—Show quality and heavy egg strain, fifteen eggs \$1.25, fifty \$3, hundred \$5. Safe arrival and satisfaction guaranteed. Garland Johnson, Mound City, Kan.

WHITE WYANDOTTES, WORLD'S FAIR winners. Mammoth Pekin White Runners and Buff Ducks. Mammoth Bronze Turkeys. Eggs for hatching. Circular free. Mrs. A. J. Higgins, Effingham, Kan.

COLUMBIAN WYANDOTTES—MISSOURI Poultry Show winners, 1915, first cock, second cockerel, etc. Few choice cockerels for sale. Eggs for hatching. Write Mrs. Mer-moud, Monett, Mo.

LANGSHANS.

EXTRA BIG SCORED BLACK LANG-shan eggs. H. Osterford, Hedrick, Iowa.

BLACK LANGSHAN EGGS AND BABY chicks. Choice stock. Write. Mrs. Geo. W. King, Solomon, Kan.

HIGHEST CLASS LANGSHANS—PEN A is headed by a 98 cockerel. Catalog free. J. A. Lovette, Poultry Judge, Mullinville, Kan.

BLACK LANGSHANS—EGGS FROM blue ribbon and sweepstakes winners; pen and range. Mrs. D. A. Swank, Blue Mound, Kan.

BLACK LANGSHANS—EGGS, FIFTEEN, \$1, \$1.25 by mail; one hundred, \$4, \$5 by mail. Baby chicks, 15c. Mrs. J. B. Stein, Smith Center, Kan.

BUCKNELL'S BIG BLACK LANGSHANS—Show bred and farm raised. Eggs, \$1 for fifteen, \$5 per hundred. Postage or express prepaid anywhere in the United States. R. E. Bucknell, Hardy, Neb.

POULTRY WANTED.

OUR OFFER SHOULD HAVE READ 15c on hens last week, same as we are now paying. The Copes, Topeka.

(Poultry Ads Continued on Next Page.)

FARM AND HERD

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

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CLAIM SALE DATES.

Shorthorns.

April 5 and 6, 1916—Central Shorthorn Sale, Fine Stock Pavilion, Kansas City, Mo.
April 18—Robert Russell, Muscotah, Kan.

Holsteins.

April 18—J. R. Smith, Newton, Kan.
April 25—F. J. Searle, Oskaloosa, Kan.
April 26—Mark B. Curdy, Howell, Mich.

Jersey Cattle.

May 20—Robt. J. Young, Route 5, St. Joseph, Missouri.

E. E. Heacock & Son of Hartford, Kan., owners of one of the outstanding herds of pure-bred Shorthorns, write that their herd is doing well. They have a select lot of cows in their herd, headed by Brawith Her 351808, and the young stock in their herd is a choice lot. They have the type of Shorthorns that are profitable.

Catalogs are out for the big sale of Holstein cattle to be held by F. J. Searle at Oskaloosa, Kansas, April 25. Over 100 head of choice registered Holsteins have been catalogued for this sale. They are the kind that are backed by records and produce profits.

The well known firm of Saunders & Maggard of Poplar Plains, Kentucky, has shipped a carload of very fine Kentucky Jacks to Newton, Kansas. This firm has been shipping Jacks and Jennets to Kansas for the past fifteen years. This carload of Jacks is a well bred lot, including one imported Jack, and they range in age from three years to mature Jacks.

N. L. Duchesne of Great Bend, Kan., has one of the largest herds of registered Jersey cattle in Kansas. The herd now numbers over seventy head of cows and heifers. He also has one of the good dairy plants in this state and one of the best producing herds. A number of the cows cost Mr. Duchesne \$250 to \$300 and have proven money makers both as dairy producing cows and as breeding stock. A feature of the herd at this time is a choice lot of young heifers that will freshen soon, all bred to an interest-bred bull.

H. H. Holmes of Great Bend, Kan., has consigned to the Central Shorthorn Breeders' sale at Kansas City, Mo., April 5 and 6, five head of valuable cattle, including Lady Butterfly, a pure Cruickshank Butterfly heifer by Mystic Chief and out of Royal Butterfly by Royal Orange; one very fine Victoria bull by Scotch Knight and out of Lavender Victor by Lavender Choice, and one Scotch-topped bull by Choice Echo by New Echo out of Isabell by Crimson Rambler.

Geo. A. Deitrich, of Carbondale, Kan., one of the progressive breeders of pure-bred Angus cattle in this state, reports his herd doing fine. Mr. Deitrich owns one of the good herds, and the spring calves in the herd this year are a choice lot. The young stock in his herd includes a choice lot of young bulls and heifers. He reports a good demand for choice bulls, and his sales this season have been very satisfactory.

Robert Russell, of Muscotah, Kan., has announced a sale of Shorthorn cattle to be held April 18 at his farm near that place. Fourteen head of Scotch topped bulls, ready for service, and eight choice heifers, have been catalogued for this sale. The entire offering was sired by the good Shorthorn bull Red Scotchman. The class of Shorthorns catalogued are the useful kind that will make good on any farm.

G. C. Roan, of Clover Leaf Valley Jack Farm, La Platte, Mo., held his eighth annual Jack and Jennet sale March 20. Twenty-two Jacks sold for \$7,230, an average of \$328.63. The highest priced Jack sold for \$1,000. Twenty-two Jennets sold for \$2,480, an average of \$95 per head. Five Jack colts sold for an average of \$136 per head.

C. E. Hill, of Toronto, Kan., is one of the progressive Shorthorn breeders of this state. His herd of Scotch and Scotch topped Shorthorns is one of the good ones now assembled. He has a fine lot of young stock in his herd at this time sired by Bettles Albion 399451, one of the good pure Scotch bulls now in service. The youngsters include some good young bulls.

J. B. Porter & Son, of Mayetta, Kan., owners of one of the good herds of Jersey cattle in Kansas, write that their herd is doing fine. A number of heifers with first calves are milking 25 to 28 pounds daily with ordinary care. They have a splendid lot of calves by their great Medal Oxford bull and ten of eleven calves dropped since January 15, 1916, are heifers. They report a good demand for high class bulls at very satisfactory prices.

R. Smith, of Newton, Kan., has changed his sale date from April 25 to April 18. The firm of Buskirk & Newton will sell in this sale jointly with Mr. Smith a number of registered cows and heifers. Mr. Smith is a successful farmer who has made a success breeding Holstein cattle. The breeding stock from his farm that has gone into new hands has made good. Mr. Smith breeds and develops Holsteins for regular producers that make a profit to the owner.

D. S. Mayhew, of Monett, Mo., owner of Sweet Springs Stock Ranch, and one of the good producing Jersey herds in that state, writes that his herd is doing well. This is one of the richly bred herds, also one of the largest in Missouri. Mr. Mayhew is one of the live members of the Southwest Jersey Cattle Breeders' Association, and for years has been a consistent worker in the interest of the Jersey breed. At this time he has a very choice lot of young stock in his herd, consisting of cows, heifers and young bulls.

RELIABLE POULTRY BREEDERS

RHODE ISLAND REDS

ROSE COMB RED EGGS, \$4 PER HUNDRED. Mrs. Eva Frederick, Asherville, Kan.

RHODE ISLAND WHITE EGGS—HUNDRED, \$5. Will Tonn, Haven, Kan.

GOOD ROSE COMB REDS—VIGOROUS laying, range flock, \$1 per fifteen, \$4 per hundred. J. C. Wilkin, Hoxie, Kan.

R. C. RHODE ISLAND RED EGGS FROM prize winning strain, \$1.50 per fifteen. Cary Millard, Thomas, Okla.

ROSE COMB REDS—EGGS FROM selected stock, \$1 for fifteen eggs. Bert G. Taylor, Cleburne, Kan.

R. C. RHODE ISLAND RED EGGS—Mating list free. G. D. Willems, Inman, Kan.

DARK R. C. REDS—EGGS, \$1 AND \$2 per fifteen; \$5 per hundred. Mrs. Howard Martindale, Hillside Farm, Madison, Kan.

SINGLE COMB RED EGGS—HUNDRED, \$3.50; thirty, \$1.50. Mrs. Rosa Janzen, Geneseo, Kan.

SINGLE COMB REDS—FIFTEEN EGGS, \$1; 100, \$4. Gertrude Haynes, Grantville, Kan.

FINE ROSE COMB RED BABY CHICKS. Eggs reduced prices during April. Lily Robb, Neal, Kan.

ROSE COMB REDS—FIFTEEN EGGS, Pen 1, \$2; Pen 2, \$1.50. Andrew Ketter, Kelly, Kan.

RHODE ISLAND REDS—FIFTEEN EGGS \$3; hens or pullets, \$2 each; cockerels, \$2 to \$15; cocks, \$4. All good ones. Nicholas Bach, Hays, Kan.

ROSE COMB REDS—FINE RANGE flock. Hens weigh up to 8 1/2 pounds. Eggs, hundred, \$5; fifty, \$2.75; thirty, \$1.85, delivered free. Howard Vail, Marysville, Kan.

FRANKS' SUPERIOR STRAIN ROSE Comb Rhode Island Whites—Eggs for hatching, baby chicks. Louis G. Frakes, Box 7, Huron, Kan.

R. C. RHODE ISLAND REDS—FIFTEEN eggs, \$1; thirty, \$1.75; hundred, \$4. Fertility guaranteed. Mrs. B. F. Weigle, Winfield, Kan.

PURE-BRED ROSE COMB RHODE ISLAND REDS, stock and eggs for sale. Mating list free. M. L. Puckett, Puxico, Mo.

SINGLE COMB RHODE ISLAND REDS—Fifteen eggs, \$1.25; 100 for \$6.50. Satisfaction guaranteed. Mrs. Fred Schuppach, Downing, Mo.

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

TRY OUR PEERLESS STRAIN PURE Rose Comb Reds. None better. \$4.50 hundred, \$1 fifteen. C. D. Ferris, Elm Creek, Neb.

REDS—SINGLE COMB, EIGHT YEARS prize winners. None better. Eggs reduced to \$2 for fifteen. Chas. E. Lentz, Atchison, Kan.

BRED TO LAY—PURE-BRED S. C. Reds. Eggs from the finest birds I ever raised, \$1 setting; fifty, \$2.50; per hundred, \$4. Guaranteed. Belmont Farm, Box 69, Topeka, Kan.

MEIER'S WINNING SINGLE COMB REDS—Farm range, headed by brothers of my first prize Frisco cockerel. One hundred eggs, \$5; fifty, \$2.75. Write for mating list. H. A. Meier, Abilene, Kan.

ROSE COMB RHODE ISLAND REDS—Healthy, dark red, range flock. Eggs, \$1 per fifteen, \$5 per hundred. Also Rouen Duck eggs, \$1 setting. Mrs. Geo. Schultz, Route 5, Box 14, Haviland, Kan.

GUARANTEED FERTILITY, SAFE DELIVERY of low priced hatching eggs, from big boned, good colored, heavy laying strain, both combs, Rhode Island Reds. Mating list free. H. A. Sibley, Lawrence, Kan.

RICH ROSE COMB REDS, BRED FROM winners. Pen eggs, \$2.50 per fifteen; range, \$5 per hundred. Baby chicks, pen, 25c; range, 10c each, live delivery guaranteed. Mrs. C. E. Hill, Toronto, Kan.

FARM RANGE, DEEP BRILLIANT, BIG-boned R. C. Reds, red eyes, long back, low tail, nice combs. Eggs, 25c each; cockerels, \$2.50, \$5, \$10. Guaranteed to suit. Highland Farm, Hedrick, Iowa.

SINGLE COMB REDS—STRONG, VIGOROUS, excellent layers. Yard eggs, \$1.25 to \$2.50, fifteen; range, \$1.50 thirty, \$4 hundred. Free catalog. T. C. Benedict, Jet, Okla.

HIGHLY BRED SINGLE COMB REDS—Consistent winners six years. Fifteen eggs, \$1.25; hundred, \$5, prepaid. Twenty-five baby chicks, \$3.00. Live delivery guaranteed. Karl Spellman, Fredonia, Kan.

ROSE COMB REDS—FINE YARDS, headed by first cockerel Kansas State, and second cockerel Missouri State Shows. Eggs, \$4 per fifteen. Fine farm range flock, all good birds, \$4 per hundred. Free catalog. Mrs. Clyde Meyers, Fredonia, Kan.

SIX GRAND PENS ROSE COMB REDS, mated to roosters costing \$15 to \$35. Fifteen eggs, \$2; thirty eggs, \$3.50; fifty eggs, \$5. Splendid range flock, \$5 per hundred. Send for catalog. W. R. Huston, Americus, Kan.

MACK'S S. C. RHODE ISLAND REDS—Finest exhibition birds scientifically bred for years for great egg production. Eggs for hatching from six grand matings, baby chicks in small quantities. Eggs by hundred from fine utility mating. Get our catalog free. It describes our fowls and gives a list of our winnings for the past three seasons. Some fine yearling hens for sale June 15. H. H. McLellan, Kearney, Neb.

BRAHMAS.

LIGHT BRAHMAS—FIFTEEN EGGS, \$3. Hens, \$2. Nicholas Bach, Hays, Kan.

DARK BRAHMAS—FIFTEEN EGGS, \$3. Pullets or hens, \$2 each. Cockerels, \$5. Nicholas Bach, Hays, Kan.

WARD'S LIGHT BRAHMAS, BARRED Rocks, S. C. W. Leghorns. Send for catalog. Nine yards mated. W. H. Ward, Nickerson, Kan.

ORPINGTONS.

BUFF ORPINGTON EGGS, FIFTEEN for \$1. A. M. Jordan, Manhattan, Kan.

CAREY STRAIN WHITE ORPINGTONS—Prize winners. Settings, \$2 to \$5. Mrs. Helen Lill, Mt. Hope, Kan.

WHITE ORPINGTONS—PRIZE WINNERS, egg layers, mating free. Craig, Galena, Mo.

BUFF ORPINGTON EGGS, FIFTEEN, \$1.25; fifty, \$3.25. Clarence Lehman, Newton, Kan.

S. C. BUFF ORPINGTON EGGS, \$1. FIFTEEN; \$4 hundred. Buff Ducks, \$1.25, thirteen. Mrs. Frank Neel, Beverly, Kan.

SINGLE COMB BUFF ORPINGTONS—William Cook strain. Stock and eggs. Eleonora Poultry Ranch, Brighton, Colo.

BUFF ORPINGTON EGGS, \$1.50 PER fifteen, from flock winning cup, best display Topeka State Show this year. Pen eggs. H. T. Farrar, Atwell, Kan.

S. C. BUFF ORPINGTONS—THE KIND that win, lay and pay. Good buff color, shape and size. Eggs, \$1.50 per fifteen. A. L. Beall, Green Castle, Mo.

RICH GOLDEN S. C. BUFF ORPINGTON eggs, fifteen, \$1; hundred, \$5. White Pekin Duck eggs, fifteen, \$1. Mary E. Price, Route 7, Manhattan, Kan.

PURE-BRED BUFF ORPINGTONS—Eggs, \$1 for fifteen, \$5 per hundred. Mrs. Minnie Hinshaw, Route 5, Haviland, Kan.

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

PURE-BRED ROSE COMB BUFF ORPINGTONS, eggs, fifteen, \$1.50; thirty, \$2.50; hundred, \$5. Fannie Renzenberger, Greeley, Kan.

FOR SALE—BIG AND BUFF TO THE hild, Single Comb Orpingtons. Eggs, \$5 per hundred, \$1.50 per setting. Mrs. N. J. Alvey, Meriden, Kan.

EGGS FROM FIRST PRIZE WINNING Buff Orpingtons at Topeka State Fair. Fancy matings, \$2.50 for fifteen. Utility stock, \$6 per hundred. Alvin Miller, Overbrook, Kan.

BUFF ORPINGTONS, S. C. WHITE Leghorns, Barred Rocks, \$3.50 hundred, 85c setting. Bourbon Red Turkeys, \$2.50 setting, prepaid. Chickens on separate farm. Ideal Poultry Farm, Concordia, Kan.

BUFF ORPINGTONS—STRICTLY FANCY matings, splendid winter layers. Eggs, \$1.50 per fifteen, prepaid. White Runner Duck eggs, \$1.25 per fifteen, prepaid. J. F. Cox, Route 28, Topeka, Kan.

SEVERAL BREEDS

TWENTY LEADING VARIETIES, EGGS and baby chicks. Write for information. Royal Poultry Yards, Coffeyville, Kan.

EGGS—S. C. BLUE ANDALUSIANS, Blue Orpingtons, Buff Leghorns. Egg-bred winners. Mating list free. Few cockerels. John A. Huber, LaCrosse, Kan.

SINGLE COMB BUFF LEGHORN and fawn and white Indian Runner duck eggs, \$1 setting, \$5 hundred. Pearl Haines, Rosalia, Kan.

SNOW WHITE ROCKS AND WHITE Wyandottes. Eggs, \$1.80 for 30. If you want something up to snuff, prize winners, order. Pleasant View Poultry Ranch, Peabody, Kan.

PURE-BRED POULTRY, EGGS FOR hatching. White Rocks, R. C. Rhode Island Reds, \$1 per fifteen, \$2 per thirty; S. C. Brown Leghorns, \$1 per fifteen, \$2 per thirty, \$3 per fifty. Thomas Ohlsen, Whiting, Kan.

STOCK, EGGS, BABY CHICKS. Leghorns, Campines, Orpingtons, Langshans, R. I. Reds, Plymouth Rocks, Wyandottes. Stock, \$2 each; eggs, \$1.50 per 15, \$5 per 100; chicks, 15c each. Miller Poultry Farm, Box K, Lancaster, Mo.

AN EXCELLENT LOUSE KILLER FORMULA. R. W. Prescott, 3908 Bell St., Kansas City, Mo., for two cents in stamps will send you a formula for making powdered poultry louse killer that will not cost over two or three cents per pound to make.

COCKERELS—WHITE, BUFF AND Barred Rocks, Rhode Island Reds, White Wyandottes and White Leghorns, \$2 each. Eggs, \$1.50 setting. White Pekin and Indian Runner ducks and eggs. J. L. Keating, Box 357, Kansas City, Mo.

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ACCLIMATED BERMUDA GRASS ROOTS—Bran sack full, \$1; six sacks, \$5. Frank Hall, Toronto, Kan.

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FREE FOR SIX MONTHS—MY SPECIAL offer to introduce my magazine, "Investing for Profit." It is worth \$10 a copy to anyone who has been getting poorer while the rich, richer. It demonstrates the real earning power of money, and shows how anyone, no matter how poor, can acquire riches. Investing for Profit is the only progressive financial journal published. 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 Blvd., Chicago.

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HEDGE POSTS FOR SALE—CAR LOTS. H. W. Porth, Winfield, Kan.

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Greater Egg Production

The possibilities of a greater egg production per hen is one of the things that the poultryman of today must consider. If he is progressive he will take the matter in hand and make the most of it. The very fact that the average farm flock does not produce more than 75 eggs per year, is enough to give anyone a desire for better things. If the beginner will make a start with pure-bred birds, carefully mated, he will in time increase the productivity of the flock. If one could be sure of securing from 150 to 175 eggs per hen per year, no complaint would be forthcoming. The question is often asked what has the poultry fancier done for the poultry industry, why are pure-breds better than scrubs? The answer is that the aim of the true fancier is always more eggs and better meat in his flock, and while the average yield of the farm flock is still low, it would be much lower were it not for the efforts of the fancier. There is hardly any flock of fowls but which has a trace of pure-bred fowls in it, and that has helped the average yield of eggs. Hens laying 200 eggs per year are common these days, and there are records of 303 and 314 eggs per hen for the year, and the result eventually will be that some of the blood of these great layers will be found among farm flocks and increase their egg yield. In the meantime, everybody should breed only from the best layers, and in turn breed only from the heaviest producers of their offspring. The time will come when the drones and poor layers will be weeded out and the basis of the flock will be of heavy yielders.

Get interested in your stock and be the best stock-man in your community.

FARM AND HERD.

In June, 1912, A. J. McCabe, a farmer residing near Cottonwood Falls, Kan., purchased two grade Holstein cows with small calves for \$80. He has kept track of all the cream since sold from these cows and the heifers he has raised from them and retained and found it had amounted to just \$472.18, or almost six times the cost of his original investment. During all this time his family has also been supplied with all the butter, milk and cream they could use. He has sold five head of live stock, the offspring of the cows, and now has a total of eight head of cows, heifers and calves left, some of which he would refuse to take \$100 per head.

Fred V. Caldwell, of Howard, Kan., one of the progressive Poland China breeders in this state, and owner of one of the good big-type herds now assembled, reports his herd doing well. During the winter he purchased a number of choice sows from the best herds in the country, among them a daughter of Bridge's Big Bob Wonder. This sow has a splendid litter of eight pigs by a Big Orphan bred boar. A granddaughter of Bridge's Big Bob Wonder. A daughter of Big Orphan has a litter of eight by Expansion Sure. He has a large number of pigs by his great young boar, Caldwell's Big Bob. This boar weighed 560 pounds at thirteen months old, and is proving an extra fine breeder.

The new Kansas regulation requiring the tuberculin test on native breeding cattle coming into Kansas, as well as on dairy stock, went into effect March 20. The new order exempts female calves under six months old. It does not include range-bred cattle. The tuberculin test will not be required where positive information is had that female cattle sent to the state are intended for stocker and feeder purposes. Springer cows, however, will not be exempt. Bulls, whether registered or not, must have the test applied if they are for breeding purposes. Under the rule the tuberculin test may be made by a veterinary inspector of the United States bureau of animal industry or a veterinary inspector authorized by Mr. Mercer, live stock commissioner of Kansas, or the state of Missouri.

The American Aberdeen-Angus Breeders' Association has just made comparisons of the first quarter of the year 1915-1916 which ended February 29, 1916, with last year and for the past five years covering the same periods. Registrations have increased 43 per cent this year over the same period last year. They have also increased 43 per cent over the past five-year average for the same period, and have increased 111 per cent over the same period during the year 1911-1912. Membership enrollment has increased 50 per cent over the same period last year, and shows an increase of 48 per cent over the same period for five years and 118 per cent increase over the same period for the year 1911-1912. This phenomenal increase which seems to be making still greater increases for March, is an index or criterion of the Aberdeen-Angus trade throughout the country, and shows very forcibly the degree in which the production of beef is becoming more popular and profitable.

The recent auction sale held under the auspices of the Milking Shorthorn Cattle Club of America, at Fainsville, Ohio, resulted in a high range of values. There were fully fifty-four lots sold in less than three hours for an aggregate of \$30,390, an average of practically \$600. Five females sold for \$1,000 or more each, the five-year-old Bellevue Daisy bringing the top figure, \$1,585. Rose Fairfield 2d, a six-year-old, went under the hammer at \$1,500, and the yearling Bessie Rose, at \$1,400, all three passing to the ownership of the enterprising California firm, Alexander & Kellogg. C. V. Hencke, of Ohio, landed the six-year-old Lulu Clay for \$1,300 and Tannenbaum Farms also of Ohio, secured Bellevue Queen, a seven-year-old, at \$1,100. The top of the bulls was \$1,325, Willowdale Robin, an August calf, selling at that figure to Flintstone Farms of Massachusetts. It would seem that the above values and the states represented by the buyers clearly indicate a widespread activity among Shorthorns of dual-purpose type and breeding. In the wake of this announcement, comes the information that a yearling Shorthorn heifer of the best type sold in the Fair Acres sale at Sterling, Ill., March 7, for \$2,375.

JERSEY CATTLE.



She's The Money Cow

She makes use of every ounce of feed. Her milk is the richest of all the breeds in butter fat and solids. She is rugged and vigorous—will thrive in any climate. She milks steadily. She is beautiful and gentle. She's the mortgage lifter. She's the cow for the everyday farmer, yet she's the rich man's pride, too. And she's the cow for the family. Our free book, "About Jersey Cattle," proves these things. Send for it now—a postal will do—it's interesting and instructive.

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

LOWMONT SHORTHORNS.

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

SEVENTY HEAD REGISTERED JERSEYS.



Forty cows and thirty heifers for sale. Nothing over five years old. Richly bred. Fox Signal and Fern Lad families. All bred to choice registered herd bull. Must reduce herd.
N. L. DUCHESNE, GREAT BEND, KANSAS

Must Reduce Herd

Forty head of registered cows, heifer and bull calves for sale. Of the best blood lines among the breed.
I am a member of the Southwest Jersey Cattle Breeders' Association.

SWEET SPRING STOCK RANCH
Box 241 Monett, Missouri

JERSEY CATTLE AND CHESTER WHITE HOGS

Two registered Jersey bulls ready for service. Richly bred.

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SUNSET "CORRECT TYPE" JERSEYS

The famous Blue Belle-Golden Rosebay breeding. A few bred heifers and young bulls for sale, singly, pair or trio. Send for circular giving description of herd, breeding, production, etc., and mention your wants. The Ennis Stock Farm, Horine Station, Mo. (Just South of St. Louis.)

DICTATORS EMINENT 117710

\$125.00. Best Bull for the Money. Born Sept. 20, 1913. Solid fawn; gentle; sure, guaranteed. Dam granddaughter Eminent 2d, sold for \$10,000. Eighty-eight tested daughters.
R. J. LINSOTT - HOLTON, KANSAS

JERSEYS BACKED BY RECORDS.

Calves, yearlings and two-year-old bulls, sired by Sultan's Trinity King, Fern's Baby Boy and Majesty Western King. From dams that will give 1,000 pounds of 5 per cent or more, a month. Also some choice young Poland China boars.

DR. J. H. LOMAX, Station D, St. Joseph, Mo.

REGISTERED JERSEYS.

Ten high class young bulls and one aged bull. Can furnish anything in registered cows and heifers. 100 head to select from. Write for special prices or come and see the best herd in the Middle West.

H. C. YOUNG, Wineland Farm, Lincoln, Neb.

JERSEY BULLS

For Sale—A few great young bulls, ready for light service. Splendid individuals of most popular breeding, sired by Blue Belle's Owl 79641 and H. F. Golden Fern's Lad 9th 101728, all out of great dams. Only bulls from our very best cows, raised and offered for sale. You must buy a good one if you buy here. Address

ROLLA OLIVER, Box 701, St. Joseph, Mo.

SMITH'S JERSEYS

One 2-year-old, two 1-year-old bulls, choice individuals. Thirty cows and heifers, solid colors, a nice lot. Come or write your wants and about the amount you wish to pay. Will describe the best I have for the price. No cows under \$100.

S. S. SMITH, CLAY CENTER, KANSAS.

FOR SALE—Nine registered Jersey cows and heifers. Excellent unrelated bull, Oakland's Sultan 2d.
PERCY LILL - MT. HOPE, KANSAS

GALLOWAY CATTLE.

GALLOWAY BULLS

Forty yearling and two-year-old bulls, strong and rugged; farmer bulls, have been range-grown. Will price a few cows and heifers.
E. E. FRIZELL, Frizell, Pawnee Co., Kansas

Feeding Pigs Economically

The pork producer cannot regulate the market price of hogs, but he can, to a considerable extent, regulate the cost of production. Therefore, he is interested in the kind of a pig that finds most favor when it reaches the market and in methods that will enable him to produce this kind of a pig with the least cost.

Ordinarily the hog with quality that weighs from 225 to 240 pounds and is well finished—fat—commands the highest market price; hence our aim should be to produce this kind of a pig as cheaply as possible.

It is natural for the pig to grow while young and to get fat as it approaches maturity, so the plan of feeding should harmonize with these general natural tendencies.

Experience and experiment have shown that the pig, to be developed most economically, must depend largely upon pasture during the growing period. Enough grain, however, should be fed to keep it thrifty. The pasture crop may be alfalfa, clover, sweet clover, rape, bluegrass, wheat, rye, oats, or cane. While all the crops mentioned have given satisfactory results, alfalfa, clover and rape are generally considered the best for pig pasture.

The Kansas Experiment Station has conducted a large number of experiments in an endeavor to find the most economical and satisfactory grain ration to feed pigs during the growing period and during the finishing or fattening period where the entire ration consists of grain and pasture. It has found that the basis of such a ration should be either corn, kafir, or milo. These grains must, however, be supplemented with feeds that are rich in protein but comparatively cheap. Best results have been secured by using shorts and tankage in the following proportions: Corn, kafir, or milo, 62 per cent; shorts, 30 per cent; tankage, 8 per cent. (These proportions by weight.)

If the corn, kafir, or milo can be ground cheaply it should be mixed with the shorts and tankage and fed as a thick slop, but if the corn, kafir, or milo cannot be ground conveniently or cheaply the corn may be fed either shelled or on the ear and the kafir and milo in the head give better results than when threshed and fed whole. Shorts are comparatively cheap and rich in protein and add bulk to the ration. Tankage is the cheapest source of protein, but must be fed in limited amounts because of its richness.

During the growing period each pig on alfalfa, clover or rape pasture should receive each day approximately 1½ pounds of the grain mixture suggested above for every hundred pounds live weight, and should grow from one-half to three-fourths of a pound each day. If the pasture is wheat, oats, rye, or cane, more grain will be required to make the pig grow from one-half to three-fourths of a pound each day and keep in a thrifty condition. The feeder will have to be his own judge as to the exact amount to feed.

Skim milk or buttermilk if available only in limited quantities, may also be fed, giving each pig about three pounds of milk for each pound of grain fed.

When the pigs are ready to finish, they should be fed all the grain mixture suggested above that they will eat up clean. The amount will average approximately five pounds each day for each hundred pounds live weight. The skim milk and buttermilk may be continued in the same proportions suggested above.

When skim milk and buttermilk are available in large quantities, pigs make very satisfactory and economical gains on a ration of corn, kafir, or milo, with all the skim milk or buttermilk they will consume, but when skim milk or buttermilk is available only in limited quantities the ration must be balanced with feeds rich in protein, such as shorts and tankage.—C. W. McCAMPBELL, Kansas Experiment Station.

J. C. Osborn, of Hamilton, County, Kansas, raised 8,000 bushels of milo last year from 200 acres of land. In co-operation with his landlord, he fed it to cattle and marketed them at a good profit. He also raised 98 acres of broom-corn and sold 32 tons of the brush for \$4,000. These crops are adapted to conditions. The growing of such crops as can be depended upon under average conditions, will insure feed for live stock and good profits from farming in that section of the state.

Only clean troughs and mangers for the stock. It is poor feeding to mix chicken manure with grain.

HOLSTEIN CATTLE.

HOLSTEIN CATTLE.

TWO REGISTERED HOLSTEIN BULLS READY FOR SERVICE.
DAMS HAVE A. R. O. RECORDS OF 21 POUNDS AND 23.9 POUNDS BUTTER IN SEVEN DAYS.
No. 1—Sir DeKol 111th Pauline 198477, born December 10, 1914. Sire, Tehee Luth Pauline DeKol, who is also the sire of Luth Piebe DeKol with A. R. O. record of 29,598 pounds milk and 820 pounds fat in 365 days and 28.82 pounds butter in seven days. Dam, Clothilde Peep Fries, with 21 pounds butter record in seven days. This cow is in our herd and promises to increase her record. This bull has a full sister in our herd that has just made 25.87 pounds butter from 587.1 pounds milk as a junior 3-year-old. He is well marked, being about two-thirds black, and a good individual.
No. 2—Fobes Canary Homestead 189479, born February 5, 1915. Sire, Canary Fobes Bessie Homestead, whose dam has A. R. O. record of 31.14 pounds butter in seven days. Dam, Johanna Clothilde 3d Canary, butter in seven days 23.91 pounds; A. R. O. dams and sire's dam average 27.57 pounds butter in seven days. This cow is also in our herd. He is two-thirds white and a good individual.
We also offer two bull calves with splendid breeding, having A. R. O. dams. Write for pedigrees and prices. Satisfaction guaranteed.
WM. A. HOOVER, GOSHEN, INDIANA.

CLYDE GIROD, At the Farm. F. W. ROBISON, Cashier Towanda State Bank

HOLSTEIN FRIESIAN FARM, TOWANDA, KANSAS

Pure-bred and high grade Holsteins, all ages. Largest pure-bred herd in the Southwest, headed by Oak De Kol Bessie Ormsby 156789, a show bull with royal breeding.

Pure-bred bulls, serviceable age, from A. R. O. dams and sires.

A grand lot of pure-bred heifers, some with official records. Choice, extra high grade cows and heifers, well marked, heavy springers, in calf to pure-bred bulls, constantly on hand. High grade heifer calves 6 to 10 weeks old, \$25. Bargains. Send draft for number wanted. All prices f. o. b. cars here. Inspect our herd before purchasing. Write, wire or phone us.

GIROD & ROBISON.

100—REGISTERED HOLSTEIN FRIESIAN FEMALES—100

Howell, Livingston Co., Mich. Sixth Annual Sale, April 26, 1916

Tuberculin tested. Best families of the breed. Send for catalog.

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Purebred Registered
HOLSTEIN
CATTLE

Dr. C. H. Eckles of the University of Missouri found Holsteins highly profitable, as do all who own them. He says, "Thirteen years ago I bought four Holstein cows. One was sold, so that all the cows we now have came from the other three. We have sold \$5,000 worth of blooded stock from the herd. In addition to that we have thirty-eight head of females on hand, worth at an estimated value of \$200 per head, \$7,600." Similar stories of success with Holsteins are really commonplace, so uniformly profitable is the purebred registered Holstein-Friesian breed. Investigate the big "Black-and-Whites."

Send for FREE Illustrated Descriptive Booklets.

The Holstein-Friesian Association of America
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One of the best bred sires in the state at head of herd. Some of our cows produce 80 pounds milk per day. Buy your next bull from a well bred and high producing herd.

T. M. Ewing, Independence, Ks.

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Holstein-Friesian A. R. O. bulls ready for service. World's record blood flows in their veins.

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Registered bull calves. Prices reasonable. Write today. These bargains will not last long.

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We want to cut down our herd. Will sell ten or twelve choice cows, most of them young, also a few heifers.

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Jewel Paul Butter Boy No. 94245
One of the best bred bulls in the state. We offer three bulls ready for service out of good producing dams.

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

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Grandsons of the King of the Pontiacs, also of Pontiac Korndyke, from A. R. O. dams. Write for prices and pedigrees. Senior sire, son of the King of the Pontiacs. Junior sire, son of Pontiac Korndyke.

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Two fine sons of Sir Sadie Cornscepia, who has 35 A. R. O. daughters, four of them averaging over 30 pounds. No. 1, born December 5, 1915, dam has 7-day record of 22 pounds and yearly of 641 pounds. No. 2, born January 5, 1915, six nearest dams average over 27 pounds in 7 days.

A card will bring you descriptions and pedigrees.
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Offers young bulls, bred cows and heifers for sale. Write for breeding, description and prices. Our herd absolutely free from tuberculosis. Satisfaction guaranteed.

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Best of sires. A. R. O. dams, fourteen over 20 pounds. Seven of the others from heifers with records of 14.89 to 19.2 pounds. The kind you want. We have only two cows in the herd with mature records less than 20 pounds.

Breeders for Thirty Years.

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Canary Butter Boy King No. 70508 in Service.

Herd has won more prizes from Holstein-Friesian Association for yearly production than any herd in Kansas. Young bulls for sale from heavy producing cows.

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

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For Sale—Registered Holstein heifer calf. Well bred, almost white, a splendid individual.

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QUALITY, BREEDING, RECORDS

All combined in the registered Holsteins we offer for sale. Bulls, cows, heifers. Send for bull catalog. 300 in herd. Also 200 Shetland ponies.

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Do you want a yearling bull, first cousin to the sire of Duchess Skylark Ormsby, year's butter 1,506 pounds, at \$125?

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TRUE—We have registered Holsteins rich in the blood of the great sires, but the big end of our profit comes from the milk and fat they produce.

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HOLSTEIN CALVES, both sexes, fifteen-sixteenths pure, \$20 each, crated. Also carload heifers 1 and 2 years old. Write us for Holsteins. Edgewood Farm, Whitewater, Wis.

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My herd bull grandson Old King Segis, fine animal. E. VIOLETT, Altoona, Kansas.

HOLSTEIN BULLS, "REGISTERED"
Two ready for service. Smith & Hughes, Breeders, Route 2, Topeka, Kansas.

KENTUCKY JACKS AT PRIVATE SALE

THE firm of Saunders & Maggard, Poplar Plains, Ky., has shipped twenty head of jacks to Newton, Kansas, and they will be for sale privately at Welsh's Transfer Barn. This is a well bred load of jacks, including one imported jack, and they range in age from coming three to matured aged jacks; height from 14 to 16 hands. We will make prices reasonable, as we want to close them out in the next thirty days. Anyone wanting a good jack will do well to call and see them. Barn two blocks from Santa Fe Depot, one block from Interurban. Come and see us.

SAUNDERS & MAGGARD, Newton, Kan.

SHORTHORN CATTLE SALE APRIL 18, 1916



ROBERT RUSSELL, Muscotah, Kansas

AT FARM TWO MILES FROM MUSCOTAH, KANSAS

Fourteen Scotch Topped Bulls Ready for Service.
Eight Extra Good Heifers, Scotch Topped.

All sired by my herd bull, Red Scotchman, bred by R. O. Miller of Iowa, and his dam was Augusta Clipper Mina, a cow now owned by the Kansas Agricultural College. My herd cows are a good lot of Scotch-topped breeding cows and the young bulls and heifers are well grown out and will make any farmer money.

Send for catalog folder and come to sale. Can drive either from Atchison or Whiting, Kansas.

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FOR SALE—Herefords and Durocs: 65 yearling and two-year-old bulls by Tophon 4th, Hessiod, Anxiety, March On and other good sires. 25 females, some have calves at foot and bred again. 10 head heifer calves. 30 head of registered Duroc gilts sired by a son of Ohio Chief and son of Buddy K 4th out of sows by grand champions. Come and see me.
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For Sale—Seven cows bred to drop calves in summer. Sixty bulls from 8 to 10 months old. Priced reasonable. Come and see us.
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Murray's O. I. C. Chesters

A few choice boars. Forty choice gilts bred for March farrow; thirty for April farrow. All bred to silver cup winner. They are priced low.
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RED POLLED BULLS

TWENTY yearling bulls, big rugged fellows, sired by ten sires; all registered and priced reasonably. Will sell a few females.
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Coburn Herd Red Polled Cattle

AND PERCHERON HORSES.
A few choice bulls. Eight extra good two-year-old stallions for sale at reasonable prices.
MAHLON GROENMILLER, P-mona, Kan.

RED POLLED CATTLE

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For Sale—Eight choice young bulls from 7 to 11 months old.
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Seventy choice bred Berkshire sows, to farrow every week from March 1 until June. Bred to as good boars as the breed has. Cholera immune.
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Big, growthy, richly-bred gilts, bred to a choice son of the great boar, A Critic, for spring farrow. Outstanding spring boars. Also a choice herd boar. Prices right.

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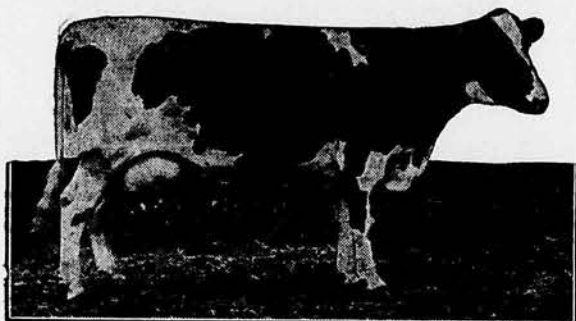
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At Farm Adjoining Newton, Kan.

Tuesday, April 18, 1916



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Two Registered Young Bulls, six months old.

Thirty-four Head of High Grade Holstein Heifers, all in milk or will freshen soon. These heifers are pure-bred but cannot be registered, and are all bred to a registered bull. They are two and three-year-olds and are very promising for heavy producing cows. You must see them to appreciate them.

Two Yearling Grade Heifers, not bred.

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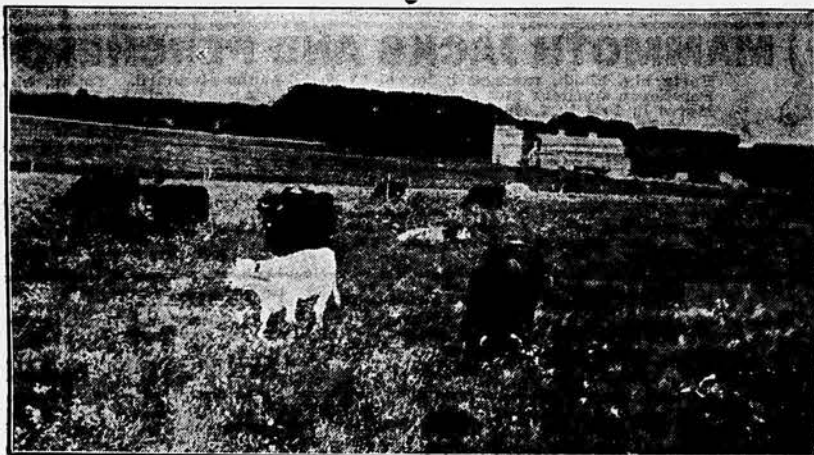
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TWO DAYS, APRIL 5, 6, 1916

FINE STOCK PAVILION, KANSAS CITY, MISSOURI.



130 HEAD OF SHORTHORNS drafted from the best herds in the corn belt. Seventy bulls from yearlings to matured sires. Sixty cows and heifers, consisting of cows with calves at side and rebred, heifers bred and open.

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40 PERCHERON AND BELGIAN STALLIONS AND MARES

2 to 6 years old, weight 1,700 to 2,410 lbs., all "Branded," "Approved," "Registered and Inspected" by governments of France and U. S. and certificates "stamped" O. K. All "inspected" by a Nebr. Deputy State Veterinarian and certificates of "Health and Soundness" are given with each horse. Iams sells

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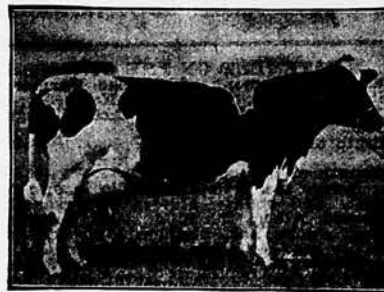
ST. PAUL, NEB.

--SUNFLOWER HERD'S-- SECOND ANNUAL SALE

110 - HEAD REGISTERED HOLSTEINS - 110

At Auction on

Tuesday, April 25th, 1916
OSKALOOSA, KANSAS



QUALITY and BREEDING will be the keynote of this great event. One hundred females and ten bulls. It's seldom that so much 30-pound blood is offered among so great a number of cattle in any sale.

There will be twenty females bred to Sunflower Herd's great 30-pound sire, Prince Artis Pontiac Abbecker No. 132382. Many close up springers.

There will be a number of A. R. O. cows bred to a son of Colantha Johanna Lad. Twelve daughters of the 31-pound sire, Sir Pontiac Rag Apple Korndyke No. 49334. (He has fourteen A. R. O. daughters, one above 23 pounds at 3 years.)

TEN daughters of the GREAT SIRE, KING SEGIS PONTIAC. Daughters of this wonderful sire are seldom offered either at private or auction sale. Then there will be a fine lot of daughters of such bulls as Woodcrest Hengerveld De Kol, Oakland Paul Beets Burke, Lewis Prilly Ruble Hartog, Woodcrest Nig De Kol, and the 40-pound sire, Johanna McKinley Segis, nearly all bred to King Segis Pontiac. Such breeding simply cannot be bettered.

The bull offerings will consist of a number of youngsters ready for immediate service and choice individuals. Six sons of King Segis Pontiac, dams of the best breeding. One son of the world's champion show bull, Paul Calamo Korndyke, by a dam that was first prize winner at the National Dairy Show. One son of the 30-pound sire, Oakland Paul Beets Burke, from a 24-pound daughter of Hengerveld De Kol. A son of King of the Pontiacs from an A. R. O. dam, and a son of Johanna McKinley Segis (dam has 40-pound record), and an A. R. O. grand-daughter of Pontiac Korndyke. WHAT BETTER COULD YOU ASK?

Your failure to attend this greatest of all Middle West sales will be your loss. Come and bring your neighbors—seating room for all.

The proper state and federal authorities will have tested these cattle for tuberculosis and they will be a clean, straight lot.

Don't forget the date, APRIL 25. Send for catalog.

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