

KANSAS FARMER

For the improvement  of the Farm and Home

Volume 54, Number 20.

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FARM POWER

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

GIVING careful attention to the spark lever when driving the automobile will conduce to the long life and sweet running of the motor as well as resulting in an appreciable saving of gasoline. The tendency among automobile drivers is to push the spark lever about half way and then forget it. This results in loss of efficiency and undue heating of the motor for rapid running and severe strains and knocks on the slow, hard pulls. It is well to remember that the faster the motor is turning, the earlier the spark should be timed and, in general, it is a safe rule to keep it advanced as far as possible without causing the engine to knock, retarding it for slow running, hard pulls, and when picking up speed.

Breaking in New Auto Engine

This article is written for the benefit of the beginner with the automobile. If heeded the advice given will save many dollars and assure a machine properly broken in. Most people on purchasing a new machine desire to find its hill climbing capabilities, its acceleration or get away, and high speed. Don't do it. There is nothing more detrimental to a machine, or any other piece of machinery, than to force it while new. There is only one way to break in an engine:

Never accelerate your engine until it has been driven at least 2,000 miles, unless it be a case of extreme emergency. Don't drive faster than fifteen to twenty miles an hour until after 2,000 miles have been reached.

Don't attempt to climb hills on high. Don't try to pick up from a standing start of thirty miles an hour in fifteen seconds.

See that there is sufficient water in the cooling system, and that your lubricating system is working perfectly. With these rules ever in mind for the first 2,000 miles, you will break your engine in and will prevent a scoring of cylinders, the bending of connecting rods and the grinding and overheating of bearings, etc.

If you will follow these rules carefully, ninety-nine times out of a hundred your engine will not come down under 50,000 miles of driving; in other words, it is what we call efficiency. On the other hand, you can readily see that if you overstrain your engine, which you are certain to do in breaking it in if you score the cylinders, or overheat the motor, or a hundred and one other things which generally happen within 2,000 miles of improper driving, the engine must come down, and always something else goes wrong soon afterward.—CYRUS B. OLSEN.

Getting Big Tire Mileage

The service automobile owners get from tires and inner tubes is largely influenced by the way they handle their cars.

"The owner who wants a big tire mileage can get it, and big gasoline mileage along with it, if he will observe a few simple rules, and one of the most important of these lies in the way he stops and starts his car." These are the words of W. Y. Van Zandt in the Hutchinson News. "Just note that man pulling up in front. See how he shut off his power almost a rod away and just coasted up to the curb. He saved gas, his tires and his car all at once. Now note that fellow. See how he has driven right up to the curb and then jammed on his brakes. His car slid a foot or more, and in that one time he put more wear and strain on his rear tires than a mile's ordinary driving.

"The matter of starting your car is another important feature, if you would have your tires wear long. Always start away from the curb slowly. Just ease in your clutch and glide away. In this way the back wheels do not revolve uselessly two or three turns and grind the rubber tread off your rear tires. Sudden starting and stopping is not only hard on tires, but it is bad for the whole car.

"In going around corners care should be taken to take the turns easily and smoothly, and slow down before you get to the corner. Going around a corner at fifteen or twenty miles an hour puts a fearful strain on the tire fabric and invites early blowouts. The man who does this is simply working for the tire companies, although he may not realize it.

"Keep the small stone cuts in your

casings filled with some good tire filler. This will keep out water and oil, two of the worst enemies to tire fabric, and put hundreds of extra miles on every casing. Get in the habit of looking for these small cuts and filling them up every week or so.

"Then there is the matter of inner tubes. Oil will ruin an inner tube in a week. Don't throw your extra inner tubes in promiscuously with your spare tools and your oil can. Wrap them carefully in cloth or better still get a couple of good strong cloth bags for them. Some of the tire companies supply these bags free or they can be made at home with very little trouble.

"But the real big rule of all is, keep your tires blown up to the proper pressure recommended by the maker. Supply yourself with a good pressure gauge and be sure that it is accurate, and then use it.

"If motorists would observe these few simple rules and occasionally read some of the literature published by the tire companies, they would find that their tires would last them a whole lot longer and that most of their tire troubles that have been taking the fun out of their trips would disappear for good."

Tractor Progress

The passing of the experimental stage in many of the farm tractor model offerings this year will by no means meet the demand of the motor educated American farmer for the absorption of the products of the industry. They will get



ONE-MAN TRACTOR TURNING UNDER WHEAT STUBBLE

the quality, but many a farmer will be compelled to stick to ancient methods, owing to lack of manufacturing facilities necessary to meet an unprecedented demand.

Of the 6,500,000 farms under our flag nearly 3,000,000 will average at least 100 acres and on these moderate sized farms, a two-plow tractor costing considerably less than \$1,000 may be profitably employed, as the tractor is really the beginning of efficiency in the progressive march towards farming as a business. The employment of the tractor, the right one, will mean an intelligent advance toward profitable farming—an increase of crop-producing acreage—the maximum of production with the minimum of muscle expenditure; thus tillage becomes a pleasure, with every acre a dividend payer.—GEORGE BROWN.

Oil Bad for Tires

Oil softens the rubber of automobile tires and greatly reduces their wearing qualities.

Tires are often seriously injured by being allowed to stand in puddles of oil, which has dripped from the power plant of the car. Whenever a casing becomes covered with oil, it should be washed immediately with gasoline.

Whenever possible, freshly oiled roads should be avoided. A few miles on a dusty road will certainly remove most of the oil which has been picked up on such a trip. If any oil does remain, it should be removed immediately by washing with gasoline. The use of one of the many tire paints on the market may afford some protection from the oil.

In motors using the splash lubricating system it is advisable to drain off the old oil from the crank case occasionally and refill with fresh oil.

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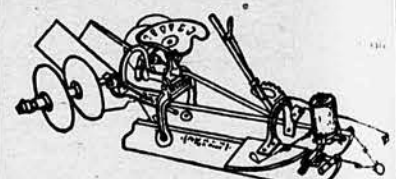
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KANSAS FARMER

The Standard Farm Paper of Kansas

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DAIRY CLUB MEETING.

The Kansas Farmer Dairy Club has great possibilities along educational lines. This week a member of the KANSAS FARMER staff attended a meeting of the club members in Leavenworth County. County Agricultural Agent Ross had called together the members of the club in that county in order to give them some instruction in dairying and in the production of milk. The meeting was held in the room of the Commercial Club at Leavenworth, where the members of the farm bureau for their meetings. Mr. Ross had secured a series of lantern slides illustrating the production of clean milk, and this was the leading feature of the instruction given.

Only one of the boys in this county has started his record, but the instructions they are getting will be most valuable to them as soon as their cows are fresh and they start on their year's record. By learning beforehand what it requires to produce good, clean milk, the boys can do what is necessary in getting their equipment into shape to handle milk properly while they are waiting for their cows to freshen.

This is the first meeting of the club boys of Leavenworth County, but we feel sure it will not be the last. Knowing Mr. Ross as we do, we will expect this club to become a regular class in dairying, meeting from time to time to learn all possible about the business.

The example set by Mr. Ross in getting the members of the club in the county together for special instructions, is worth following in other counties. Few counties have agricultural agents to bring this about and not many have so large an enrollment as does Leavenworth County, but the bankers who are backing the boys and girls in these communities can make the club work more useful by taking up the task of securing all the help they can for the members. Special talks and lectures might be planned. There will be no difficulty in getting such help if the plans are made a sufficient time in advance. The banker who has made it possible for boys and girls to get cows and join the club is surely a logical man to become the recognized leader of the club and keep the interest of members growing. This will be an opportunity to teach business methods to some young people who will be the community leaders in the near future.

STOCK MEETING AT MANHATTAN.

The live stock farmers of Kansas are invited to attend a meeting at Manhattan on June 9. This will be one of the live stock events of the year. These spring meetings have now been held for several years and are being looked forward to with increasing interest.

A hundred heifer calves have been on feed the past winter, and Professor Cochel will furnish those in attendance the results of feeding the different rations. Better than all else will be the opportunity to see the cattle and inspect carefully the yards, the equipment, and the feeding methods practiced. It is also worth a great deal to meet men who are interested in the same line of work. We have been attending these spring live stock meetings for several years, and it has been our observation that those in attendance have felt amply repaid for the time and money spent on the trip.

Those who never visit the experiment station sometimes fail to appreciate the value and purpose of experimental work. We would urge live stock farmers to attend this meeting if it is possible to do so. A most instructive program has been prepared. "Financing the Cattleman" is the subject that will be discussed by P. W. Coburn, president of the largest bank in Kansas City, and also president of the National Bankers' Association. W. R. Stubbs, former governor of Kansas, will speak on "The Relation of the Range Cattle Business to the Feeding Industry." C. F. Curtis, director of the Iowa Experiment Station and dean of the Iowa State College, will also be present and give an address. Dean Curtis has a national reputation as a live stock man. President Waters, Dean Jardine, and Professor Cochel will also speak. Governor Capper has been asked to preside at the conference.

The purpose of the winter's experi-

ment has been to make a comparison between shelled corn, ground corn, and corn and cob meal, and between kafir heads, ground corn, and corn and cob meal. The effect of adding silage to a ration of corn, cottonseed meal, and alfalfa hay, will also be shown. The 100 head of calves have been on full feed since last fall and are being finished as baby beef.

The station has lost no money on cattle it has fed during the past three years, and cattle feeders will be specially interested in the outcome of this experiment.

STARCH FROM KAFIR.

Kafir is now being used to some extent in the manufacture of starch and other commercial products. Its composition is very similar to that of corn. Both are starchy grains, and farmers and feeders have learned that kafir is very close to corn in feeding value. The demand for kafir is widening through its increased use for these various commercial purposes. It would seem that it should be as good a source of starch as is corn.

The department of milling industry at the Kansas Agricultural College recently received a shipment of kafir to be used in the mill. This department has a complete flour mill and is studying many problems having to do with the milling of grain. The department plans to work on kafir with the idea of widening its use for various purposes. Such experimental work can be of great value to farmers of Kansas as kafir is one of our surest grain crops.

At the present time practically all the commercial supply of kafir is grown in Kansas and Oklahoma. The acreage is being increased each year. Last year the Kansas crop amounted to 22 million bushels. Three million bushels of kafir reached the Kansas City market the past three months. This is twice as much as was handled in the corresponding period a year ago.

There can be no question as to the desirability of developing the milling industry in Kansas. Too much of our grains of all kinds are now shipped to other states to be manufactured. This experimental mill at Manhattan can be made very useful to the industry. Increasing the state's capacity for manufacturing such grains as wheat, corn, and kafir, into commercial products, is in line with the conservation of our agricultural resources.

ONE MORE AGRICULTURAL AGENT.

McPherson County has just hired an agricultural agent. This county has been organized for some time. It is the thirteenth county in the state to employ an agent. The man selected is V. M. Emmert, who graduated from the Kansas Agricultural College fifteen years ago. He spent seven years in general farming and raising pure-bred live stock near Blue Rapids, and later farmed four years in Texas. He has also had experience in teaching agriculture in high schools.

Three other counties have completed the organization of farm bureaus and will employ agents as soon as the right men can be found. Among them is Pawnee County, one of the progressive counties of Southwest Kansas. In this county \$1,000 has been subscribed by farmers, merchants, and professional men over the county, to cover the initial expense of the bureau. This will include an automobile for the agent, office fixtures, and other needed equipment. Only \$800 is required by the federal and state authorities for this initial fund. There are 281 enrolled members in this bureau, which is in excess of the requirement.

E. M. HALL BURNED TO DEATH.

Again we have our attention directed to the awful results of fires on farms. E. M. Hall, the well known Shorthorn breeder of Carthage, Mo., recently lost his life when his farm residence was destroyed by a fire of unknown origin. The unsuccessful attempt to save the lives of his mother and her maid, resulted in Mr. Hall's death the following day.

He has been conspicuous in agricultural affairs in Missouri and especially in the breeding of Shorthorn cattle. He

had not only made a success as a breeder, but had put his farm in a highly productive condition. Hallwood Farm was pointed to as an outstanding example of successful farming.

Such tragedies emphasize the need for realizing more fully the fire danger which constantly exists on many farms. Only the week before a fire destroyed the residence and three large barns belonging to E. H. Salisbury, Kirksville, Mo. No lives were lost in this fire, but twelve pure-bred Percheron horses and fifty Angus cattle were destroyed, the total property loss being \$35,000.

GROW TREES ALONG ROADS

The practical business men who manage the Chicago, Burlington & Quincy Railroad have found that beauty and economy are two things that go together. They have been studying for ten years the conservation of the timber resources from which they must draw their supplies and within this period they have planted two hundred thousand catalpa trees along their right of way which in time will yield sufficient timber to maintain the road as it runs through the cultivated area and at the same time add immensely to the beauty of the route, thus combining the two elements of economy and beauty in a way to impress the popular mind and promote the public good. So successful has this railroad been in the forestation of its right of way that it has assembled fifty thousand additional trees which will be planted the present spring and, pursuing this policy which promises surprising results, doubtless the whole line of road in time will be bordered on either side by luxuriant trees enhancing the beauty of the changing landscapes, supplying refreshing shade from summer heat to the travelers on their way and serving as windbreaks when in the winter time the storm king holds sway, and all the time growing timber to make the roadbed smooth and safe.

The right of way of the railroads in the United States covers an immense acreage. Estimating that this right of way is forty feet wide, a mile of road occupies nearly five acres, or to be more exact 4.85 acres, of which about two acres are the roadsides. This means that over five hundred thousand acres of land in the roadsides along the right of way of the railroads in the United States might be used by the roads after the Burlington plan for the creation of a railroad forestry reserve to the large advantage of the roads and the benefit of the public. The railroad roadsides are in a sense wasted land and very little has been done to improve them, and as timber is growing scarce and cross-ties are increasing in cost it might be possible for the railroads to turn their idle acres to practical account.

If it would be a good thing for the railroads to plant trees along their lines, why would it not be an equally good, or better, thing for the people who build the public roads of the country to plan for the planting of trees along these roads? Experience and observation have shown that the wind has an injurious effect on earth, gravel and macadam roads, and it stands to reason that the growing of trees along the public roads would remove in a degree this menace. In England, where the humidity is great and the annual amount of sunshine rather low, trees are not desired along roads because they tend to keep them too moist; but in most parts of the United States trees are desirable because they would prevent the roads from becoming too dry.

Grasshoppers damage field and garden crops, and fruit and shade trees. Poison bran mash sowed early in the morning kills them and their eggs may be destroyed by cultivating pastures, meadows, and waste lands late in the fall.

Garden web worms eat alfalfa, live and spin webs over the plant. If your field is badly infested, cut the alfalfa and disk the ground.

All animals respond to kind treatment. Rough treatment, too, produces results—but not the kind that make the animal more valuable.

FARM AGENT MISUNDERSTOOD.

The extension of the farm bureau idea in Kansas has been referred to on this page. In spite of all the good accomplished through the farm bureau and its agent, some few still persist in misunderstanding the purpose and plan of the movement. Nothing will more quickly clear up the misapprehension and prejudice than careful study of the working of the bureau in counties which have adopted this plan. It is no longer an untried experiment and the mere fact that the men who first became members of farm bureaus are still members and becoming more enthusiastic each year, should be convincing evidence of the value of the plan.

We were in a meeting recently where the idea was up for discussion and the same old arguments and objections were advanced. We would urge these doubters to look into the workings of the farm bureau. These things have not been done under a bushel. In every bureau now organized will be found many of the best and most progressive farmers of the county. These men are not too proud to admit that there may be some few useful things that they can learn. They are also glad of this opportunity to give of their own experiences to the community.

How a farm bureau and county agent work to bring about more profitable farming in a community is well illustrated by the report of County Agent F. P. Lane of Harvey County, Kansas, for the week ending April 22.

Mr. Lane says: "Monday and Tuesday, George O. Greene, specialist in horticulture in the Extension Division, was with me and helped in starting orchard spraying demonstrations. Sixteen farmers were present in one orchard and eighteen in another. At least a dozen men in the vicinity of these orchards expect to spray this year for the first time.

"Tuesday night a meeting of the farm bureau members of Richland Township was held. The plans of work for the year were explained in detail and the work of the farm bureau in that township gone over fully.

"Wednesday night I went to a farm on invitation to test milk. The farmer had invited all of his neighbors and they came, bringing with them samples of cream, skimmed milk and whole milk, and I was busy from until 11 o'clock explaining and demonstrating how to make the different tests. Ten farmers and their wives and all the children were present. Another demonstration is planned for the same community soon.

"Friday night we had a meeting of the farm bureau members and others in Lake Township. The evening was spent in explaining the work that the farm bureau is undertaking this year and in advising with members how to make the bureau work more efficient. Twenty-five were present."

In the meeting first referred to, one good farmer announced that he had been very much opposed to the idea until he had occasion to visit in a county where a farm agent was employed. This one visit converted him. He said he was now convinced that the agent could get a lot of valuable information for him while he remained at home and plowed corn.

In Harvey County four of the banks are furnishing money to boys to buy dairy cows to use in the work of the Kansas Farmer Dairy Club. One banker agreed to furnish \$1,000. The great trouble now is to find good cows.

An investment in a good oil or gasoline stove would be a paying one. It would lighten the burden of summer cooking—which should be given serious consideration, as should everything tending to make the housewife's work lighter and more enjoyable.

Corn root lice suck the juices from the roots of corn, grasses, and weeds. They depend on colonies of small brown ants for protection and transportation and may be controlled by crop rotation, fall plowing, and early spring cultivation to destroy weeds and grasses.

Fire cannot start in concrete.

GRAIN AND LIVE STOCK

Practical Plans for System of Diversified Farming in Northwestern Kansas

By H. T. NEILSEN, in Kansas Board of Agriculture Report

It is a comparatively easy matter to make plans, but much more difficult to manage so as to follow them even though they are practically ideal. In this expression of my views, I have laid out a plan which I believe is a practical one. A great many farmers will object to it because their fields do not conform to the plan. There may be either too much plow land or too much grass land for the farm to fit into this general scheme. To those who find fault on this account I wish to say that a plan of this kind must be general, and cannot therefore apply to every place.

The plan contemplates dividing the farm into equal areas of pasture land and cultivated crops. On some farms, of course, this proportion is already destroyed, and on others it will not be feasible to make such division. But the plan is sufficiently elastic to permit of its being adapted to almost any farm if the farmer will make the required effort. It should not be forgotten that in this district the grass area is twice as large as that growing cultivated crops. Those who have too much of their farm under cultivation to carry as much live stock as outlined, could overcome this difficulty by hiring pasturage for the young stock.

LAYING OUT THE FARM

The plans are practically self-explanatory. I have used a section of land because there are many large farms in this part of Kansas. If a man has a half section, the scheme would be to use one-half of it as pasture and then have the other 160 acres divided into four fields of 40 acres each, with the farmstead in the center of the farm near the road, as is the case on the diagrams shown.

It is of course entirely impossible to divide all farms in this rectangular and set manner. But a man can readily exercise sufficient ingenuity to divide his farm so as to get the land best adapted for farming, into cultivation, and leave the other part for the grazing land. If the farm is of such nature that more than half of it is not suitable for farming, the sensible thing to do is to keep all the live stock the grazing land will carry, and decrease the wheat acreage to a sufficient extent so as to grow ample forage on the place.

If the farm is one on which more than half the land is suitable for cultivation, the farmer will be exercising poor judgment if he does not leave half of it for pasture. This general observation does not apply to farms on which the plow land is adapted to alfalfa growing, for this kind of land is too valuable in Northwestern Kansas to be left for grazing purposes. A man owning good alfalfa land will soon be able anyway to own other land for pasture purposes. The average farm on the divide land should certainly not have more than half the area under the plow, unless good pasture for young stock can be readily hired not far from the farm.

LIVE STOCK POSSIBILITIES

It is interesting to contemplate the number of animals that could be handled in this section if half the land were stocked as suggested. The twenty-one counties would maintain 305,730 horses and mules, 611,460 cattle, and 954,000 sheep. If the two-thirds area which is in grass were thus stocked, the numbers would be 395,970 horses and mules, 791,940 cattle, and 1,236,000 sheep. The actual numbers for 1912 were 179,498 horses and mules, 230,867 cattle, and 14,075 sheep. It is possible that these numbers are slightly larger for 1914.

I have not made any provision for hogs in this plan. It is difficult to arouse much enthusiasm on hog raising in this part of Kansas except where alfalfa pasture is available. A great many alfalfa growers are opposed to pasturing alfalfa at all in this section, claiming that it greatly shortens the life of the field, and it is rather difficult to get a good start again. It is desirable to keep some hogs, probably five or six brood sows on a farm like the one under consideration. Before hog raising will be at all profitable here in a series of years, the farmers must largely give up corn planting and rely on the grain sorghums for their grain feed. There are occasional years when even the grain sorghums yield little grain. The years that the sorghums do not yield an abundance of forage are exceedingly rare. By being forehanded and storing up a surplus in the abundant years there need never be a time when there is a really serious shortage of roughage for horses, cattle and sheep.

PLANS IN OPERATION

In order to make sure there will not

be any misunderstanding of the plans, a general explanation is perhaps desirable. As there can be so many different applications made of the general principles involved, detail has been avoided as much as possible.

Beginning with field "A" in plan 1, it is taken for granted that it was fallowed in 1915 and put to wheat in the fall, and therefore will grow a crop of wheat in 1916. This fallowing may be

possible, leaving the field in this condition until wheat-sowing time, unless weed growth and volunteer wheat make it necessary to disk again. The sowing should be done as early as weather conditions and insects will permit. It will vary somewhat between the eastern and western parts of the section. If a reasonably good crop of wheat is grown on this field in 1917 it is a debatable question what should be done to it that fall.

might be grown for hay for horses. After the sorghums are harvested the field should be handled in the best practical manner to prevent blowing. It will likely be best to list the field at right angles to the prevailing winds if this can be done. In 1919 the field should again be fallowed and prepared for seeding to wheat in the fall of that year.

If the farmer deems it advisable—and I think it is—to grow some barley, part of the field allotted for the second crop of wheat after the fallow should be set aside for this purpose. If he insists on planting some corn, he should plant this on the same field as the barley, sacrificing part of his wheat acreage.

The plan thus provides for three crops on the same field in four years—two crops of wheat and one of forage. On the farms under consideration there would be each year 160 acres in wheat, 80 in forage crops, and 80 acres fallow. I believe it would be more sensible to reduce the wheat acreage to 140 and grow 20 acres of barley. I do not consider it wise or desirable, because of the many failures, to plant corn on the divide or upland soils of this section. A great many argue that it is worth while planting because of its being a good preparation of the land for wheat. In the plans outlined corn has no place, because the crops grown are much more dependable.

There might be two small pastures near the farmstead—plan 2—not so much because this seems the most economical arrangement—though it has its advantages—but to prevent dust blowing back and forth across the farmstead. These pastures can be used advantageously for the work horses and milk cows at night. This arrangement would necessitate considerably more fencing, and therefore would be more expensive.

LIVE STOCK TO HANDLE

The live stock feature of the plan is harder to work out. The high price and comparative scarcity of live stock, with a relative shortage of ready money among the farmers, means that the live stock problem will not be properly settled or adjusted for several years at least. The men will need to make such starts as conditions will allow, making all the sacrifices permissible, and gradually grow into the business.

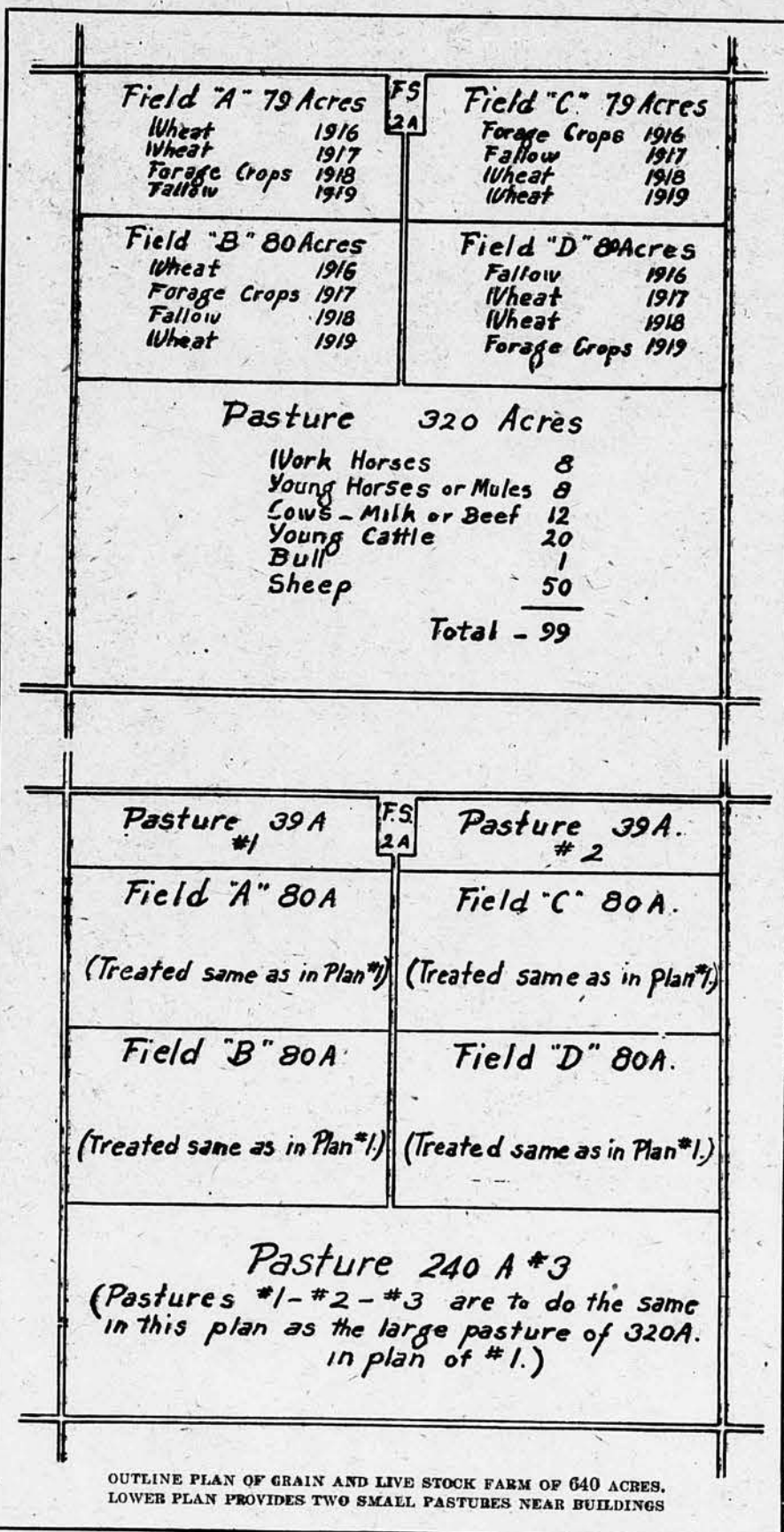
The plan makes allowance for eight work animals. Six of these should be brood mares of a good, drafty type, as there is every assurance that good work horses will be in big demand and command good prices for years to come. This section of Kansas is admirably adapted to raising horses, and the advantages Nature has given us should be wisely utilized. The other two work animals could probably advantageously be a lighter team of geldings or mules. This team could do most of the road work except for heavy hauling. They should be able to keep up their end in a four-horse team in general farm work.

Twelve cows is the number planned for. There is no question that the most profitable kind of cows to keep is good milk cows. The farmer himself should decide on the breed, picking the one that suits him best. It seems most desirable to get a breed of at least reasonably good size. There are many who do not want to milk cows. Such men should not think of keeping common cows, but should make every effort to keep real beef cows, as in this way they will get the most out of them.

A small bunch of sheep has been included in this plan. It is fully realized that a great many object to sheep.

If the farmer refuses to have sheep on the place he can keep a few more cattle, five to eight head probably. He will not get as large returns in this way as from sheep.

The number of live stock is much smaller in this district than it was ten years ago. Generally speaking, the most prosperous farmers are those who have followed live stock farming. The district at large has an immense area in grass land and the climate is ideal for the growing of live stock. We can raise an abundance of excellent roughage and sufficient grain to winter our stock to good advantage. By farming right we can grow a great deal of wheat of as good quality as can be grown anywhere. With all of these things in its favor, Northwestern Kansas is a decidedly attractive farming region. When people fully appreciate its wonderful opportunities as a live-stock-producing district, and bend their energies in the direction of making it do what it is especially adapted to do, then the largest measure of prosperity will be realized.



done in a number of different ways. The listing method is coming into use and is advocated by most farmers who have tried it. The field should be double listed in order to get the best results. Plowing is perhaps the best way of preparing the land, but great care and excellent judgment are needed so as not to get the field in too loose and mellow a condition, and thus invite soil drifting. Two of the most common and frequent causes of poor success with fallowing are inability to work the land at the proper time, and sowing too much seed per acre. These two difficulties must be overcome if fallowing is to be a paying practice.

Continuing with field "A", it is supposed that the fallowing was properly done in 1915. After the wheat is harvested in 1916 the land should be double disked to a medium depth as soon as

Some good farmers advocate leaving the field without doing any work on it until early spring, when it should be disked. Others consider it an advantage to disk that fall. Still others think listing in the fall, in October or November, an excellent and paying practice. This latter method gives promise of being the very best one, though it has not been given a really thorough trial by very many farmers.

GROWING THE FEED CROPS

In 1918 field "A" will be devoted to forage crops. The very best spring treatment should be given the field, so as to be as sure as possible of good crops. Approximately half the area should be planted to kafir and sorgo, or cane, for silage and fodder, the balance of the field to be planted to the grain sorghums—milo, feterita, and kafir if it will mature. A patch of Sudan grass

BORDEAUX CONTROLS SCAB

Present Season Favorable to Spread of Apple Scab—Systematic Spraying the Remedy

By GEORGE GREENE, K. S. A. C.

APPLE growers in Kansas should be on the look-out for scab. The weather conditions at the present time are very favorable for the growth of this fungus.

Apple scab is a native of moist, cool climates and is perhaps the most serious disease on the fruit of the apple in the northern and eastern portions of the United States. In ordinary seasons scab does not cause much damage to Kansas fruit except in the northeast corner of the state, owing to the fact that the warm dry weather prevailing throughout the larger part of the state tends to check its growth. The season of 1915, however, was very favorable for the development of the scab and infections were noted even on the southern border of Kansas. The results were not as discouraging to apple growers in the southern third of the state as they were further north but even there, considerable damage was apparent.

The spring of 1916 has opened up cool with light showers and should May prove to be as cool as April this disease will cause considerable damage during this season. Those growers who have already applied the cluster bud spray and who are planning to follow with the petal fall spray, will probably have little cause to worry, but the orchardist who, because he had no canker worm, felt that he might well do without the cluster bud spray is apt to have some serious results from this disease.

SCAB EFFECTS LEAVES FIRST

That the growers may be on the look-out for the disease and spray to prevent serious injury, a description will not be out of place. The disease makes its appearance first on the leaves in the form of peculiar cup like spots which taken on an olive green or a smoky olive color, afterwards turning black. The spots are more or less circular in outline at first, but after two or three coalesce, they will, of course, be very irregular. The next stage is the falling of the badly affected leaves. These leaves remain and on them the disease will live over until another year, ready to re-infect the leaves and fruit in 1917.

On the fruit the disease will first be noticed by a darkened area underneath the skin. This will gradually take on a smoky olive hue, turning black, and around the edge of the spots which will



APPLE SCAB ON LEAVES.—DIFFERENT TYPES OF INFECTION

be from a quarter of an inch to five sixteenth inch in diameter, will be noticed scales of the outer skin of the fruit. As the spots grow larger, the spores drop from the center of them, leaving the skin a darkened, russeted color. If a number of these spots coalesce, it may cause cracking of the fruit and even where the spots are small after the spores have dropped away, it will be noticed that the roughened skin is checked in such a way that fungous plants causing rot may easily gain entrance, and the fruit will not keep in storage.

INJURES NEW GROWTH

The disease often attacks the very

young growth and on this immature wood it will be seen in the shape of dark spots with more or less of a purplish outline which, of course, will interfere with the proper development of the year's growth. The disease is serious from the fact that it causes a dropping of the leaves whose function it is to furnish food for the development of next year's fruit spurs, for growth of the other wood and for the development of the fruit now on the trees. The proper growth is retarded where badly affected decreasing its value in the market and interfering seriously with its ability to stand storage.

As soon as a grower finds the peculiar

darkening and cupping of the leaves, he should begin the application of some fungicide, preferably Bordeaux mixture. Whether or not he shall follow the spray schedule as sent out from the Agricultural Colleges and Experiment stations will depend on the seriousness of the disease.

LIFE HISTORY OF DISEASE

In order that control measures may be intelligently used a knowledge of the life history of the disease is essential. The spores, which have the same functions as the seeds of higher plants, are carried over winter on the leaves beneath the trees. From here in the spring the spores are carried to the rapidly developing leaves on the trees. These spores germinate and small thread-like roots or mycelia are sent into the tissues and as they grow and branch the affected area becomes larger and within this spot the threads will come to the surface and produce new spores to be carried to other leaves or fruit. The control depends upon having some fungicide as Bordeaux mixture on the surface of the leaves and fruit at the time of the germination of the spores in order that the germ tube may come in contact with the fungicide and be killed. Spraying in this case would be preventive. After the disease has gained entrance no spraying can cure because the threads of the fungus are protected by the tissues of the leaves or fruit.

Because of the high price of copper sulphate, many growers are questioning the advisability of the use of Bordeaux mixture, but because of the fact that the results of spraying are cumulative, it is not advisable, even at the high price of copper sulphate, to omit its use. Those varieties on which apple scab will first appear and which it is well to watch are Duchess, Winesap, and Ben Davis. Where the grower feels that there is some danger, it would be well to make sure that the first and second sprays for apple blotch are put on to control apple scab. These will be Bordeaux mixture from 18 to 21 days after petal fall and again 5 to 6 weeks after petal fall. Should we have cool, moist weather, it would be necessary to put on another spray 8 to 10 weeks after petal fall.

Stock Exchange Favors Competition

THE place of the live stock commission man in maintaining a competitive market was discussed at the Hays Cattlemen's meeting by M. L. McClure of the Federal Reserve Bank, Kansas City.

"One of the main factors of these great markets that have been established," said Mr. McClure, "is the commission men, and I am here today to ask for a closer and better understanding between the commission men and their patrons.

"Live stock exchanges have been by many misunderstood and I want to say that we have no rules or regulations but what are of benefit to the shipper and producer. The only difference of opinion that could reasonably arise between the shipper and the commission men would be the one over the commission charges, and I feel that all just men who are willing to investigate will find that these commission charges are not too high and are not much less than for any such services rendered by any other agents in a like line of business.

"The very first purpose of the first live stock exchange was to protect the hog shipper in the docking of hogs. Up to that date the buyer did his own docking. The exchange has endeavored to protect the public against unscrupulous, crooked men engaged in business at the different stockyards.

"While it has not wholly eliminated that class, it has protected the public where the laws of the states could not and did not reach, and we challenge any other line of business that handles such vast sums of money and has as many responsibilities as the commission men to show as clean a slate.

"The commission man is the buffer between the packer and the producer, and the individual commission man can do nothing singly, but the organization can act effectively for him and take the individuality out of it, and the individual commission man can still be friendly with the buying interest and yet the public be protected by the action of the

united exchanges. For instance, when the live stock exchanges made the fight against the attempt of the packers to buy all live stock subject to post-mortem—a fight wholly in the interest of the shippers—which was won by the live stock exchange, no individual commission man lost caste with the buyers, although the fight was very bitter.

"The National Live Stock Exchange is now engaged in a publicity campaign against the practice of the packers buying in the country, a practice lately inaugurated that is detrimental to the interest of the producer and shipper. You have sufficient competition on the feeder end of the live stock bought on the market and in the country at the present time, and so long as present conditions last you are justified in selling them when and where you can; not so with fat stock.

"The packers own most of the stock yards, and if the stock came to the markets, they would receive a profit in the way of yardage, feed, etc. Therefore, they must have a greater profit in sight when they go to the country to buy.

"Twenty per cent of the hogs received now at Kansas City go direct to the packing houses without being offered on the open market, but are paid for on a basis of the prices obtained for like stock on the open market at Kansas City. A packing house buys in the country and receives direct at their plant, say 2,000 hogs. That day he lays out of the market until late, as he is independent. He has enough to keep his men at killing for a while, and with one of the main buyers out of the early market, competition is reduced that much.

"The other buyers will say: 'So-and-So is out of the market, and you will have to sell at reduced prices.' This happens oftentimes and specific cases can be mentioned, and it is the best club known to knock prices. This also happens in the cattle yards, just the same as it does in the hog yards, but you may say there is no competition anyway, but there is some and it does have its effect on the market.

"Just lately the presence of Canadian buyers on the Chicago market greatly

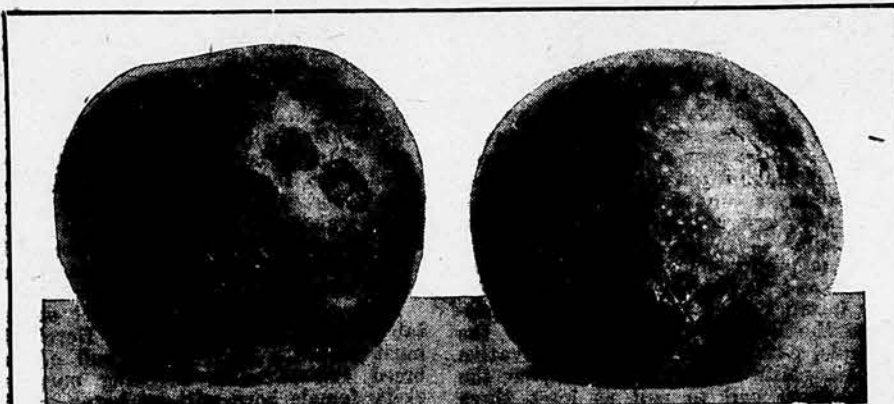
improved the market for hogs. There are also on all markets order buyers for small packing plants. We ourselves bought lately three double deck loads of hogs for a small plant in the state of Pennsylvania. On the cattle yards there is competition by feeders for heavy cattle who bid against the packers; there are order buyers for Eastern packing houses, and there is competition made by the commission men striving to obtain the best price possible for their customers.

"At Kansas City about fifteen per cent of the killing cattle and twenty-five per cent of the hogs are bought by order buyers and shipped on the hoof to killers at Eastern points, this includes what are bought by the packers to be killed in their Eastern plants. If the practice of country buying becomes fashionable, you will find the country will be divided into districts, where certain buyers will go and the other buyers will likewise have their own districts and there would be no competition between them.

"In adjusting this marketing of live stock the small producer and shipper has to be reckoned with and it is hard to get united action on account of these shippers being so vast in number, and distributed over such a wide territory. The shipments of the men who produce and market one to five loads of cattle are more numerous in volume than the shipments made by the larger producers, and the number of small producers is increasing yearly.

"The large shippers are decreasing yearly. All stockyard men will tell you that in the last fifteen or twenty years there has been a great change in the number of cattle that are weighed per draft in their yards. At Kansas City the average draft weighed over the scales in 1915 was less than seven head.

"This shows that the shipments are cut up into smaller lots and the larger shipper does not altogether control the marketing situation, though a big factor."



APPLE SCAB AS IT APPEARS ON FRUIT

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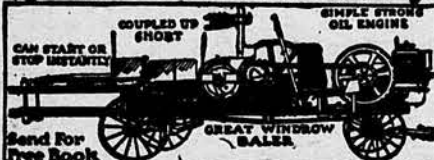
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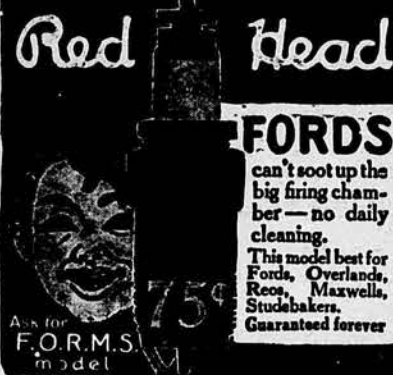


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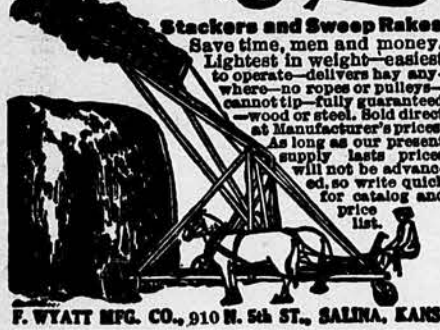
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Kansas Farmer Dairy Club

Here Will be Found Information of Great Importance to Our Dairy Club Members

TO determine the amount of butter fat a cow produces it is necessary to have the exact weight of the milk and the percentage of butter fat which it contains. This percentage of butter fat is referred to as the test. The fat is that part of the milk which makes butter and is its most valuable constituent. Milk or cream is usually sold on the basis of the butter fat it contains. Because of this a cow's production of fat is of great importance. The fat she produces in a year becomes an index of her value as a dairy animal. Mere quantity of milk does not of necessity make a cow a big butter fat producer.

Testing the milk regularly is the only means of finding out how much butter fat the cow produces. The first step in determining production is to weigh the milk, but without the test this will not give any information as to the total amount of butter fat produced.

The rules of the Kansas Farmer Dairy Club require that one test of the cow's milk be made each month. This test will be made from a composite sample of the milk the cow gives on the fifteenth day of the month, this to be taken as the average butter fat test for the month. The percentage of butter fat will vary slightly from day to day, but it has been found that a single test made the middle of the month will approximate very closely the average percentage of fat for the month.

In order to make this test reliable the sample must be properly taken. Unless it is a representative sample of the milk produced the test will be very inaccurate. There are several things which tend to bring about this result. The first milk drawn is much poorer in fat than the last. The strippings may test as high as 14 per cent, while the first pint drawn frequently tests less than one per cent. The sample, to be representative, must be taken from the pail containing all the milk the cow gave at one milking.

Another source of error is due to the fact that the butter fat globules begin to rise to the surface as soon as the milk is drawn. A sample taken from the top after the milk has stood a few minutes will not be a true sample. The milk should be poured from one pail to another several times and the sample taken at once while it is thoroughly mixed. This will give a true sample of that milking.

The richness of milk is affected by the length of time between milkings. The morning milk is nearly always richer in butter fat than is the evening milk, thus if a sample of either is taken as representative of the day's milk, the result will be inaccurate. This is overcome by making a composite sample. This is simply putting together the samples from the two milkings. If the cow is being milked more than twice a day, a sample from each milking of the day must go into this composite sample.

The samples are most conveniently taken by using a little long-handled dipper holding one ounce. One or two dipperfuls should be taken from each milking. Whatever the size of the sample it should be the same for each milking. Since the night and morning milk varies in richness, there is possibility for error here but it is slight.

The sample of milk sent to Manhattan must be kept sweet, otherwise the test cannot be accurately made. This can be done by putting a preservative in the bottle before the sample is poured in. Corrosive sublimate or bi-chromate of potash is commonly used. These are put up in the form of little tablets and your cream buyer can supply them. If not, write to KANSAS FARMER and we will help you to get them. These preservatives are deadly poison and should be plainly labeled, carefully handled, and kept out of the reach of smaller children. Also keep the poisoned sample carefully guarded until it is mailed.

Suitable bottles and containers for mailing must be provided since the samples are to be sent to the dairy department at Manhattan, for testing. If your cream buyer cannot supply these mailing tubes and bottles, we will help you get them.

Since proper sampling is so essential to correct testing, we will summarize the instructions given above. First provide the bottle in which to place the sample, putting into it one preservative tablet. Milk the cow dry and pour the milk from pail to pail at least three times. Take the sample at once, put it in the bottle and cork tight. Take sample of night milk in the same way. Be

sure to save the same amount from each milking. Cork the bottle tight and place it in the container, packing it with cotton so there will be no danger of its being broken in the mail. Address to Professor O. E. Reed, Dairy Department, Kansas Agricultural College, Manhattan, Kansas. Put your own name and address on the package and in addition, write "Member of Kansas Farmer Dairy Club". Be sure to put your name and address on each package for unless this is done you will lose your test for that month.

Do not delay in securing the containers and bottles for mailing the samples. These will cost only a few cents apiece. If you cannot get these sample bottles and the mailing tubes, let us know at once, as the work of the club cannot be conducted without them.

Does Calf Count in Dairy Club

F. H., one of the Kansas Farmer Dairy Club members in Douglas County, who started his record May 1, asks if the calf is to be considered as a part of the proceeds from the cow. Also whether he should keep a record of what the calf eats.

While the calf is a legitimate return from the cow, it will not be considered as a part of her year's production. If the calf should be sold, the money received could be applied on the note held by the bank. If kept and grown out to maturity it would add to the capital the club member has invested in cows. Keeping a record of what the calf eats is not required as a part of the work of the club, but we hope all our club members will be so interested in keeping records that they will not neglect to keep track of what the calf consumes. Unless this is done they will not know how much the calf costs and if it should be sold they could not tell whether it had returned any profit or not. While the calf is drinking whole milk there will not be so much cream to sell, so the payments at the bank cannot be as large as they will be later when the calf is being fed skim milk. If it should be a heifer it will be growing into money rapidly and will make a good return for the whole milk consumed.

Interest on Cow Investment

O. V., Anderson County, writes that he has bought a cow from his father to use in the Kansas Farmer Dairy Club. He has had her appraised by two disinterested parties in accordance with the rules, and wants to know what interest rate he should pay.

The prevailing rate at the banks for such loans is eight per cent. A number of banks, however, are loaning money to members of the dairy club at six per cent. A good cow will easily pay out at eight per cent, but we believe in this instance six per cent would be a fair rate.

Polled Herefords

F. E. L., Leavenworth County, writes that he dislikes horns on cattle and wants to know if Polled Herefords are as good as those with horns.

As a breed, the Polled Herefords are not yet as good as the Herefords with horns. It has not been an easy task to breed the horns off Hereford cattle. The difficulty is to find natural polls that will transmit the characteristic to their offspring. In the Hereford breed during the past twenty-five years there have been probably less than twenty head of such natural polls produced by horned sire and dam. A start has been made, however, in establishing a breed of Hereford cattle without horns, and it is merely a question of time when they will be as good individually as the old style Hereford.

Because of the small number of Polled Herefords in existence, it is more difficult to find animals of the best beef type than it is in the old established breed. At the present time there are only about 100 naturally polled Herefords registered in the American Hereford Record, while there are thousands of registered Herefords with horns from which to select.

A man who has his heart set on establishing a herd of hornless Herefords must secure a good polled bull of the breed and save for breeding purposes every female born without horns. It is a slow process but a number of Hereford breeders are working along this line at the present time.

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TYPEWRITER ON THE FARM

ONLY those who have used a typewriter realize the time thus saved. And only those, who, in the course of business must read through letter after letter written by hand, understand the amount of time saved in reading a typewritten letter and the greater ease with which its meaning is grasped.

Just as the use of the binder greatly simplifies the grain harvest, so the use of the typewriter takes away the dread of writing business letters.

Is it not a fact that on many farms letters which really should be written and which would result in better business transactions, are neglected because when the farmer comes in tired from his day's work, the task of finding the writing materials and collecting his thoughts, seems harder than the day's work? If he had a typewriter he would have at least a small desk for it, and here should be kept all writing materials within easy reach from the machine on which used. With these conveniences at hand, the matter of constructing the letter could be given undivided attention and would cease to be so much dreaded.

Many times the difference between a good and poor price for farm products is chargeable to a lack of business methods—a lack of business correspondence, if you please, bringing together the supply and demand. In so far as profitable, home markets should be patronized both by buyer and seller, but a good animal may be purchased by a neighbor, not because he is really needed but because he can be obtained at a bargain price, when perhaps an opportunity to sell profitably through an outside channel of real demand is being lost.

Business correspondence widens the farmer's market and this is necessary if he would turn his labors to the greatest profit. But the farmer's business aside from his correspondence, is too great and too pressing, to add to his letter-writing if it must be done by hand.

There are numerous makes of typewriters and as many prices at which they can be bought. The most important point to be considered is the simplicity of operation and mechanism to be kept in running order. A number of the machines are constructed simply, and these, if given reasonable care, will last many years, and their cost and the small amount of practice required to learn to use them proficiently, will very soon be over-balanced by the opportunities they bring to the busy man's door.

One of the advantages of the use of the typewriter is that a copy can easily be made of each letter written, and these copies often have an important bearing on transactions. By placing a piece of carbon paper between two sheets of writing paper, the copy can be made at the same time the letter is written. The copy can then be pinned or pasted to the letter which it answers and the whole transaction can be filed together in a small space and may be very valuable later should any controversy arise.

Once the typewriter is installed, uses aside from writing letters, will be found for it.

It is certain the typewriter will fascinate the children, and through its use and the business methods which it makes possible, they will be getting a business training which will not come amiss.

Bookkeeping Experience

Without profit farming cannot improve. There are two main channels through which increased profits come—increased production, and decreased cost of production. In order to make a profit from farming, as in other lines of business, it is necessary to get down to first principles and determine costs as compared with production. It is not a simple matter to do this. It involves keeping books. The accounts must include labor costs, interest charges, depreciation, and other points of like nature. Farm bookkeeping methods must be simple and so planned that only a single entry of each item will be necessary.

The need for work of this kind has been recognized by many of our best farmers and numerous more or less successful attempts have been made to keep accounts. The ones so doing have improved their methods from year to year as suggested by the experience gained. The following letter from A. W. Duer, Reno County, tells of such a start. This letter is the best one received on the subject during April, and Mr. Duer thus wins a year's subscription to KANSAS FARMER:

"I started keeping farm accounts four years ago in a very crude way. I merely kept a complete itemized account of every cent of money that I spent. The

next year I added to this account a diary and kept an itemized account of all receipts. This did not supply all the information I wanted. I then got some ideas from a Manhattan bulletin and made another attempt at bookkeeping. I got an old ledger and have tried to carry it along for the past two years, still keeping my daily diary. I have had to keep my time along with my actual money expenses, and this has been confusing. For example, I have a field of corn, and along with the actual expenses of seed, taxes, interest on land, and breakage of tools, I keep the cost of labor at so much a day. While this is an improvement over my first efforts, it is far from satisfactory.

"I hope the account book prepared by Mr. Johnson and Mr. McNall will simplify keeping farm records and supply the information needed to make my farming more business-like. From the experience I have had, I consider the diary of considerable value. In this I keep notes on many matters that are likely to be forgotten unless written down.

"I have been beginning my year May 1, but I think I shall change it to February 1, as that seems nearer to the dividing time."

Labor Distribution

To secure labor efficiency on the farm it is important that it be distributed throughout the year as much as possible. Through diversity of farm enterprises such distribution can usually be worked out to a considerable extent. On adjoining farms the total labor of the year may be equal, but on one it all comes in a rush period and more help must be hired. On such farms even the owner may not have a productive job to keep him employed during slack periods.

In working out a farm management scheme, it is always desirable from the labor standpoint to so distribute the labor through the year as to make it possible for the owner to do all the work he can. This almost forces a diversity of enterprises. Single crop farming makes its heavy labor demands at certain seasons of the year. In addition to the difficulty of hiring the extra help when needed, it is not good for the workers of the family to have these periods of excessive activity alternating with slack time.

The number of horses needed will be less on a farm where the labor is well distributed. The average farm work horse does not put in very long hours when the whole year work is considered. His maintenance is one of the big expenses of farming and any system that will keep all the horses steadily at work throughout the year will greatly increase their efficiency.

Farm Cost Accounts

The principles used to obtain costs on the farm are really no different than those used in the factory. The principal activity of both farm and factory is to produce.

The elements entering into the cost of the finished product, be it on the farm or in the factory, are the same, viz., labor, material, and expense.

The labor on the farm is classed as man labor, horse labor, and machine labor.

The material consists of such items as seeds, fertilizers, etc.

The expense items are taxes, insurance, depreciation on buildings, small sundry expenses, etc.

The total of the expense items are proportionately charged to the production departments of the farm.—A. E. CHANDLER, in Hoard's Dairyman.

Cowpeas Increase Yields

Cowpeas are paying dividends in Leavenworth County, according to P. H. Ross, the agricultural agent. The summer of 1913 a few farmers in the county grew cowpeas and turned them under as a green manure crop, following with wheat. It is difficult to prepare a good wheat seed bed following the turning under of such crop, but in all but three cases there was an increase in the yield of wheat ranging from two to fifteen bushels an acre. The average increase was 5.6 bushels. Eight farmers in the county report following cowpeas with corn. In only one case was there no increase in yield. The average was 9.7 bushels an acre. On three farms potatoes followed peas, the increase in yield being 21.7 bushels an acre. The effects of growing cowpeas and turning them under are not all noticeable the first year. The soil will continue to show the results of such fertilization for several years.



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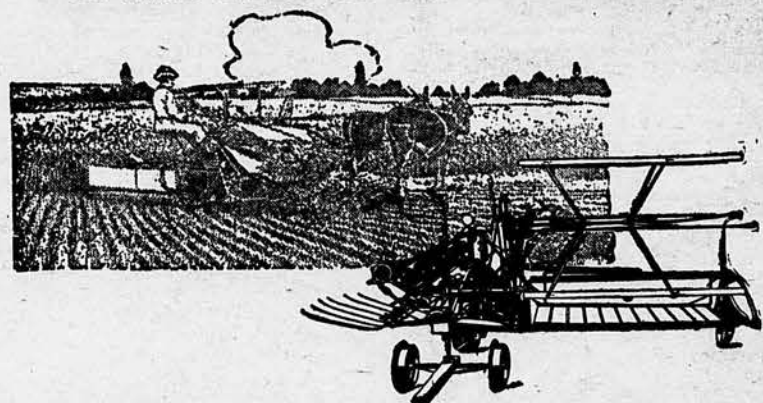
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HELPS IN FARM BUILDING

A SERIES of nine bulletins on farm buildings of various types which will go into detail on the construction of various buildings about the farm is being prepared by the National Lumber Manufacturers' Association. The first two, just now completed, are those on implement sheds and grain storage buildings, two of the most important but most neglected buildings about a farm.

K. J. T. Ekblaw of the University of Illinois, author of these bulletins, estimates that a fair average life for farm machinery allowed to stand in the open is five years. He says that farmers who care properly for their machinery can get from twenty to twenty-five years' use of the same type of machinery. He figures, therefore, that on an average investment of \$1,000 per farm for machinery, the building of an implement shed for \$250 will save the farmer \$1,800, or rather give him an investment representing \$1,800, gauged by his savings. He says that the growing use of the small tractor on the farm increases the necessity for a well built implement shed. The bulletin gives dimensions for the various items of farm machinery, with suggestion on the technical side of the building problem.

In the same author's bulletin on grain storage buildings he brings out that while economy in construction is a main factor in the building of an implement shed, strength is of the utmost importance in the building of granaries. The problems of pressure on walls, the foundation strength, floors and framing are all given due consideration. The use of solid materials, the right sizes and grades of lumber, it is asseverated, will avoid the complaints against the old style buildings made of wood not of the best, and not erected on the basis of strength of every timber in the construction.

Both of the bulletins are extensively illustrated, carrying diagrams of the structures described in the text, and also give statistics on sizes and costs, just the sort of information a prospective builder wants to get. The bulletin suggests forms for simple sheds, open sheds, the wide enclosed type, and even the little-used two-story style. In the two-story building it is suggested that the upper floor be used for light plows, harrows, and other light implements which can be pulled up either with block and tackle or by an inclined runway from the exterior.

The author advises the use of paint on all farm buildings, two coats, partly as a preservative and protection against weather and rot and insects and also for the prosperous appearance well painted buildings give to a farm.

In the bulletin on grain storage buildings, the author says that the chief fault of cribs and granaries as they are usually constructed is that they are constructed with too little regard for strength and durability. False economy is practiced and proper consideration is not given to the great strain to which a crib or bin is subjected, due to the lateral pressure from the weight and settling of the grain.

One of the interesting phases of his discussion of this weight problem is that of ear corn, on which there are said to be no reliable statistics as to its action in mass. The author, however, says that the best estimates are to compare it to coal in its action, and to build accordingly to guard against too light construction. The author also expresses his doubt of the value of the common

type of corn crib which is narrower at the bottom than at the top, on the theory that the corn is thus kept dry.

Steel Posts

A reader asks if steel posts are practical. This is a question upon which we have had no first hand information. It is getting more and more difficult to get good wood posts and they are increasing in cost. A good many are using the steel posts and it would seem that there is a place for them. They can be quickly set and for hog fences where only short posts are needed, a temporary fence can frequently be built to good advantage with steel posts.

If any of our readers have had experience with steel posts, we would be glad to hear from them.

Curing Self-Sucking Cow

B. M. Neosho County, writes that his heaviest milking cow has acquired the habit of sucking herself.

This is a most exasperating habit and one that is difficult to overcome. Some put a sort of jockey stick on the cow, fastening one end to the halter and the other to a strap around the body just back of the shoulders. This will keep the cow from sucking herself but it also keeps her irritated and uncomfortable and this is not conducive to keeping up the milk flow.

Another method that is sometimes successful is to put a horse collar on the cow. This makes it impossible for the cow to lay her head close enough to her side to reach the teats.

Perhaps the simplest measure and one that is very often successful, is to put a bull ring in the cow's nose, with several loose rings hanging from it.

Harrowing Corn

We have been asked if there is any danger of overdoing the harrowing of young corn.

The principal merit of the harrow in cultivating young corn is that a large amount of ground can be gone over quickly. The purpose is to kill as many weeds as possible just as they are sprouting. If the land is free from cornstalks and other rubbish on the surface, so that the corn will not be dragged out, the harrow can frequently be used to good advantage in killing the weeds as they start. However, a great deal depends on the weather. Harrowing just before a rain would be of little avail in killing weeds. They would merely be transplanted and would grow all the more vigorously. A few hours of dry, sunny weather following the harrowing is necessary to make this means of destroying weeds successful.

Like all other farming methods, harrowing young corn cannot be adopted as an infallible practice. There are times when it would be far better to put cultivators in instead of harrows. There is need for more head work in farming than in almost any other occupation. There can be no hard and fast rules that can be followed without modification.

School Farm Pays Profit

A 40-acre farm is maintained in connection with the Reno County High School. It produced last year a net profit of \$372, or about ten per cent on the investment. This farm is used as a demonstration farm in connection with the teaching work in the high school.

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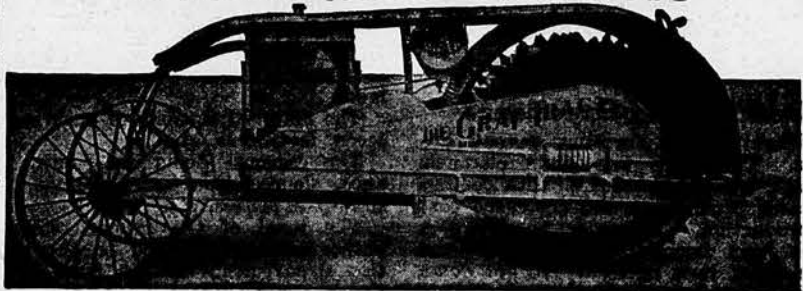
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Little Talks to Housekeepers

Helpful Hints Here for the Women Folks of the Farm

"Flow deep while sluggards sleep,
And you shall have corn to sell and to keep."

Then sing, ye birds, sing, sing a joyous song!
And let the young larks bound
As to the tabor's sound!
We in thought will join your throng,
Ye that pipe and ye that play,
Ye that through your hearts today
Feel the gladness of the May!
—Wordsworth.

What a pity that the old-time custom of having large bells on the farms for calling the men from the fields for meals, is fast losing its popularity.

Consider whether we ought not to be more in the habit of seeking honor from our descendants than from our ancestors; thinking it better to be nobly remembered than nobly born.—RUSKIN.

Always is the time to start campaigns against house flies, and there should be no restriction as to the territory covered. The value of a persistent house-by-house warfare against this deadly pest cannot be estimated. Flies do much greater damage, even, than is credited to them, and when the cause is traced to germs carried by them, it is too late

to check it. The safe and sure way is to check the flies.

We never think of a fight against flies without remembering the accompanying danger of children being poisoned by the preparations set out for flies but which are so often found and sampled by the little folks. The only safe way to use such preparations is to put them beyond the reach of the children.

Let us endeavor so to live that when we die even the undertaker will be sorry.

Poor Richard Says

Love your enemies, for they tell you your faults.

Neglect mending a small fault, and 'twill soon be a great one.

Many have quarreled about religion, that never practiced it.

Sudden pow'r is apt to be insolent, sudden liberty saucy; that behaves best which has grown gradually.

He that is of opinion money will do everything, may well be suspected of doing everything for money.

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No. 7660—Ladies' Shirtdress: Cut in sizes 36 to 42 inches bust measure. This model is gathered at front shoulders and is fashionable to the extreme in fullness. A dainty collar overlays a neck finished with a fold or band of the material which in rounded outline continues down front where the closing is made. No. 7640—Boys' Russian Suit: Cut in sizes 2, 4 and 6 years. This is a suit that will appeal to the practical mother who will depend upon blend of color for the dress effect. The blouse is cut full and shapely and conveniently closes down the front. The trousers may be finished at the legs with leg bands or elastic. No. 7642—Ladies' Shirtdress: Cut in sizes 34 to 42 inches bust measure. Popular because of its practical lines, this waist is made with two plaits at each side of front, the closing at the center is visible and made with buttons; a smart collar and neat cuffs bring out its lines for simplicity of style. No. 7652—Ladies' Negligee: Cut in sizes 36, 40 and 44 inches bust measure. This ladies' negligee is made with a slightly raised waistline and has a four-gored skirt. The broad collar reaches to the shoulder in front and is of solid color material, scalloping being used to finish. Long or short sleeves may be used. No. 7686—Girls' Dress: Cut in sizes 6, 8, 10 and 12 years. This girl's dress shows a garment that is really bewitching in style. It has a separate gullepe and admits of being made with long or short sleeves. The full plaited skirt has a deep hem and buttons with edging for cuffs and the low collar give the finishing touches. No. 7685—Ladies' Dress: Cut in sizes 36 to 44 inches bust measure. In excellent taste is this dress for the woman who wants a practical design that is not necessarily plain. Either high or regulation waist line is used, and short or long sleeves. The skirt has four gores and a pocket either side.

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None Affords More Instructive Work and the Results are Shared by all the Family Throughout the Year

HOW would you like to be able to go to your pantry or cellar, especially during the winter and spring months, when you hardly know what to get for dinner, and find that you have plenty of nice, home-grown and home-canned sweet corn, tender, golden wax and stringless green pod beans, peas, pumpkin, squash and asparagus? Yes, you can buy all these, but wouldn't they taste a little better if they came from your own garden and were canned in your own kitchen? If you are not enjoying all these good things, it is just because you are not trying to as are the club boys and girls. Surely if the club boys and girls all over Kansas and their mothers can grow and then can these vegetables, you can.

In the club work, the young people are first urged to grow their gardens, then they are taught how to can the surplus either for the market or for home use. They are taught to can by the new method which enables them to do all the work in one operation and mostly with home-made outfits or with the wash boiler or an empty lard can. More than ten thousand quarts of home-grown fruits and vegetables were canned by these club girls and boys last year right here in Kansas. The method is so simple that even the boys enjoy working at it, and many of them find it profitable, too. For example, one boy who could only get fifteen cents each for his pumpkins, canned them and, in this way made the larger ones bring him ninety cents each. One club in Leavenworth County canned more than fifty different varieties of fruits and vegetables and a club of twenty-two girls in Cowley County under the leadership of Mrs. J. I. Deichman of near Winfield, canned 4,670 quarts. Not a single one of these girls had ever successfully canned a quart of vegetables save tomatoes previous to entering Mrs. Deichman's club. They were taught the new cold pack method and even surprised their leaders by the results of their work.

All this canning club work is done in connection with two club projects which are promoted under the direction of the extension division of the Kansas Agricultural College—the gardening and canning clubs and the mother-daughter canning clubs.

MOTHER-DAUGHTER CANNING CLUB
The requirements for this club are as follows: Age, daughters 10 to 18 years, inclusive, but no age requirement for the mothers. Time of enrollment, January 1 to July 1. Project, to can and report on not less than twenty-five quarts of fruit and twenty-five quarts of vegetables representing not less than five different varieties of each.

The purpose of the club is to teach and encourage home canning and the saving of those fruits and vegetables that are generally plentiful in summer, but scarce in winter. Complete canning instructions will be sent to each team—mother-daughter—enrolled in this club, and if possible, a canning demonstration will be given for each club by someone sent out from the extension division of the State Agricultural College. Last year members of these clubs very successfully canned such vegetables as green beans, peas, corn, pumpkins, squash, sweet potatoes, asparagus, and mixed greens.

Either mother and her daughter enroll together, do the canning together, keep records together, and, when making an exhibit, enter their products as one exhibit. (Jellies and preserves are not to be classed as canned products.)

The fruits and vegetables used by these clubs may be from the home orchard or garden, or purchased. The only requirement in this respect is that each team note the cost or approximate value of all products at the time they were canned. Records must also be kept of amount and cost of sugar used, cost of new jars, cans, rubbers, lids, labels, and the number of hours of time spent either by the mother or the daughter.

Each club should organize by electing a president, vice-president, secretary, and committee leaders. Meetings should be held every two to four weeks. The actual canning of at least one fruit and one vegetable should be demonstrated at each meeting. No club should be organized with less than five teams and perhaps never more than ten.

It frequently happens that arrangements can be made with local merchants, gardeners, and fruit growers to have fresh products supplied to a club of this kind at somewhat better rates than when each individual buys in small quantities.

These clubs are also able to get local dealers or merchants to send away and get for them fruits and vegetables not grown locally.

In determining prize winners, the following basis for awards will be considered:

Quality and variety of canned products, 0 to 30 per cent or points; quantity of canned products, 0 to 15 per cent or points; general appearance of exhibit, 0 to 15 per cent or points; profit on investment, 0 to 20 per cent or points; records and story, 0 to 20 per cent or points.

GARDENING AND CANNING CLUBS
Requirements are as follows: Age, 10 to 18 years, inclusive. Time of enrollment, January 1 to July 1. Project, to grow one-fortieth acre of garden vegetables and the canning of no less than one-tenth of the total amount of each variety grown.

One-fortieth of an acre is four square rods or 1,089 square feet, so this plot can be 33 feet by 33 feet; 99 by 11; 60½ by 18, or 66 to 16½ feet. It must be rectangular in shape and all in one tract. Only those vegetables should be grown that can be canned, such as corn, beans, peas, tomatoes, pumpkins, squash, beets, sweet potatoes, spinach, Swiss chard, mixed greens, cucumbers, etc. Instructions for the canning of vegetables will be sent out by the state leader to all members who enroll in this club. While the members are not required to can more than one-tenth of the total crop of each variety grown, it frequently happens that they are able to increase their profits by canning a considerable more than this amount. Especially is this true where a good daily market for fresh vegetables is not within easy reach.

In determining local, county, and state champions, the following basis for awards will be considered:

Quantity grown and canned, 0 to 30 per cent or points; variety grown and canned, 0 to 15 per cent or points; exhibit of canned products, 0 to 15 per cent or points; net profit from garden, 0 to 20 per cent or points; records and story, 0 to 20 per cent or points.

When a gardening and canning club or a mother-daughter canning club is properly organized, Mr. Hall, the state leader of boys' and girls' club work, either goes himself or sends someone to teach the new canning process. Not only are the club members taught how to can in glass jars, but they are also taught how to can in tin. When a club wishes to can for the market, Mr. Hall recommends that cans be used instead of jars, but for home purposes the jars are recommended as they are considerably cheaper since they can be used several years, while a can is good for only one season. It is true, however, that boys and girls find it more difficult to can in glass than in tin, but with a little experience most of the boys, even, become quite skilled in handling the glass jars.

One boy who canned 64 quarts of vegetables last year, reported that he had broken but two jars. The canning work is not only making the garden club work more profitable, but it is making it more popular with both old and young. In many communities there is no market for fresh garden vegetables, so club members who are not able to can their surplus are not making much profit from their gardens. By canning they can sell at good profits and whenever they wish to sell. But better still, this canning work is providing the homes with vegetables from home gardens, not simply two or three months during the growing season, but the whole year through. Farm families which a year or two ago were growing only a few rows of corn, beans, peas, and pumpkins for summer use, are now growing ten times as much of each and by means of the canning are able to have these vegetables every week throughout the year.

Beginning with the next issue of KANSAS FARMER, the instructions and recipes which Mr. Hall sends out to his canning clubs will be published.

Anyone interested in the canning club work should write Otis E. Hall, State Leader of Boys' and Girls' Club Work, Manhattan, Kansas.

Cards—Free

If you will send us the names of ten persons who are not now subscribers to KANSAS FARMER, we will send you a set of Twentieth Century Travel Cards free for your trouble. Address KANSAS FARMER, Travel Dept., Topeka, Kansas.

HELP WANTED.

WANTED—MAN TO WORK ON FARM to do all kinds of farm work and milk cows. Must be clean and no bad habits. J. L. Yordy, Tescott, Kan.

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

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

WANTED—MAN WITH FORD CAPABLE handling territory for new Ford Timer. Sells on sight. Has no equal. Price 50 cents. Write for particulars and sample. Dow Mfg. Co., Los Angeles, Calif.

MEN AND WOMEN WANTED EVERY-where. Government jobs. \$70 month. Short hours. Vacation. Big chance for farmers. Write immediately for list of positions now obtainable. Franklin Institute, Dept. K 82, Rochester, N. Y.

\$1,000 PER MAN PER COUNTY, STRANGE invention, startles world—agents amazed. Ten experienced men divide \$40,000. Korstad, a farmer, did \$2,200 in 14 days. Schleicher, a minister, \$195 in first 12 hours. \$1,200 cold cash made, paid, banked by Stoneman in 30 days; \$15,000 to date. A hot or cold running water bath equipment for any home at only \$6.50. Self-heating. No plumbing or waterworks required. Investigate. Exclusive sale. Credit given. Send no money. Write letter or postal to-day. Allen Mfg. Co., 226 Allen Bldg., Toledo, Ohio.

AGENTS WANTED

SUITS \$3.50, PANTS \$1.00, MADE TO measure. For even a better offer than this write and ask for free samples and styles. Knickerbocker Tailoring Co., Dept. 451, Chicago, Ill.

REAL ESTATE.

WANTED—FARMS. HAVE \$357 BUY-ers. Describe your unsold property. 678 Farmers' Exchange, Denver, Colo.

SQUARE SECTION FINE WHEAT LAND, small cash payment, long time. L. E. Pendleton, Dodge City, Kan.

IF YOU WANT TO SELL OR EX-change property, write us. Black's Business Agency, Desk C, Chippewa Falls, Wis.

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

WANTED—FARMS AND RANCHES. Owners send description. We have cash buyers on hand. Don't pay commission. Write Up-to-Date Realty Exchange, La Salle, Ill.

FOR SALE—ONE OF THE FINEST CAT-tle ranches in Texas; 5,500 acres in the oil district, with private station and shipping pens on the ranch, and also several hundred head of good stock cattle on the ranch. For sale with the ranch. Price, \$15.00 per acre, part cash, balance terms. Address W. T. Gibbins, Manager, Odell, Texas.

IDEAL DAIRY, POULTRY AND TRUCK farm of forty acres, just outside a good live town, 800 population. Good six-room house, barn, poultry house with cement floor, shop, garage, buggy shed, coal shed, two good wells of never-failing water with wind mills and tanks, one irrigating tank holds 200 barrels, one stock tank 10 barrels. Trees, shrubbery and flowers to make it homey and cozy. Price, \$6,000. Address C, care Kansas Farmer.

U. S. GOVERNMENT LAND OPENING—Over 500,000 acres fruit, farm and dairy land in Colville Indian Reservation, Washington, will be thrown open to settlement this summer. Our new book, "Description of Colville Indian Reservation," copyrighted by Smith & McCrea, publishers, gives full information and map and shows how to locate any piece of land without the assistance of a locator. Postpaid, \$1.00. Smith & McCrea, 533 Eagle Building, Spokane, Wash.

CATTLE.

SEE E. L. ENSIGN FOR GRADE HOL-stein cows and heifers and registered bulls. Cameron, Mo.

HOLSTEIN CALVES, 15-16THS PURE, \$20 each, express prepaid. Write us for Holsteins. "Edgewood," Whitewater, Wis.

FOR SALE—HIGH-GRADE HOLSTEIN heifer calves, \$15 each, crated. Edward Yohn, Watertown, Wis.

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

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

100 HOLSTEIN HEIFERS AND COWS—Consisting of big springing heifers and pure-breds, young springing cows and a number of heifers, six to fifteen months old ones. A carefully selected well bred lot. High grades. Paul E. Johnson, South St. Paul, Minn.

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

PATENTS.

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

BEE SUPPLIES.

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

TREES, SEEDS AND PLANTS.

GERMAN MILLET, \$2.06 PER HUNDRED pounds. John Holmstrom, Randolph, Kan.

SEED CORN. BRUCE SAUNDERS, HOL-ton, Kan.

PURE BLACK-HULLED WHITE KAFIR corn graded and tested, \$1 per bushel; bur-lap sacks free. A. J. Rymph, Harper, Kan.

SEED CORN IN THE EAR—PURE-BRED Yellow Dent and Boone County White, \$3 per bushel. Woestemeyer & Shuyler, Bethel, Kan.

NANCY HALL SWEET POTATO PLANTS by the million, \$1.75 thousand; 5,000 lots prepaid. J. S. Norman, Bentonville, Ark.

PURE DWARF BLACK-HULLED KAFIR, choice seed, \$1 per bushel f. o. b. Ness City. Sacks, 25 cents. E. J. Ruffhead, Ness City, Kan.

PURE BRED SEED CORN, FULLY tested and guaranteed. Boone County White, Hildreth and Reid's Yellow Dent. M. T. Kelsey, Northwood Farm, Topeka, Kan.

NANCY HALL SWEET POTATO PLANTS and Newstone, Redrock, Junepink, Earliana tomato plants, \$2 thousand. Wakefield, Flatdutch, Allhead, Drumhead cabbage plants, \$1.25 thousand. All 5,000 lots prepaid. Any kind postpaid 40c hundred; \$1 three hundred; \$1.40 five hundred. Catalog weekly. Quantity orders solicited. Quick shipment. Catalog free. Acme Plant Company, "Largest Southwest," Bentonville, Arkansas.

BUSINESS CHANCES

DEMOCRATIC NEWSPAPER, 8,000, state wide circulation, with plant. Incorporated. Will sell or trade for clear real estate. Will sell half interest or all. X-Rays Democrat, 217 W. 6th St., Topeka, Kan.

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.

DOGS.

WANTED—WHITE ESKIMO-SPITZ PUP-ples, six to eight weeks old. Fancy price for good ones. Brockway's Kennels, Baldwin, Kan.

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

HOGS.

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

FOR SALE—DUROC JERSEY FALL boars; also good yearling Percheron stallion. All pure-bred. Oscar T. York, Vinland, Kan.

TANNING.

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

HORSES AND MULES.

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

FOR SALE—THREE SPOTTED SHET-land ponies, good size and style. Also buggy and harness. J. H. French, Topeka, Kan.

FOR SALE—THIRTY JACKS AND JEN-nets, the big kind. A four-year-old registered black French draft stallion, the ton kind. Theodore Conrad, Groom, Carson Co., Texas.

BERMUDA GRASS.

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

BACK AGAIN! THE IMPROVED, BIG, creeping, hardy Bermuda grass, bigger and better than ever. One sack, \$1; six sacks, \$5. Rates on larger orders. Inquiries solicited. "Bermuda" Mitchell, Chandler, Okla.

BERMUDA GRASS—HARDY, RAN-growing variety. Stands floods, drouths, hot winds and severe freezing. Best and hardest pasture grass. Great milk producer. Write today for leaflet telling how to get started. Henry Jefferies, Ottawa, Kan.

SILOS.

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

HONEY.

CHOICE WHITE ALFALFA HONEY—Two 60-pound cans, \$11; light amber, \$10. Single cans, 25 cents extra. Bert W. Hopper, Rocky Ford, Colo.

MISCELLANEOUS.

A SUCCESSFUL MANURE AND GRAVEL loader is now being built and marketed by the Iowa Manufacturing Company of Bancroft, Iowa.

LISTEN, BOYS AND GIRLS. SEND FOR my free catalog and have lots of fun. It also tells how you can earn valuable premiums. L. Stewart, Traders Building, Kansas City, Mo.

DO YOU NEED A WAGON OR BUGGY? We have some high grade wagons and buggies at a Kansas point for sale cheap. All new and up-to-date stock. Write us for circular and prices. Miller Wagon Co., Edina, Mo.

RELIABLE POULTRY BREEDERS

LEGHORNS.

PURE-BRED BUFF LEGHORN EGGS, \$4 hundred. Jessie Crites, Florence, Kan.

S. C. W. LEGHORN EGGS CHEAP. D. W. Young strain. G. D. Williams, Inman, Kan.

SINGLE COMB BUFF LEGHORNS—Thirty eggs, \$1.75; 100 eggs, \$4. J. A. Reed, Lyons, Kan.

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

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

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

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

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

ROSE COMB WHITE LEGHORNS, 200-egg strain. Won 155 prizes. Best eggs, \$1.50 fifteen, \$5 hundred. Ruthe McFarland, Sedalia, Mo.

S. C. B. LEGHORNS, 50c. FIFTEEN; Barred Rocks, 75c fifteen; W. I. Runner Ducks, \$1, twelve; White Guineas, \$1, sixteen. Mrs. David Johnson, Roxbury, Kan.

FOR SALE—PRIZE WINNING SINGLE Comb White Leghorns, \$2 to \$25 each. Eggs, 1 cent. Chicks, 10 cents. Clara Colwell, Smith Center, Kan.

WINTERLAY S. C. WHITE LEGHORNS—Bred for egg production exclusively. Day-old chicks. Hatching eggs. Barlow & Sons, Kinsley, Kan.

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

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

PURE SINGLE COMB WHITE LEGHORN eggs. Young-Franz-Yesterland strains. Fifteen, \$1; hundred, \$4. Chicks, hundred, \$10. Satisfaction guaranteed. C. G. Cook, Lyons, 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.

BABY CHICKS.

BABY CHICKS AND EGGS—PRICES reasonable. Alfred Young, Wakefield, Kan.

YOU BUY THE BEST BABY CHICKS, guaranteed, at Colwell's Hatchery, Smith Center, Kan.

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

BABY CHICKS FROM THE WORLD'S best S. C. W. Leghorns. Trap-nested stock, with record of 200 and 250 eggs. Hundred, \$12.50 up to 500. Fifteen eggs, \$1.50. Order from this ad. Bellevue Poultry Farm, Scammon, Kan.

WYANDOTTES.

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

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

PURE-BRED R. C. WHITE WYANDOTTE eggs. Choice birds, good laying strain; fifteen, \$1; hundred, \$4.50. G. A. Berglund, Route 4, Clay Center, Kan.

WHITE WYANDOTTES—EGGS FROM birds of best strain in state. These are extra choice. Fifteen, \$1; 100, \$5. I. B. Pixley, Wamego, 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.

WHITE WYANDOTTES, WINNERS OF first pen Concordia, Minneapolis and Solomon poultry shows. Eggs, 10c each. Satisfaction guaranteed. Frank Henderson, Solomon, 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.

DUCKS AND GESE.

ENGLISH PENCILLED RUNNER DUCKS—Eggs, twelve, \$1; hundred, \$5. Frank Hall, Toronto, Kan.

PURE WHITE RUNNER DUCKS—STOCK and eggs for sale. Satisfaction guaranteed. Mrs. H. E. Halle, McCune, Kan.

LARGE WHITE PEKIN DUCKS—GOOD layers, \$1 per 12; \$1.75 per 24 eggs. E. Bauer, Beattie, Kan.

FAWN INDIAN RUNNER DUCK EGGS, 75c, thirteen, \$5 hundred. Mrs. E. C. Wagner, Holton, Kan.

LANGSHANS.

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

PLYMOUTH ROCKS.

PURE-BRED BUFF ROCK EGGS, \$4.00 hundred. Prompt shipment. Henry Martin, Wamego, Kan.

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

EXTRA FINE FARM RAISED WHITE Rocks. Eggs, \$4. Baby chicks, 11c. Mrs. Florence Hoornbeck, Winfield, Kan.

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

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

BARTLEY'S WINNING BARRED ROCKS—Eggs, \$2 setting. Half price after May 1. Paul Bartley, Harper, Kan.

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

PRIZE BARRED ROCK EGGS, \$2.50 FIFTEEN, \$4.50 thirty, \$9 hundred. 106 premiums. Mrs. Chris Bearman, Ottawa, Kan.

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

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

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

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

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.

ORPINGTONS.

BUFF ORPINGTON EGGS—MAY REDUCED, 75c for fifteen, from pen scoring \$0. A. M. Jordan, Manhattan, Kan.

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

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

BUFF ORPINGTONS, S. C. WHITE LEGHORNS, Barred Rocks, \$1.50 hundred, 85c setting. Bourbon Red Turkeys, \$2.50 setting, prepaid. Chickens on separate farm. Ideal Poultry Farm, Concordia, Kan.

RHODE ISLAND REDS.

DARK SINGLE COMB REDS—100 EGGS, \$1.25; fifteen, 75c. Gertrude Haynes, Grantville, Kan.

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

ROSE COMB RED HEN HATCHED chicks, 10c. Mrs. Alex. Leitich, Parkerville, Kan.

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

R. C. REDS—EGGS FROM LAYING strain, deep rich red. Fifteen, \$2. Mrs. Lester Lambert, Anderson, Mo.

S. C. R. I. REDS—EGGS FROM ESPECIALLY good stock, \$1 per setting, \$4 per hundred. Creighton Harper, Roca, Neb.

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

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

SEVERAL BREEDS

SILVER LACED WYANDOTTES, BARRED Plymouth Rocks and White Crested Black Polish eggs and stock for sale. Wm. Nellers, Cascade, Iowa.

COCHINS.

PARTRIDGE COCHINS—ALL FULL-blooded stock, prize winners. Fifteen eggs, \$2. Hens or pullets, \$3 each; cockerels, \$4 each. Nicholas Bach, Hays, Kan.

BEAUTIFUL BIG BUFF COCHINS, heavily feathered from head to toe, with golden yellow plumage. Chicks hatched in May mature fast and lay in cold weather. Eggs. K. Tyler, Norfolk, Neb.

Chick Feeding Hints

The first chick feed should be a dry mixture of cracked grains. Cracked corn, wheat, kafir, and pin-head oats are all good.

Feed sour milk or beef scrap to help build muscle, feathers, and bone. One per cent of bone meal should be included in the ration.

Feed three times a day and no more, but add rolled oats to the chick feed twice a day and stale bread crumbs or corn bread will do if there are no rolled oats on hand.

Feed finely cut lettuce, onion tops, or other green stuff if the chicks cannot be allowed to run on grass, for they must have something of this kind to keep the bowels working properly.

Poor growth and lack of thrift usually indicate something wrong with the feeding. A few grains of sand during the first few days after hatching help to prepare the stomach for food later, though the chick is still living on the yolk drawn into its body just before hatching.

Commercial ground feed may be fed or a coffee grinder may be used in cracking the grains. Never feed wet mixtures until the chicks are at least five weeks old. Use corn meal that has not heated in sack or bin and place a wire screen over it in the trough to prevent it from being scratched out and wasted.

Sell Unproductive Hens

At this time of year the egg yield generally diminishes and there are several idle hens on the place. Many of these will not lay before next fall and some not until next spring. To feed these unprofitable fowls for several months without getting any returns from them is a waste of money, and here is where the leak in the poultry business is often found. Feed is very high in price, and if you feed one hundred hens when only twenty-five of them are laying, you are losing money. The proper thing to do is to keep the twenty-five layers and get rid of the non-productive ones; provided, of course, that the non-productive ones are not needed for breeding purposes next year.

Hens are bringing good prices these days—from fourteen to fifteen cents a pound, live weight—and a good fat hen is easily worth a dollar. You had better sort out your unproductive stock and sell them at once. All roosters that are not wanted for next season should be disposed of as soon as the hatching period is over.

Cost of Producing Eggs

An inquirer wants to know the cost of the feed required to produce a dozen eggs and whether it pays when you can only get fifteen cents a dozen for them.

It depends altogether on what kind of a farm you raise the hens on. During an experiment at Cornell University the average cost for feed throughout the year was about nine cents per dozen eggs. Other experimenters give the cost of eggs in winter at fifteen cents per dozen and in summer eight cents. Of course you get a higher price in winter for eggs than in summer, enough to pay for the difference in the price of feed.

Where all the grain is paid for at present prices, we should say that eggs cost the producer about ten cents a dozen, so there would be a nice margin of profit at fifteen cents a dozen. It must be remembered that on the farm the hen picks up the most part of her living from the waste material scattered all around, and that the cost of a dozen eggs under such circumstances is a very small item of cash outlay.

Cards—Free

If you will send us the names of ten persons who are not now subscribers to KANSAS FARMER, we will send you a set of Twentieth Century Travel Cards free for your trouble. Address KANSAS FARMER, Travel Dept., Topeka, Kansas.

SEDALIA, MISSOURI, April 26, 1916.

KANSAS FARMER, Topeka, Kansas.

Dear Sirs: Enclosed find copy for new ad. My other ad offering cockerels sure did the work. I am well pleased with results. Yours very truly,

(Signed) RUTH MCFARLAND.

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

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

BARRED ROCKS, AMERICA'S BEST strains. Yard eggs, fifteen, \$2; range, fifteen, \$1, \$2 per fifty, \$5 hundred. A. G. Hammond, Vinland, 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.

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.

BEAUTIFULLY BARRED LAYING strain Ringlets. New York prize winners for years. Pens two and three, thirty for \$4; pen four, fifty, \$2.75. Mrs. Iver Christenson, Jamestown, 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.

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.

BRAHMAS.

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

LIGHT BRAHMAS, REDS, ROCKS, WYANDOTTES, guineas, Toulouse geese. Stock and eggs. Emma Ahlstedt, Roxbury, 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.

LIGHT BRAHMAS EXCLUSIVELY—Eggs from carefully mated range flock, \$1.25 per fifteen, \$4 per hundred. Mrs. Mark Johnson, Bronson, Kan.

EGGS, \$2 TO \$3 FOR FIFTEEN FROM my almost world-wide reputation Light Brahmas. Also a few young cockerels. Mrs. J. R. Kenworthy, Wichita, Kan.

CORNISH FOWLS.

CORNISH FOWLS—A FEW UTILITY pullets, cockerels, eggs. L. C. Horst, Newton, Kan.

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

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

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 stock, 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.

ROSE COMB RHODE ISLAND REDS—Won second at Illinois State Fair and first at two county shows. Four grand matings for 1916. Eggs, \$1.50 to \$4 per setting. Write for mating list. A. W. Hibbets, Damar, Kan.

ROSE COMB RHODE ISLAND REDS—I have bred Reds for ten years. I have them as good as the best at live and let live prices. Eggs, \$1.25 to \$4. Big mating list free. Redview Stock and Poultry Farm, A. S. Fellers, Prop., Hays, Kan. (Secretary of the Golden Belt Poultry Breeders' Assn.)

TURKEYS.

WHITE HOLLAND TURKEY EGGS, \$2.50 per twelve. W. F. Teague, Collyer, Kan.

THIRTY-FIVE POUND TOMS, WHITE Holland, eggs \$3 per eleven. Jessie Crites, Florence, Kan.

BOURBON RED EGGS FROM LARGE well marked stock, \$3 per eleven. Julia Haynes, McDonald, Kan.

EGGS—FAMOUS NARRAGANSETT Turkeys. Sunlight Poultry Farm, Mt. Moriah, Mo.

FOR SALE—MAMMOTH WHITE Holland turkey eggs, \$2 per ten. Miss Margaret Jeckel, Sabetha, Kan.

EGGS—MAMMOTH BRONZE TURKEY, prize winning stock, \$2.25 per eleven. White Guineas, \$1.75 per fifteen. W. L. Bell, Funk, Neb.

BOURBON RED TURKEYS—MATINGS headed by my Missouri State, Kansas State and San Francisco Poultry Show first prize toms. Eggs, \$3 and \$4 per eleven. Free catalog. Mrs. Clyde Meyers, Fredonia, Kan.

MAMMOTH BRONZE "GOLD BANK" turkeys, heavy bodies, splendidly bronzed, white edging. Eggs, 65 cents each, \$5 for ten, postpaid. Mrs. Iver Christenson, Jamestown, Kan.



Remedy For Leg Weakness

A CORRESPONDENT writes that leg weakness is prevalent among his growing chicks, and asks for a remedy.

His chicks must have been hatched early, for as a rule leg weakness never gets very bad until the chicks are two or three months old. There are several causes that contribute to this ailment, and the most prevalent one is that the chicks are kept too long on hard board floors before being let out on the ground. The larger birds are more prone to this trouble than the smaller and more active breeds, and cockerels are afflicted with it more than pullets, possibly because their legs are longer and cannot support their bodies. This weakness is often caused by pushing the growth, by feeding too much fattening food and condiments, thereby increasing the weight of the body beyond the ability of the legs to support it.

If our correspondent's birds are getting into this condition, he will notice at first an unsteadiness in gait. They move slowly and the limbs shake slightly. In a week's time they can hardly keep up on their legs, and when feeding will sit down so that the body is resting on the ground. The bird otherwise appears to be healthy. The feathers are bright, the eye clear and the appetite good. As the days pass the bird loses its desire for food, is picked upon by its brothers, lice multiply upon him, he becomes thin, and the skin seems dry and crackly.

In the very beginning of the trouble remove all causes of the weakness. Spice, corn, cornmeal, buckwheat and rye should not be fed for weeks to such birds. Instead of such fattening food, which goes to make flesh, they should be fed bone and feather-making rations. Feed clean meat and bone meal in goodly proportions. Ground fresh bone and meat gristle are all good for them. Have regular times to give the meals and make each bird work for part of his food. If possible have sick birds by themselves, to avoid imposition by the other birds. A grass run, with shade and cool water, will help cure these cases. If you have time and patience, one-tenth grain of quinine given to each bird with leg weakness every morning will help bring back health. But the most desirable thing to do is to let them have all the range they want, so as to develop their muscles. If you keep them on a hard board floor, no matter what you give them, they will never get strong.

The farmer is calling for warm weather so that he may plant his corn, and the poultryman is yearning for the same thing so that his chicks may grow.

It has been too cold for the early broods of chicks to do well. Only where the conditions for keeping them have been exceptionally good, have they thrived as they should. Here's hoping for warmer weather.

Everyone engaged in raising poultry for profit should endeavor to take advantage of every source of profit. The value of poultry feathers is an important reason for dry-picking the birds. Dry-picked body feathers bring from 17 to 20 cents a pound, while scalded feathers are worth less than a cent a pound. The demand for feathers adds to the poultryman's profits.

The prices of beef, pork and mutton are getting higher and higher every day, and ought to stimulate the poultryman to raise all the chickens he can possibly care for this season. For what he doesn't need for his own consumption, he is sure to get a good price. Dressed chickens, with head and feet off, are now selling at retail for 24 cents a pound, but even at that price they are cheaper than tough beefsteak at the prevailing prices.

A correspondent writes that although he has advertised in several papers that he has had no results or inquiries this year, although he breeds a very popular variety, the Barred Rocks. He says a lady living near him breeding White Leghorns has had the same experience, although last year they both had a good trade. He says, "I just wonder if this is an off year in selling eggs for hatching purposes, or has the season been too backward with most of them and the

season is likely to be better during next month, or is it the fault of my ad. There surely ought to be a good cockerel trade next fall, if conditions are as I think they are." From a great number of reports, we are inclined to be of the opinion that this is an off year in the eggs for hatching business. Complaint of poor business is almost universal. The writer and his neighbors have not had such poor business in years. Why it should be so, we couldn't say, for we had the greatest trade in cockerels and other stock this spring for years. Couldn't begin to supply the demand. We don't believe the blame can be placed on the advertising mediums or on the way the ads are written. We will have to place it where we place all the other ills this year, on the war.

In a bulletin just issued by the Ohio Experiment Station are some very valuable facts in regard to poultry culture. The average yearly egg production per hen in Ohio farm flocks was estimated at from 60 to 70 eggs. The most important causes for this low egg yield are poor stock, improper housing conditions, indifferent care and inadequate rations. By keeping carefully selected fowls in properly ventilated houses, feeding better rations and caring for the flock at regular intervals each day, this average yield can be greatly increased; with one lot, which the bulletin reports, it was almost trebled. That is, where fowls only lay 60 or 70 eggs a year, these fowls laid over 200 eggs each per year. The fowls used in this experiment were pure-bred and of good quality, but no better than could be placed on every farm in the state for a very small expenditure on the part of each farmer for a few settings of eggs from pure-bred stock. The fowls received only such care as was necessary to feed and water them regularly. They were not pampered in any way. There is still plenty of time this season to raise chicks from stock that lay 200 eggs and over.

Growing chicks should be allowed to keep on the soft ground as much as possible. Many times where the chicks are growing rapidly and are kept on hard floors, they will develop leg weakness. Many chicks thus affected never recover from the ill effects. If leg weakness develops and becomes pronounced, the chick that is half grown will never be very strong on its feet. Soft, well-spaded ground, free from stones of any size, is an ideal ground on which to keep growing chicks. Bluegrass sod is also fine for the chicks to run on.

Fowls that are intended for killing should not have any food for fourteen or sixteen hours before killing. If this is not done, and they are full of food when killed, the carcass soon decomposes, turns the flesh green and renders it comparatively worthless. Even if the food has passed out of the crop into the bowels, the fowls will not keep very long, as the half-digested food in the interior causes them to spoil and give an exceedingly unpleasant odor. Buyers of poultry these days will dock the weight of the crops if the fowls are full of grain.

Watch Out for Vermin

After the chicks begin to feather out, there is not so much danger of their not thriving; but they must still be looked after to see that enemies are not getting away with them. There is always danger from the depredations of rats, skunks, hawks, cats and dogs, and they should be guarded from these enemies as much as possible.

It is a good plan to count the chicks at night to see that the usual number are on hand. If some are missing, the cause should be sought and remedied. It is very disheartening after raising a brood of chicks to have them dwindle away, one by one, till they are all gone. If they are counted occasionally you will know whether any enemy is getting away with them or not.

Save Your Chicks—Free

Send the names of five poultry raisers to The Wight Co., Box 18, Lamoni, Iowa, and they will send you enough Chictone (a positive preventive for White Diarrhoea) to save from 50 to 75 chicks. They will also tell you how you can get a 50-cent box, absolutely free.—(Adv.)

T. M. EWING'S HERD HEADER A Valuable Holstein Bull

Sir Korndyke Queen 55993, sire of 25 A. R. O. daughters.
Pietje Juliette Korn Queen, 4½ years.....26.79
May Korndyke Queen, 3 years.....24.08
Jessie Korndyke Queen, 3 years.....23.85
Princess Jacoba Korndyke, 3½ years.....23.26
Minnie Favorite Korn. Queen, 3 years.....23.24
Bessie Korn. Queen, 3 years.....23.11
Six others above 20.8 pounds.
Two proven sons.

WAUSEONA KING KORNDYKE
NO. 139946, at head of the Cedar Lane Holstein Herd of T. M. Ewing, Independence, Kansas.

Beauty Serene Nudine 134432, at 7 yrs., 9 mos., 22 days:
Milk.....580.60
Butter.....27.79
Milk, 30 days.....2,615.80
Butter.....113.58
Milk, 365 days.....16,174.10
Butter.....765.21
Dam of one A. R. O. daughter, Wauseona Serene Korndyke Queen, 2 years.. 17.37

Pontiac Korndyke 25982, sire of 126 A. R. O. daughters.
Pontiac Lady Korndyke, 5½ yrs..38.03
Pontiac Pet, 7 years.....37.68
Pontiac Clothilde De Kol 2d, 6½ years.....37.21
Sadie Vale Korndyke, 5½ years..36.20
Sadie Korndyke Maid, 5½ years..33.76
21 between 25.01 and 32.17 pounds.
32 others above 20 pounds.
57 proven sons.

Pontiac Queen Korndyke 69713 at 5 years, 11 months, 20 days:
Milk.....537.80
Butter.....31.01
Milk, 30 days.....2,264.60
Butter.....121.01
Dam of one A. R. O. daughter, Fairview Queen Korndyke, 5½ years.....26.05
Two proven sons.

Count America Nudine 35848, sire of thirteen A. R. O. daughters.
Beauty Serene Nudine, 7½ years..27.79
Spring Hill Nudine Queen, 4 years.....21.99
Spring Hill Neth. Martha, 4 years.....21.46
Spring Hill Neth. Delphina, 3 years.....30.63
Spring Hill Delphina Aag., 6½ years.....18.27
Eight others above 13.52 pounds.
Three proven sons.

Serene Beauty 45999, dam of one A. R. O. daughter.
Beauty Serene Nudine, 7½ yrs...27.79

The fourth and fifth generations are by noted sires and dams with equally as high testing records. I have a few bull calves for sale. Send for full printed pedigree.

T. M. EWING, Independence, Ks.

You Will Find Many Uses for the Speedy Stitcher Awl

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

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



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

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

HOW TO GET THE AWL FREE

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

KANSAS FARMER, Topeka, Kansas

JERSEY CATTLE.**SEVENTY HEAD REGISTERED JERSEYS.**

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

N. L. DUCHESNE, GREAT BEND, KANSAS

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

Brookside Farm Jerseys

Registered Jersey bulls for sale. Flying Fox and Eminent breeding, good enough to head any herd. Also a few females.

THOS. D. MARSHALL, SYLVIA, KANSAS

LINSCOTT JERSEYS

Kansas' First Register of Merit, Estab. 1878. Bargain in month-old bull calf from one of the heaviest milkers in our herd. Flying Fox blood. Fully guaranteed. A beauty. \$25.00.

R. J. LINSCOTT, HOLTON, KANSAS

SUNFLOWER HERD JERSEYS

For Sale—Two yearling bulls and a few cows and heifers. All sired by Coster's Splendid. Imported and a grandson of Golden Jolly.

H. F. ERDLEY - HOLTON, KANSAS

Sunset Jersey Cattle Herd

Will offer at private sale fifty head cows, heifers, bulls, calves. The famous Blue Belle-Golden Rosebays. Send for special circular before buying elsewhere. Bargains.

Ennis Stock and Dairy Farm, Holme, Mo.

(Just south of St. Louis)

WIRE US TO SHIP HIM

Noble Sparkler, sired by a grandson of \$15,000 Noble of Oakland's great grandson, \$11,500 Stockwell. His dam, a 4-gallon St. Lambert, is sired by great grandson of \$10,000 Eminent. Solid color. Vigor enough for a regiment. \$25 f. o. b. Lawrence.

BISONTE FARM - LAWRENCE, KAN.

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

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

SMITH'S JERSEYS

For Sale—White Hall's Baron 138966, solid color, 26 months, fine individual. Sire Blue Boy Baron 99918; dam White Hall Duchess 299731, used on a few of our best cows. Females all ages and three bull calves, \$25 up.

S. S. SMITH, CLAY CENTER, KAN.

REDHURST JERSEYS

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

REDMAN & SON - TIPTON, MISSOURI

FOR SALE—Nine registered Jersey cows and heifers. Excellent unrelated bull, Oakland's Sultan 2d.

PERCY LILL - MT. HOPE, KANSAS

FOR SALE—Three registered Jersey bulls, richly bred.

L. E. Pendleton - Dodge City, Kansas

TAMWORTH SWINE.**TAMWORTH HOGS**

My specialty is pigs at weaning time.

Male pigs \$9 each

Sow pigs 10 each

You can take one or more as you like at the price.

F.M. Hartzell, Carthage, Ill.

Breeders' Directory**PERCHERON HORSES.**

M. E. Gideon, Emmett, Kan.

ANGUS CATTLE.

Geo. A. Dietrich, Carbondale, Kan.

Geo. McAdam, Holton, Kan.

SHORTHORNS.

C. H. White, Burlington, Kan.

HOLSTEINS.

C. E. Bean, Garnett, Kansas.

DORSET-HORN SHEEP.

H. C. LaTourette, Route 2, Oberlin, Kan.

JERSEY CATTLE.

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

MULEFOOT HOGS.

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

FULL MARKET FOR WOOL AND PELTS

We are the only strictly commission house in Kansas City, so in order to get full market prices for WOOL, HIDES and PELTS, consign your shipments to us. Shipments sold on the Open Market on their Own Merits. Quotations gladly furnished. Correspondence solicited.

C. J. MUSTION WOOL COM. CO.

1741-1743 Genesee St. Kansas City, Mo.

Opposite Stock Yards.

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W. J. Cody, Manager, Stock Advertising.
O. W. Devine, Representative

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CLAIM SALE DATES.

Hereforas.
Oct. 7—J. O. Southard, Comiskey, Kan.

Jersey Cattle.

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

Poland Chinas.

Oct. 19—H. B. Walter, Effingham, Kan.

Oct. 24—Leonard & Russell, St. Joseph, Mo.

Oct. 25—U. S. Byrne, Saxton, Mo.

Oct. 26—Walter W. Head, St. Joseph, Mo.

Nov. 1—Fred B. Caldwell, Howard, Kan.

Nov. 4—L. R. Wiley, Sr., Elmdale, Kan.

Durocs.

Nov. 2—Lant Bros., Dennis, Kan.

George A. Dietrich of Carbondale, Kan., owner of a choice herd of registered Angus cattle, reports them doing fine. This year he has the best lot of spring calves that he has ever had since the herd was established.

George McAdam of Holton, Kan., owner of one of the good herds of registered Angus cattle in this state, reports his herd doing well. This herd is made up of representatives of the popular families of the breed and a feature at this time is the good lot of youngsters in the herd.

A. S. Alexander of Burlington, Kan., who is making a success as a breeder of registered Spotted Poland China hogs, reports his herd doing well. This year he has a large number of early spring pigs. He breeds the old original big-boned spotted kind that have size and quality and has found them very profitable.

D. J. White of Clements, Kan., one of the progressive breeders of registered Angus cattle and owner of one of the best herds of that breed of beef cattle in this state, writes that his herd is doing well. Mr. White breeds the beefy type that are profitable and a feature of his herd at this time is the excellent lot of young stock, including a number of top yearling bulls.

J. B. Porter & Son of Mayetta, Kan., report their Jersey herd doing well. This firm owns one of the richly-bred and profit-producing herds in this state and their herd is drawn upon heavily for breeding stock.

John D. Henry of Leocompton, Kan., owner of one of the great herds of big-type Friesians in this state, reports his herds doing fine. Mr. Henry has the profitable type and at this time he has a very choice lot of young stock, including some boars and gilts by Mammoth Orange. He has a choice lot of early pigs. A number of his early litters have been weaned.

Mr. Ralph Tratt of Whitewater, Wis., owner of the Maple Guernsey herd, one of the state reports his herd in fine condition. This herd is noted for the number of A. R. O. cows and is one of the great producing herds of that breed now assembled. A feature at this time is the choice lot of young stock sired by a May Rose bull, whose six nearest dams averaged 720 pounds fat A. R.

John Dunlap of Williamsport, Ohio, noted breeder of big-type Mulefoot hogs, reports his herd doing fine. Mr. Dunlap owns the largest herd of this breed of hogs in the United States and his herd is drawn upon heavily for breeding stock. He recently received an order from South America for sixty head of bred sows. He has just issued a neat catalog that will be of interest to all swine breeders.

W. H. Vall of Hume, Mo., is making a great success with his Shorthorn herd. At the head of this herd is the great Scotch bull, Clansman by Viceroy by Lavender Viscount, and his dam was by Baron Goldsmith 2d. This bull is a splendid individual of the right sort of low-down Scotch type of Shorthorn cattle. The great value of this bull is proven by the splendid crop of calves he is siring and a feature of the Vall herd is a splendid lot of young bulls now on hand.

J. C. Hopper of Ness City, Kan., is one of the successful breeders of registered Hereford cattle in this state. His herd consists of both polled and horned Herefords and is made up of representatives of the popular Hereford families. A feature of his herd at this time is the large number of high-class bulls of serviceable age.

E. M. Hall of Carthage, Mo., died Saturday, April 29, as the result of injuries received in the fire that destroyed Hallwood home earlier in the day. Mr. Hall's mother and Miss Alma Shaw, a maid, also perished in the fire. Hallwood Farm, under the management of Ed Hall, came to be known as one of the leading sources of registered Shorthorns in the Southwest. About 125 head of registered cattle have been maintained here for the last ten years. Contributions to shows and sales have proven the worth of these cattle in comparison to those of other herds. For the past three years Ed Hall has been secretary of the Central Shorthorn Breeders' Association. He was re-elected at the last annual meeting in Kansas City, April 7.

HOLSTEIN CATTLE.

CLYDE GIROD, At the Farm.

HOLSTEIN FRESIAN FARM, TOWANDA, KANSAS

Pure-bred and high grade Holsteins, all ages. Largest pure-bred herd in the South-west, 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.

TORREY'S HOLSTEINS

High grade cows and heifers and registered bulls. The best breeding. Call and see them.

O. E. Torrey - Towanda, Kansas



Purebred Registered
HOLSTEIN CATTLE

If you are not ready to buy purebred registered Holstein cows for foundation stock, why not grade up your common cows by using a purebred registered Holstein bull? The Dairy Department of the Illinois Agricultural College has figured that \$150 invested in a good purebred bull earns in six years nearly 1000 per cent profit in the increased production alone, not taking into account the increased value of the herd. Can you invest \$100 or \$200 so that it will pay you more profit? Investigate the big "Black-and-Whites."

Send for FREE Illustrated Descriptive Booklets.

The Holstein-Friesian Association of America
F. L. Houghton, Sec'y Box 114, Brattleboro, Vt.

Cederlane Holstein Herd

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.

Regier's Holsteins

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

G. REGIER & SONS, WHITEWATER, KAN.

IN MISSOURI

Eight bulls, 2 to 8 months, \$100 to \$175 each. Always have a few good cows and bred heifers for sale. Nothing but registered Holsteins.

S. W. COOKE & SON - MAYSVILLE, MO.

BUTTER BRED HOLSTEINS

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

J. P. MAST - SCRANTON, KANSAS

REGISTERED HOLSTEINS

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

M. E. MOORE & CO. - CAMERON, MO.

CORYDALE FARM HERD

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

L. F. CORY & SON, Belleville, Kansas.

HOLSTEIN COWS

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

J. C. ROBISON, TOWANDA, KANSAS

HOLSTEINS

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

Alb. M. Hanson, Prop.

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.

TREDICO FARM

Route 44 - KINGMAN, KANSAS

23—HOLSTEIN-FRIESIAN BULLS—23

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

Breeders for Thirty Years.

McKAY BROS., Waterloo, Iowa

Golden Belt Holstein Herd

Canary Butter Boy King No. 70508
in Service.

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

W. E. BENTLEY, MANHATTAN, KANSAS

HOLSTEIN BULLS, "REGISTERED"

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

BERKSHIRE HOGS.**BERKSHIRE BRED SOWS**

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

E. D. KING - BURLINGTON, KANSAS

HOLSTEIN CATTLE.

F. W. ROBISON, Cashier Towanda State Bank

HOLSTEIN FRESIAN FARM, TOWANDA, KANSAS

Pure-bred and high grade Holsteins, all ages. Largest pure-bred herd in the South-west, 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.

TORREY'S HOLSTEINS

High grade cows and heifers and registered bulls. The best breeding. Call and see them.

O. E. Torrey - Towanda, Kansas

Albechar Holstein Farm

Offers young bulls, bred cows and heifers for sale. Write for breeding, description and prices. Our herd absolutely free from tuberculosis. Satisfaction guaranteed.

ROBINSON & SHULTZ, Independence, Kan.

CHOICE HOLSTEIN BULLS

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

BEN SCHNEIDER, NORTONVILLE, KAN.

BONNIE BRAE HOLSTEINS

Twenty head extra fine, big, heavy producing young cows. Fresh and heavy springers. Also springing heifers. Three extra fine Guernsey cows and a few Guernsey heifers.

IRA ROMIG, Station B, TOPEKA, KANSAS

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

EDGEWOOD FARM, Whitewater, Wisconsin

BRAEBURN HOLSTEINS - A.R.O. Bull

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

REGISTERED HOLSTEIN BULL CALVES.

Fine individuals and breeding.

PLEASANT VIEW FARM, Altoona, Kansas

HEREFORD CATTLE.**Hereford Bulls**

We can furnish carload of coming three-year-old Hereford bulls. Have both polled and horned. Good ones cheap. Address

J. C. HOPPER, Ness City, Kansas

Herefords and Percherons

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

M. E. GIDEON - EMMETT, KANSAS

WILLIAMS & SONS HEREFORDS

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

PAUL E. WILLIAMS, MARION, KANSAS

SOUTHARD'S MONARCH HEREFORDS

For Sale—Choice cows and heifers bred to Monarch No. 449994 and Repeater 6800. A few extra good herd bull prospects. Annual sale October 7, 1916. Send for catalog.

J. O. SOUTHARD - COMISKEY, KAN.

RED POLLED CATTLE.**RED POLLED BULLS**

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

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

RED POLLED CATTLE

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

AULD BROTHERS, FRANKFORT, KAN.

RED POLLED CATTLE

A few choice young bulls for sale. Priced reasonably. T. A. Hawkins, Hill City, Kan.

DUROC JERSEYS.

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

G. M. SHEPHERD - LYONS, KANSAS

DUROC BOARS

For Sale—Five fall boars, sired by a son of Long Wonder and out of a B. & C's Col. dam. Price \$25. First check gets choice.

CHAS. STITH - EUREKA, KAN.

TWENTY-FIVE DUROC BOARS, \$15 TO \$25 100 to 180 pounds; four choice herd prospects, \$30 to \$35. Will ship these four on approval. Few tried sows, bred for summer farrow; fifty gilts for August and September. Write me.

J. E. WELLER - FAUCETT, MO.

"VERIBEST" DUROC JERSEYS

Choice fall boars from 150 pounds up to \$20. One yearling boar at \$30. Good bone length and quality.

A. S. GRABLE, JR. - DEARBORN, MO.

When Writing to Advertisers, Please Mention Kansas Farmer.

WANTED

Man to take charge of our herd of hogs. We have about one thousand brood sows and are raising hogs strictly for the market. Man must be thoroughly familiar with vaccination and capable of handling a large drive of hogs. Plenty of help furnished. Salary \$60 per month with house.
MILLER BROTHERS 101 RANCH
Bliss - Oklahoma

HORSES AND MULES.**FAIRVIEW STOCK FARM**

Home of World's Grand Champion Jack, Kansas Chief 8194

More registered jacks and jennets than any farm in the West. Jacks to 1,240 pounds. Prices and terms reasonable. Written guarantee with every jack. Car fare refunded if stock is not as represented. Young jennets bred to Kansas Chief. References, any bank in Dighton.
H. T. HINEMAN & SONS
Dighton - Kansas

Fifty-four extra heavy 3, 4 and 5 yr. old registered Percheron stallions ready for heavy stand; 38 growthy 2 yr. olds ready for some service and develop on. 19 Belgian stallions. Just above Kansas City.
FRED CHANDLER PERCHERON FARM
Route 7, Chariton, Iowa. 47 Trains Daily

ANGUS CATTLE**EDGEWOOD FARM****ABERDEEN-ANGUS CATTLE**

I have for sale several good yearling and two-year-old bulls, also a few good cows. If you are looking for the good kind, write me or come and see them. They are offered at reasonable prices.
D. J. WHITE, CLEMENTS, KANSAS
On Main Line of Santa Fe, 145 Miles West of Kansas City.

ABERDEEN ANGUS BULLS

I have several head of extra good Aberdeen Angus bulls for sale. These bulls are of serviceable age, good families, good individuals, raised under farm conditions and are priced to sell. Anyone in need of a good bull of the above description will do well to write for description and prices. Come and see them.
E. B. LAFIN, CRAB ORCHARD, NEB.

SHORTHORN CATTLE.**Tenneholm Shorthorns**

For Sale—A number of good bulls 8 to 18 months old. Some Scotch, others Scotch-topped. Some herd headers among them. Two outstanding ones. Can spare a few females. Farm one mile from town.
E. S. MYERS - CHANUTE, KANSAS

VALE HERD SHORTHORNS

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

SHORTHORN BULLS.

Twelve head bulls, breeding age, all sired by a pure Scotch bull. Reds, whites and roans. Herd headed by Scottish Monarch by New Goods by Choice Goods, out of Morning Glory, a granddaughter of imported Lady Star. Will sell a few females.
KILLY BROS. - GARDNER, KANSAS

HILL'S SHORTHORNS

One red Shorthorn bull 11 months old, sired by Bettie's Albion 399451, pure Scotch. Weight between 600 and 700 pounds. Ready for service. Priced to sell.
C. E. HILL - TORONTO, KANSAS

Sycamore Springs Shorthorns

Master of Dale by the great Avondale blooded. A few young Scotch bulls and bred heifers for sale.
H. M. HILL - LAFONTAINE, KANSAS

RIVERSIDE SHORTHORNS

For Sale—Five pure Scotch and Scotch-topped young bulls. Prices reasonable. Come and see them. They are extra good and will make herd headers.
H. H. HOLMES, GREAT BEND, KANSAS

LOWEMONT SHORTHORNS.

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

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That is Our Business. Let us make your cuts for sale catalogs, sale bills, letter heads, and cards. Send your order Write for information.

TOPEKA Engraving Company

ARTISTS AND ENGRAVERS

SIX TWENTY FIVE JACKSON STREET Topeka, Kans.

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

We have just received Volume 87 of the American Shorthorn Book containing pedigrees of animals calved before May 5, 1915. The volume contains pedigrees of bulls from No. 42001 to 429000; pedigrees of cows from No. 193001 to 205000.

C. E. Bean of Garnett, Kan., owner of one of the heavy producing herds of Holsteins, reports the herd doing well. This is one of the richly-bred herds in the state. They are the kind that insure regular milk checks.

Albert S. Ennis of Ennis Stock Farm, Horine Station, Mo., owner of the famous Sunset herd of Jersey cattle, writes that his herd is doing fine and that it will make some new records this year. This is one of the big Jersey herds now in existence and is also one of the big herds. A feature at this time is the large number of heavy-producing Jerseys that were bred on the Ennis farm. The herd is made up entirely of representatives of the heavy-producing families of the breed. There has never been any tuberculosis in the herd. In the first test ten years ago it tested free, just as it has in every test since that time. Mr. Ennis writes that he has decided to reduce his herd down to 100 head.

KANSAS FAIRS IN 1916

Following is a list of fairs to be held in Kansas in 1916, their dates—where they have been decided on—locations and secretaries, as reported to the State Board of Agriculture and compiled by Secretary J. C. Mohler:

Kansas State Fair Association, Phil Eastman, Secretary, Topeka; September 11-16.
Kansas State Fair, A. L. Sponsley, Secretary, Hutchinson; September 16-23.
Allen County Agricultural Society, Dr. F. S. Beattie, Secretary, Iola; September 5-8.
Allen County—Moran Agricultural Fair Association, E. N. McCormack, Secretary, Moran; September 11-14.

Barton County Fair Association, Porter Young, Secretary, Great Bend; October 3-6.
Brown County—The Hiawatha Fair Association, J. D. Weltmer, Secretary, Hiawatha; September 5-8.
Butler County—Douglas Agricultural Society, J. A. Clay, Secretary, Douglass; September 27-30.

Clay County Fair Association, W. F. Miller, Secretary, Clay Center; dates not set.
Clay County—Wakefield Agricultural Association, Eugene Elkins, Secretary, Wakefield; October 6-7.

Cloud County Fair Association, W. L. McCarty, Secretary, Concordia; August 29-September 1.
Coffey County Agricultural Fair Association, S. D. Weaver, Secretary, Burlington; September 11-14.

Cowley County—Eastern Cowley County Fair Association, W. A. Bowden, Secretary, Burden; dates not set.

Cowley County Agricultural & Live Stock Association, Frank W. Sidle, Secretary, Winfield; July 11-14.

Decatur County Fair Association, J. R. Correll, Secretary, Oberlin; dates not set.
Dickinson County Fair Association, C. R. Baer, Secretary, Abilene; September 19-22.

Douglas County Fair & Agricultural Society, C. W. Murphy, Secretary, Lawrence; September 19-22.

Elk County Agricultural Fair Association, Fred R. Lanter, Secretary, Grenola; August 29-31.

Ellsworth County Agricultural & Fair Association, G. C. Gebhardt, Secretary, Ellsworth; September 19-22.

Franklin County Agricultural Society, J. R. Finley, Secretary, Ottawa; September 6-8.
Franklin County—Lane Agricultural Fair Association, Floyd B. Martin, Secretary, Lane; September 1 and 2.

Gray County Agricultural Association, E. T. Peterson, Secretary, Cimarron; September 11-14.

Greenwood County Fair Association, William Bays, Secretary, Eureka; August 29-September 1.

Harper County—The Anthony Fair Association, L. G. Jennings, Secretary, Anthony; August 8-11.

Johnson County—Spring Hill Grange Fair Association, W. F. Wilkerson, Secretary, Spring Hill; September 5-8.

Lafayette County Fair Association, Clarence Montgomery, Secretary, Oswego; September 20-23.

Lincoln County—Sylvan Grove Fair & Agricultural Association, R. W. Wohler, Secretary, Sylvan Grove; September 20-22.

Linn County Fair Association, John C. Madden, Secretary, Mound City; September 5-8.

Logan County—Inter-County Fair Association, L. L. Moore, Secretary, Oakley; September 20-23.

Marshall County Stock Show & Fair Association, Blue Rapids; dates not set.

McPherson County Agricultural Fair Association, James T. Griffing, Secretary, McPherson; August 22-25.

Meade County Fair Association, Frank Fuhr, Secretary, Meade; September 5-8.

Mitchell County Fair Association, I. N. Tice, Secretary, Beloit; October 3-7.

Montgomery County Fair Association, Elliott Irvin, Secretary, Coffeyville; September 26-29.

Morris County Fair Association, H. A. Clyborne, Secretary, Council Grove; July 25-27. (Race meet only.)

Nemaha Fair Association, M. B. Williams, Secretary, Seneca; dates not set.

Neosho County Agricultural Society, Geo. K. Bideau, Secretary, Chanute; October 3-6.

Ness County Agricultural Association, James A. Cason, Secretary, Ness City; about September 1.

Norton County Agricultural Association, Fred L. Strohwig, Secretary, Norton; August 29-September 1.

Ottawa County Fair Association, J. E. Johnston, Secretary, Minneapolis; September 5-8.

Pawnee County Agricultural Association, Harry H. Wolcott, Secretary, Larned; September 26-29.

Phillips County—Four-County Fair Association, Abram Troup, Secretary, Logan; September 12-15.

Republic County Agricultural Association, Dr. W. R. Barnard, Secretary, Belleville; August 22-25.

Riley County Agricultural Society, Edd Beard, Secretary, Riley; dates not set.

Rooks County Fair Association, F. M. Smith, Secretary, Stockton; September 5-8.

Rush County Agricultural & Fair Association, C. H. Lyman, Secretary, Rush Center; September 5-7.

Russell County Fair Association, J. B. Funk, Secretary, Russell; October 3-6.

Saline County Agricultural, Horticultural & Mechanical Association, F. D. Blundon, Secretary, Salina; September 25-30.

Sherman County Agricultural & Racing Association, Wade Warner, Secretary, Goodland; August 23-26.

Smith County Fair Association, T. C. Badger, Secretary, Smith Center; September 5-8.

Stafford County Fair Association, R. B. McKay, Secretary, St. John; dates not set.

Trego County Fair Association, S. J. Straw, Secretary, Wakeeney; September 13-15.

YOUNG'S REDUCTION JERSEY CATTLE SALE

St Joe, Missouri, Saturday, May 20

SIXTY HEAD OF REGISTERED COWS AND HEIFERS, FORTY OF THEM IN MILK SALE DAY.

They are the working kind that I have always sold at my sales. I have raised all of them from the heifers kept when I made my 1909 sale, when I sold Pogis Irene 2d, the dam of the world's champion dairy cow, Jacoba Irene. The old cow last year, although nineteen years old, made over 600 pounds of butter by official record. Much of this splendid breeding is included in this sale, and I know the Jersey lovers of the West will appreciate it. Forty head of this offering were sired by the splendid breeding bull, Lord Larchmont, a son of the great Fountains Emment, and his dam was a daughter of Imp. Guenons Lad. The dams of the offering were mostly sired by Young's Golden Lad, a son of old Golden Lad, making this herd as strong in Golden Lad breeding as any herd in America. The herd bulls, Lord Larchmont and Emment Larchmont, both go in the sale along with some choice young bull calves. Most of the cows are bred to Emment Larchmont. Sale will be held at farm five miles south of St. Joseph, on Kansas City & St. Joseph Interurban Railroad. Write early for catalog and mention this paper.

ROBERT I. YOUNG,

St. Joseph, Missouri

COL. H. S. DUNCAN, AUCTIONEER.

HORSES AND MULES.**HORSES AND MULES.****The Champion Breeder---Missouri Chief 8365**

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

Write Us for List of Winnings of His Get.

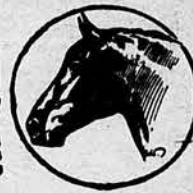
Most liberal terms and other information about this sire possessing excellent size, quality, bone, finish, and unexcelled style and action. Winner first as sire at Kansas State Fair, Hutchinson, 1915.

M. E. RICHARDSON

STERLING, KANSAS

**HORSES AND JACKS**

FOR SALE—Six coming two-year-old fillies, big growthy fillies, dark steel grays; one black mare, three years old in April; stud colt, two years old; all extra good; all out of imported sire and dams; Percheron Society of America. Twenty-two head two-year-old jacks; all raised on the farm; all priced to sell, cash or time. You can see the sire and dams of all this stuff. These are the blacks with mealy noses, the color that all breeders raise. I am now breeding white-faced jacks that will produce white-faced mules, and in a few years the breeding of white-faced jacks, alone, will be continued on this farm. Since running my advertisement every man who came to the farm found what he wanted and bought.
OAKLAND STOCK FARM, Box 207, CHILLICOTHE, MO.

**DEIERLING STOCK FARMS**

Have fifteen large, heavy boned, black, registered jacks, 15 to 16 hands high, good heads and ears, good style, good breeders. I have a number of jacks sired by the champion, Pride of Missouri, also several other good herd prospects. In my 1914 sale I sold the champion of Kansas State Fair, 1915, Eastern Lightning, also Demonstrator, first prize aged jack Missouri State Fair. Reference, Peoples Bank. Written guarantee with each animal. Have a number of Percheron stallions for sale, also saddle stallions. Barn in town. Wabash Railroad. WM. DEIERLING, QUEEN CITY, MISSOURI.

THE SAUNDERS JACK COMPANY

U. G. Saunders, of Lexington, Ky., and Bruce Saunders, of Holton, Kan., have shipped a carload of registered Mammoth Jacks from Lexington, Ky., to Holton, Kan. Two to six years old, 15 to 16 hands high. Come to Holton and see as good a load of jacks as ever left Kentucky. Write your wants to BRUCE SAUNDERS, HOLTON, KANSAS. PHONE 589

PERCHERON STALLIONS FOR SALE

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

A. M. DULL & SONS

WASHINGTON, 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

AUCTIONEERS.**Live Stock and Real Estate Auctioneer**

Authorized state agent of Kansas Rural Credit Association. Write me your wants.
H. M. JUSTICE - PAOLA, KANSAS

J. P. OLIVER Live Stock and Real Estate Auctioneer.
Twenty years' experience. Newton, Kansas.

Live Stock and Farm Auctioneer

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

GUERNSEY CATTLE

TEN GUERNSEY COWS AVERAGE 947 lbs. FAT large and Economical production is the key to larger profits. The Guernsey Cow is a sure way to increased profit.

Shall we send literature?
Guernsey Cattle Club.
Box K, Peterboro, N.H.

Guernsey Bulls For Sale

A few promising bulls from 2 to 14 months old from A. R. O. cows and sired by the May Rose bull, Langwater Hambro 21011, whose six nearest dams average 720 pounds fat A. R. At reasonable prices.
RALPH TRATT - WHITEWATER, WIS.

Advertisers in Kansas Farmer are reliable and sell dependable merchandise. Tell them where you saw their ad.

POLAND CHINAS**Poland China Boars**

Ten fall boars ready for service, sired by Big Logan Ex. and A King. Price, \$20 and \$25. First check gets choice.

L. V. O'KEEFE

BUCYRUS - KANSAS

POLAND CHINAS

500 Head Registered Poland Chinas. Bred sows and bred gilts. 200 spring pigs. A few fall boars. Farmers' prices.

DEMING RANCH - OSWEGO, KANSAS

TWO YEARLING POLAND CHINA BOARS

For quick sale, two yearling boars, ready for service, sired by Long Scamp by Long King's Equal 2d, out of litter of nine, all raised. Priced, \$30. First order gets choice.
SULLIVAN BROS. - MORAN, KANSAS

HENRY'S BIG-TYPE POLANDS

Choice boars and gilts by Mammoth Orange; also weaned pigs. We have the size and quality. Write for prices and description.
JOHN D. HENRY, LECOMPTON, KANSAS

OLD ORIGINAL SPOTTED POLANDS.

Booking orders for spring pigs.

A. S. ALEXANDER, R. 2, Burlington, Kansas

LANGFORD'S SPOTTED POLANDS.

Late fall boars. Yours for good hogs. Spotted Poland. T. T. Langford & Sons, Jamesport, Mo.

OHIO IMPROVED CHESTERS**IMMUNE O. I. C. PIGS**

ALVEY BROS. - MERIDEN, KANSAS

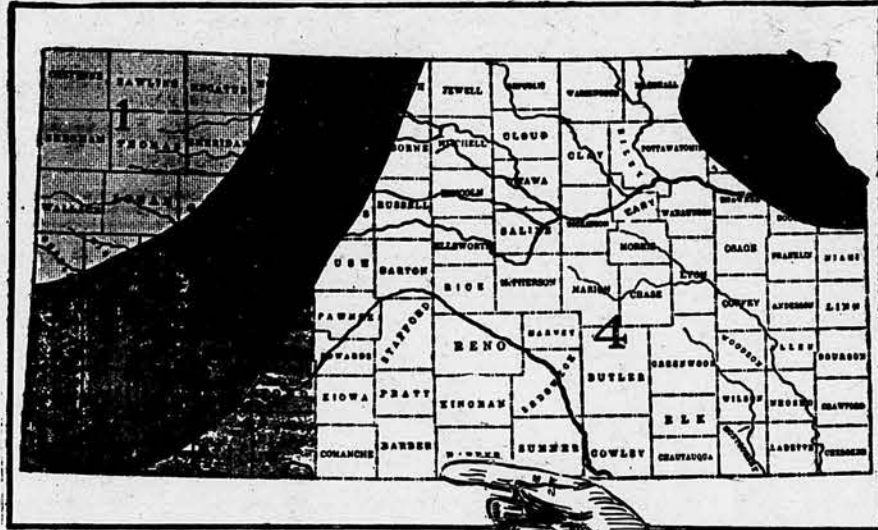
Choice August and September Pigs

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

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

A CROP THAT IS SURE!

THERE IS ONE FOR THE GREAT SOUTHWEST---IT IS THE CROP OF GRAIN SORGHUMS



MR. BORMAN POINTS OUT—

- AREA 1—For grain, plant dwarf milo, feterita, Freed Sorgo.
- AREA 2—Dwarf black-hulled kafir, white-hulled kafir, feterita.
- AREA 3—Standard black-hulled kafir and other grain sorghums.
- AREA 4—Standard black-hulled kafir is the best variety.
- AREA 5—Here corn outyields kafir. Use sorghums for forage only.



For many years, planted in patches, without the care of corn and wheat, the Sorghums have produced grain and forage year after year in *every Sorghum Belt locality*. This then is a *sure crop*, and sure crops means regular, dependable returns for labor, time and investment. It means a permanent prosperity for whoever rightly farms Sorghums in the Sorghum Belt.

WHY NOT LEARN ALL ABOUT SORGHUM AND KAFIR GROWING AND GROW IT IN A WAY THAT WILL ASSURE YOU ALL THE FEED YOU NEED

After several years' study and investigation of Sorghum, Kafir, Feterita, Milo and all similar grains, known as the Sorghums, Mr. T. A. Borman, Editor of KANSAS FARMER, wrote a most interesting and valuable book on SORGHUMS, SURE FEED CROPS. This book shows how Kafir, Milo and Cane fed to live stock of all kinds WILL INCREASE YOUR FARM CASH AND FEED INCOME.

It is a book not only of value to Sorghum Growers, but is almost equally valuable to every farmer in the Southwest whether he grows Sorghums or other crops. It contains precipitation maps, corn area map, frost date map, map showing number of days in growing season in different sections of Kansas, altitude map, precipitation map, and length of growing season for the entire Southwest.

It discusses every phase of Sorghum farming, selecting seed, planting, cultivation, types, SECTIONAL GROWING SEASON, effect on land, best methods of planting, feeding, handling and hundreds of other important things that have never heretofore been put into book form.

For 12 years in Kansas, Kafir has been 23 per cent more valuable than corn. The average acre value of Kafir in Kansas for a period of 13 years, is \$11.41. For 12 years the Kafir average acre value was \$2.12 greater than that of corn.

The book is not one of statistics; of course, it contains some figures, but they are woven into an interesting readable and instructive story. The experience of hundreds of sorghum growing farmers are condensed therein.

KANSAS FARMER COMPANY, 625 Jackson Street, Topeka, Kansas
Gentlemen:—I enclose herewith \$1.50, for which please send KANSAS FARMER one year and a copy of Mr. Borman's Book on Sorghums, postpaid.

Name..... F. F. D.....
Post Office..... State

It is printed on a fine quality of book paper; printed in large, clear type, and is full of pictures. It is neatly and substantially bound in cloth, contains 310 pages, and will be a valuable addition to any library.

The price of Mr. Borman's sorghum book is \$1.25, postpaid. The book and a year's subscription to KANSAS FARMER, \$1.50, new or renewal. To order, just write your name and address on the coupon and attach your personal check, draft or money order. Send all orders to Kansas Farmer, Topeka, Kan.

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"It is a practical work, for practical farmers, by a practical man."
—J. C. MOHLER, Secretary Kansas State Board of Agriculture.

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KANSAS FARMER
Topeka, Kansas