

KANSAS FARMER

For the improvement  of the Farm and Home

Volume 54, Number 28.

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FARM POWER

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

I HAVE had several years' experience in operating a tractor on my farm, and I believe I can give a few suggestions that will be helpful to the owner, operator, or prospective buyer of a tractor.

I have used my tractor four years, it being the first one brought into this county. Nearly everyone predicted that I would fail with this engine. We had a fine small grain crop that fall and the first use I made of the tractor was to operate a 30x46 separator for forty-six days. I came in from this work with \$2,400 and felt that the tractor had been anything but a failure. I was then told that the engine would be worn out in two years. I find, however, that the repairs I have had to make have been so small as to be almost negligible. This tractor has been used at all kinds of hard work, such as pulling hedge, moving houses, grading roads, plowing sod, running a sawmill.

I do not believe I have made an exceptional record. In my judgment, any of the present standard tractors will give as good results if given proper care. It is far better to buy an engine with some extra power than to buy one that is too small. You are sure to need a little more power at times, and the engine that is working with an overload cannot stand up like the one that has power to handle its load easily.

From my experience, I favor a tractor that will burn low-grade fuel, especially at the present time when gasoline is so high in price. I feel sure that those who fall in using kerosene do so because the engine they have is not a kerosene-burning engine. I think an engine designed and timed for gasoline cannot burn kerosene successfully. It is well to consider these things before buying. I am now paying eight cents a gallon for kerosene and use about thirty gallons for ten hours' work on a road grader. I probably use about sixty cents' worth of cylinder oil and grease, so my fuel and lubricants cost me \$3 for a ten-hour day.

This part of Missouri is rather hilly, and I do not do much plowing. I should think Kansas farmers could make the tractor even more valuable than we can here because their land is level and they have larger fields.

I am strongly in favor of the tractor as a source of farm power, and feel sure it will help in making farming easier and more profitable. I have been especially fortunate in having a good engineer to put in charge of the engine when I could not attend to it myself. It is very important to have the engine handled by a man who thoroughly understands his business.—J. R. SHIPPS, Nodaway County, Missouri.

Bearings Important Parts

Wheat harvesting season is always thought of in connection with that one word, "rush." You rush from the first morning you wade into the wheat throwing bundles over into the fence row until the last toot of the engineer's whistle as he pulls out of the neighborhood. At this particular time of the year old Sol beams down upon you with all his splendor and power. Since you get warm under the collar and the horses get warm under their collars, then why shouldn't you expect the bearings of the machinery to get hot? True it is, every one is in a mad rush to get through, and it is aggravating to have to stop on account of a hot box.

It is better to keep your bearings from getting hot than to stop and cool down after they have become hot. The remedies for keeping bearings from heating are simple. The heating of a bearing is due to—

1. Insufficient lubrication, due to insufficient amount of oil, wrong kind of oil, or lack of proper means of distribute the oil about the bearings.
2. The presence of dirt in the bearings.
3. Bearings out of alignment.
4. Bearings improperly adjusted; they may be either too tight or too loose.
5. Operation in a place where the temperature is excessive.

All bearings in places where the load is heavy and where the speed is excessive should be adjustable for wear by means of wedges and set screws fastened by lock-nuts. Such bearings as the main bearings on the binder and tractor. When the main bearings on the trac-

tor become so hot that it is necessary to shut down, it is better to shut off the load and allow the engine to run slowly until the bearings become cool. This is especially true in the case of babitted bearings. If the engine is shut off entirely and if the bearing is allowed to stand without attention the soft metal of the boxes will tend to braze with the harder metal of the shaft.

Every bearing is made with the intention of keeping friction at its minimum. Roller bearings, ball bearings and other kinds have been perfected to keep down friction, and are successful. All bearings where the load is heavy should be of this character.

Handling the Tractor

There are so many different makes of tractors on the market that the buyer is sometimes considerably puzzled as to which one will suit his requirements. I have run several different kinds, and find they all have a few drawbacks. It is necessary that the engine be handled carefully. The operator should never get excited, for if he does, he is quite apt to break something. I always keep a little graphite on the engine. It is a good plan to put some into the crank case at least once a week, and also into the transmission case and on the clutch, and if possible, a little into the air chamber of the carburetor. This will be taken into the cylinder and will smooth the walls. The gearing should be kept well greased. It is a good idea to put dirt guards over the master gears. This can be done without much trouble.

The magneto on the engine should be of a good, reliable make. The oiling system is also important, and the best oil that can be bought should be used. The engine must be equipped with a good cooling system. Oil for cooling is now being used. It requires more cooling space, but does away with the need for carrying water and drawing it off in the winter time. The tractor can be used in zero weather as well as in the summer when oil is used for cooling.

Many times a tractor is brought into a neighborhood and fails because of misuse. All the farmers about get down on the tractor even though it might have been a thoroughly good one. Such result is more the fault of the man than of the tractor. Some men cannot look at a tractor or other piece of machinery without knocking off the paint. Some who pose as tractioners think only of the big money they are getting and soon the engine is badly damaged.

I do not think it pays to buy a cheap engine and one that is yet an experiment should not be bought. It is always best to buy a standard make. Such engine, if given the right kind of treatment, will do all that is claimed for it.—R. C. T., Jewell County.

Automobiles and Roads

The enormous increase in motor car traffic is bound to affect favorably the condition of the public roads of the country as the number of cars and the revenues increase. In the good old patient days when the horst-drawn vehicle was the only means of transportation in the rural districts, and time was no object to the people, who took things as they were, it did not seem to matter very much how many holes and ruts and swampy places there were on the roads to market; but it is different now, and the motor cars are making smooth and substantial highways necessary to their favorable progress and to the success of business. It is worth noting that from the time of the old Cumberland highway, surveyed by Washington, and built by the national government, it was not until the automobile had come and proved its practical value as the greatest burden bearer of the centuries that there was any serious thought of inter-state and transcontinental highways that would hold the country together in the closest neighborhood. It was not until wise men at the capitol discovered the rural free delivery postal routes, that a constitutional way was found to make the government at Washington an active partner in the enterprise of building good roads for the health of the nation.

The Motor Car Bulletin prepared by the United States Office of Public Roads and Rural Engineering is a most suggestive and interesting contribution to the good roads literature on the subject.

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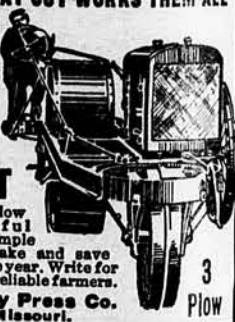
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PLANNING FARM WORK

Farming requires as much head work as any other business. Definite plans should be worked out a month in advance. This is especially true on a farm devoted to live stock production. Nothing so seriously handicaps the growing of live stock as a lack of feed, and without definite plans this may easily occur.

J. E. Payne, agricultural demonstrator for the Frisco Railroad in Eastern Oklahoma, tells of visiting a successful farmer and stock raiser who had for years kept about the same amount of stock on his place. When asked how he managed to keep his farm so uniformly stocked, he said that when he bought the place he made a careful estimate of the amount of each class of stock that could be carried in average years. He then gradually stocked up until he reached the limit set. From then on it was simply a matter of keeping at all times the amount of stock his judgment and experience showed this farm could safely carry. All his farming plans were made on the basis of a definite amount of stock and the success of his method demonstrated the wisdom of working out such well matured plans and then sticking to them through a period of years.

A merchant has to make definite plans as to the stock he needs to meet the requirements of his business, and there is no good reason why the farmer should not follow the same business methods.

NEW CORN BULLETIN

Another corn bulletin has just been issued by the Kansas Experiment Station. It has to do with a study of the ear characters of corn as related to yield. In selecting seed corn, farmers have been following the general rule of picking ears of standard size rather rough in type, with covered tips, well rounded butts, and deep uniform kernels properly proportioned as to size and shape.

In 1905 C. C. Cunningham, the author of this bulletin, began a series of ear-to-row tests to see just what was the relation between these commonly accepted desirable characters and yield. The yield is most important, and unless the characters selected are definitely related to yield they are of little value.

It appears from these studies reported in this bulletin that some of the ear characters have been given entirely too much consideration in selecting seed. It has been generally observed that the smoother types of corn produced better under adverse conditions than did the roughly indented types. When moisture is a limiting factor, deep kernel types do not yield as well as shallow-grained varieties. Some of the ear characters upon which we have been insisting are actually tending to reduce yields. It is evident that we need some decided revision of our system of selecting corn for seed. We have too long taken for granted data coming to us from entirely different conditions than prevail in Kansas. The information supplied in this bulletin is a distinct addition to our knowledge of what types of corn are best adapted to conditions prevailing in this state. Kansas corn growers should by all means make a careful study of the results of these ear-to-row tests.

FARM PAPER QUOTATIONS

The Daily Drivers' Telegram of Kansas City again takes up the matter of weekly market quotations in farm papers. The editor in this editorial says it is foolish to expect the man on the farm who gets his mail every morning by 9 or 10 o'clock to select the market report in the weekly paper in preference to that found in the daily.

"Occasionally there is a weekly farm paper that gives this question some thought, and thought cannot result otherwise than in the abolition of the practice. KANSAS FARMER is one paper that acknowledges that it has no business monkeying with price quotations—a thing it learned years ago."

The Telegram in this editorial completely exonerates KANSAS FARMER in

the charges it makes relative to quotations that misquote. KANSAS FARMER appreciates this direct reference to our practice in this matter.

STATE FAIR PREMIUM LIST

The Kansas State Fair Association is announcing the second big free fair to be held in Topeka, September 11-16. The free gate idea attracted a great deal of attention all over the country last year and all attendance records were broken. The management fully expects the fair this year to be larger and better than the one held last fall.

The premium list for this year's fair is now ready for distribution, and the secretary, Phil Eastman, Topeka, Kansas, will send a copy on request.

The week following, the Kansas State Fair at Hutchinson will be held. The indications are that this fair will be

bigger and better than ever. The premium list is now ready and it is being mailed by the secretary, A. L. Sponsler, Hutchinson, Kansas.

These two big fairs are great educators. In no other way can the people of the state get so clear an idea of agricultural progress along various lines as by spending a few days at one of these big expositions.

Manufacturers of tractors in the United States are not confining their sales to this country. Fourteen heavy tractors were recently shipped to Egypt to be used in the Assouan irrigated district where is located the Assouan dam, said to be the greatest diversion dam in the world. Cotton is produced in this section and this dam increased the cotton crop under irrigation twenty million dollars in value the first year.

Plan to Attend Tractor Demonstration

At Hutchinson, Kansas, July 24-28, a thousand acres of land will be plowed and given other preparation work during the National Tractor Demonstration. Power farming has developed so rapidly the past few years that it has been almost impossible to keep pace with it. Tractors are made for use on farms and farmers are asked to buy them because it is a means of giving them control of more power in doing various kinds of farm work. Before investing they want to know that the tractor will do what is claimed for it. There is no better method than to see the different types of tractors at work in the field. Farmers are anxious to be shown and manufacturers are just as anxious to put their outfits to the actual field test.

This is at the bottom of such traction farming demonstrations as have been held the past few years in various parts of the country. Farmers for whom tractors are made, want to see all the makes on the market. They are not satisfied with seeing them on parade. They want to see them at work under conditions with which they are familiar. They are also greatly interested in seeing them at work at the same time and under similar conditions, and finally they want to study them all impartially and be their own judges as to which particular outfit suits their conditions. This last point is important. The man who is to use a piece of equipment is the best judge as to whether or not it fits his requirements and conditions.

The traction plowing demonstration held in Hutchinson last year was worked out along these lines and farmers by the thousand came and saw the various outfits at work. The idea appealed because it gave the visitors just the chance they wanted, and before last year's demonstrations were over, plans were begun to make them annual affairs. In order that they be managed with the greatest efficiency, the National Tractor and Thresher Association organized a tractor demonstration circuit. A committee from this organization is working in co-operation with the farm and trade papers and commercial clubs in carrying out the demonstrations planned. They begin in Dallas, Texas, July 17-21, and close in Madison, Wisconsin, September 4-8.

There is every reason why farmers should attend this great demonstration. The American farmer has developed a type of farming based on man efficiency. In no other country in the world is the man so efficient. From the standpoint of family income, this is of far greater importance than are acre yields which frequently are at the expense of lowered efficiency of the individual worker. Through the use of more power it will be possible to do deeper and better plowing and this will eventually become a factor in increasing acre efficiency as well as man efficiency. It will make it possible to farm the acre below. On the farms south of Hutchinson that were plowed seven inches deep during the plowing demonstration last July, is now being harvested the best wheat in Reno County, and it is significant that tractors are being given a trial by these farmers as a source of power for pulling the binders. The more kinds of work a tractor can do, the more sure it is of becoming a money-maker.

Remember the date at Hutchinson is July 24-28. These will be days of tremendous interest to the under-powered farmers of Kansas.

FEEDING GRAIN SORGHUMS

In sections where the grain sorghums are the most reliable crops, the problem of how to most profitably dispose of them is ever confronting the grower. A small proportion of the grain produced may of course be sold on the market direct, but the great majority of those who depend on the sorghums must find other means of disposing of their crops. The direct market outlet is taking care of more of these grains each year, but feeding them to live stock will continue to be the best and surest means of converting these crops into cash.

This principle of using stock to market feeds is of general application—it is not peculiar to the sorghum belt. In this part of the country, however, there has been a lack of appreciation of the value of these feeds and only in recent years have they come into general use as a substitute for corn so long regarded as essential to success in feeding stock.

"Feeding grain sorghum to live stock" is the subject of Farmers' Bulletin 724, recently issued by the Federal Department of Agriculture. This bulletin is of value to every farmer in the sorghum belt. It shows how all over this area these crops are successfully taking the place occupied by corn in the corn belt. It is shown that in digestible nutrients kaffir is very near corn and in fact contains more digestible protein. As in the feeding of corn, other feeds rich in protein and mineral matter must be used to get the best results. Cottonseed meal is being successfully and profitably used for this purpose. Experiment after experiment is quoted showing the value of grain sorghums as feeds.

If any are in doubt as to the possibilities of building up a profitable live stock business with grain sorghums as the main feeds, this bulletin will help convince them of the possibilities along this line. The biggest agricultural opportunities now open in Kansas are those having to do with the fuller use of the sorghums in live stock production.

CREAM BRINGS IN CASH

A cream buying station in Tribune, Kansas, reports paying out \$10,520 for cream during the year ending July 1, 1915. Farmers are few and far between in this county, the population of the whole county being less than 1,000. Probably only a part of the farmers sold cream. It is evident from the figures that those who did realized a good income.

Farming in this section was a precarious business until settlers began to milk cows. There are several cream buying stations now in each town, and money is steadily coming into the county in payment for the cream produced. Prosperity has followed the cow in this section of the state because no matter what the season may be there is always some feed that a cow can turn into milk.

Recently two Utah ranchmen are reported to have sold their cattle on the same market the same day. Both used the same amount of national forest range per head and paid the same grazing fee. One had used good bulls, the other had not. The cattle sired by the good bulls brought \$40 a head more than the ones by poor bulls. Whether live stock sold is cattle, hogs, sheep, or horses, the good ones are appreciated and bring higher prices and normally yield greater profit. The most practical means of improvement is through the use of good sires, for the male may become the parent of from forty to a hundred animals each year.

State boards of agriculture, agricultural colleges, and the Department of Agriculture at Washington, D. C., are co-operating in making traction farming demonstrations of greatest value to farmers in different sections in which they are held. The Department of Agriculture will furnish models for exhibits of good roads at each demonstration. This will be accompanied by two experts who will explain construction of roads to farmers and road overseers in attendance.

MAKING EXPERIMENTS USEFUL

Information to be of Value Must be Offered in Usable Form



Standing in the Back Row from Left to Right: Dr. H. J. Waters, President of the Agricultural College; Edw. C. Johnson, Dean of Division of College Extension; W. E. Watkins, County Agent, Allen County; A. D. Folker, County Agent, Jewell County; P. H. Ross, County Agent, Leavenworth County; A. S. Neale, Specialist in Dairy Husbandry, in charge of Extension Schools; J. D. Lewis, County Agent, Nemaha County; Miss M. Winifred Fortney, Specialist in Domestic Art, Extension Schools; W. S. Gearhart, State Highway Engineer; Miss Marion Broughten, Specialist in Domestic Science, Extension Schools; F. E. Crabtree, District Agent, Scott City; Miss Frances L. Brown, Director of Home Economics; Miss Louise Caldwell, Specialist in Home Economics; Miss Stella Mather, Specialist in Home Economics; Lee H. Gould, District Agent, Dodge City; Karl Knaus, County Agent, Cloud County; Geo. O. Greene, Specialist in Horticulture; Otis E. Hall, State Leader, Boys' and Girls' Clubs; T. H. Parks, Specialist in Entomology; H. Umberger, Assistant County Agent Leader in charge of County Agent Work; M. G. Burton, Director of the Home Study Service; E. J. Macy, County Agent, Montgomery County; Ross M. Sherwood, Specialist in Poultry Husbandry; Geo. E. Bray, Industrial Engineer, Home Study Service. Sitting and Kneeling in the Front Two Rows: Walter Burr, Director Department of Rural Service; F. B. Williams, County Agent, Harvey County; H. B. Walker, State Irrigation and Drainage Engineer; A. R. Losh, Assistant State Highway Engineer; Miss Alice Poulter, Specialist in Home Economics; E. O. Smith, County Agent, Wilson County; R. P. Schnacke, County Agent, Pawnee County; P. E. McNall, Farm Management Demonstrator; C. H. Taylor, County Agent, Atchison County; G. E. Thompson, Specialist in Crops; W. A. Boys, District Agent, Hays; V. M. Emmert, County Agent, McPherson County; Carl F. Thompson, Specialist in Animal Husbandry; C. K. Peck, County Agent, Linn County; H. J. Bower, Specialist in Soils; O. C. Hagans, County Agent, Miami County; H. L. Popenoe, County Agent, Lyon County; G. T. Gray, Assistant, Department of Highway Engineering; L. C. Williams, Assistant to the Superintendent of Institutes; C. H. Scholer, Assistant in Highway Engineering; J. C. Holmes, County Agent, Cowley County; E. M. Tiffany, Assistant in Home Study Service.

INFORMATION locked up in the laboratories and vaults of an agricultural experiment station is of little use to the people who till the soil and manage the home. To be of value it must be taken out and applied practically on the farms and in the homes where the people live and carry on their daily round of activities associated with tilling the soil and harvesting the fruits of their labors.

In no other state has a better system of supplying this missing link between station and farm, been developed, than in Kansas. The cut on this page shows the people who are doing the work in our state. During the week of June 12 to 17 they were in conference at the agricultural college and have now gone back to their work better equipped than ever to be of service to the people of the state.

Wonderful progress has been made in the past twenty years in digging out the secrets of Nature as related to agriculture. A type of investigator has been developed who is never so happy as when delving away at the most intricate problems of the soil, of feeds, the growth of crops, animal diseases, life histories of injurious insects, and others of similar nature. These investigators become so wrapped up in searching out the truth that they lose their interest in getting to the people to be benefited the results of their labors in practical, usable form. It is well that their energy has been thus concentrated, for half truths or inaccuracies in observations on how soils, plants, or animals act under certain conditions, are most misleading if used in working out practical problems.

To get this fund of accurate information into the hands of men who could use it, prompted the farmers' institute movement which provided a common meeting point for the practical men and women who could there exchange experiences and secure new truth or principles from the accumulated store of the experiment station. Then came the extension schools, where a whole week could be spent in assimilating useful knowledge and working out plans for its practical application. The women as well as the men found these of value. Clubs among the boys and girls stimulated the use of the best modern methods by the young people, and not infrequently those of more mature age acquired much that was useful from observing the youngsters at their work.

In order to have the latest knowledge on special problems properly presented, it was necessary to have men and women in this state-wide work having special training along specific lines. There were lands needing draining. Irrigation was a possibility in many localities. This need was met by having a man to go out and explain these irrigation and drainage problems right on the farms. Better methods in road and bridge building were being called for, and this need was met by employing a man specially

trained along highway engineering lines. There were soil problems peculiar to certain parts of the state. Only first-hand observation by one skilled in the subject of soils could be of value, so a soil man was added, and so on until this department of the agricultural college work is now equipped to be of the greatest practical value to all the people of the state. The locked-up knowledge is being brought into use. Many farmers have tested the practicability of the information that has been thus offered them and have found that it can be depended upon to bring them profitable results. The farmer could find out many of these things for himself, but he is too busy carrying on his farm work. One farmer recently remarked that he knew where and how to get much of the information he needed, but he could make more money staying at home and plowing corn and the needed facts could be brought to him.

The agricultural agent acting under the direction of a well organized county farm bureau, is the latest addition to the work of getting the best practices into actual operation. Sixteen of these men are now employed in Kansas by counties, and there are five having districts of several counties as their fields. These men, with their organized bureaus, serve as most effective mediums for disseminating needed information—not only that from the experiment station, but the successful practices that are being followed in the home counties but which, through press of work, often go unnoticed by neighbors.

The agricultural agent cannot himself have at his tongue's end all the information needed in his county. He will be asked many questions he cannot answer

offhand, but he is always in position to get that which is needed almost immediately. No problem is so serious or so complicated that it cannot be attacked with some measure of success by a farm bureau and a good agent. Much of the program at the week's conference referred to centered around the work of these agricultural agents.

Dean Johnson reports that including the sixteen county agents and five district agents, there are now forty-one men and six women devoting their whole time to this work of getting out information in usable form to the people of the state.

The different lines of work are as follows: Farm and home institutes; extension schools for men and women; county agent work; boys' and girls' club work; home economics extension; homemakers' clubs; home study service; judging at agricultural fairs; community welfare work; highway engineering; irrigation and drainage; state farm and home week at college.

Among the people in this division are specialists in soils, crops, animal husbandry, dairying, horticulture, entomology, poultry, irrigation and drainage, highway engineering, domestic science, domestic art, farm management, community welfare, and rural education.

No feature of our system of agricultural education means more to the state. This work is not limited by college walls. No other division of the college is better equipped for useful service nor more entitled to credit for what it has already accomplished, than is this one.

Allen County Pomona Meeting

Our Pomona Grange is planning several festivals for the summer. Geneva

will soon have their hall ready to dedicate. The local grange built this hall by popular subscription. It is 36x80 feet, and when completed will cost \$3,000. This grange has found that buying and selling and working together is what counts. All granges can find something to do for the betterment of their communities and one of the grange principles is to make the home community a better place in which to live.

We had planned to have a picnic in the grove June 15, but the rains had made it so muddy that we held it at the Diamond schoolhouse. Shade was furnished by erecting poles in the schoolhouse yard and stretching tarpaulins over them. About 300 people were present at the dinner and many more came in the afternoon. There were fully 500 present when the program was given from the porch of the schoolhouse. There would have been many more there if the road had been better. Equity Grange, of Anderson County, was well represented, and the delegates were on the ground early.

Our next Pomona will be held with Allen Center Grange near La Harpe. As this is near the center of the county, we expect to have at least 1,200 present. The fifth degree will be given by the county officers in the schoolhouse and then all will go to the grove for dinner, following which the program will be given. The general public is invited to the dinner and program. The date is July 27.—A. L. M., Allen County.

Windmills for Pumping Water

The Nebraska College of Agriculture has figured that it costs 15 cents to pump a hundred barrels of water with a good windmill.

The usefulness of the windmill can be greatly increased by using larger wheels and small pump cylinders, as well as by providing storage tanks and removing obstructions to the wind.

The wind blows more hours per month throughout the year at a velocity of from six to fifteen miles an hour than at any other rate, and the windmill should be large in order that the slower rates may be taken advantage of. When forcing water in a reservoir, a ten-foot wheel and a 2½-inch pump cylinder should be used. If the well is shallow, a larger cylinder can be used.

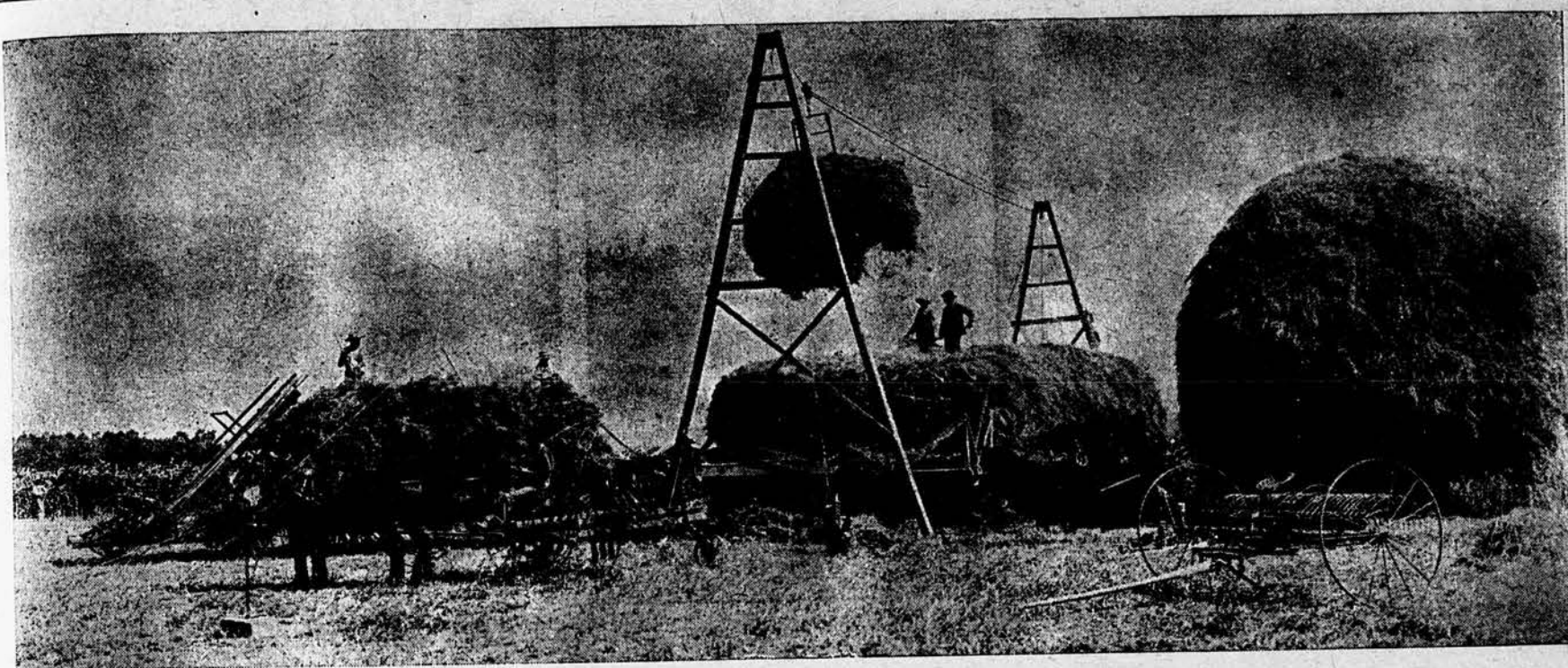
It is important that heifer calves selected for dairy purposes should be well kept. A bulletin on this subject, issued by the Wisconsin Agricultural College, says: "During the second year feed or pasture dairy heifers in such a way as to get the maximum growth. It has been found that the most productive and profitable cows are produced by getting the maximum growth from birth to maturity. Heifers which are bred at from 16 to 20 months old and that are in good flesh at calving time usually develop satisfactorily."



VIEW OF STONE ROAD.—THIS ROAD IS NOT AFFECTED IN THE LEAST BY HEAVY RAINS.—NO MATTER HOW MUDDY IT MAY BE, HEAVY LOADS CAN BE HAULED

CURING ALFALFA HAY

Important to Save Leaves But Work Must Proceed Rapidly



ON THIS RILEY COUNTY FARM ALFALFA IS PUT UP IN ACCORDANCE WITH A WELL WORKED OUT PLAN.—LABOR-
SAVING MACHINERY IS USED FOR EVERY OPERATION POSSIBLE.—STACKS ARE MADE LARGE AND HIGH.—THERE IS THUS A MINIMUM OF LOSS DUE TO EXPOSURE TO RAIN

Two desirable changes take place in the curing of alfalfa hay, the loss of water and the development of aroma or odor and flavor. Both are favored by slow curing, while rapid curing, in addition to being unfavorable to these changes, results in bleaching and loss of leaves. Slow curing requires more time and labor, for the hay must be raked and cocked at the proper time, and most of the curing goes on in the windrow and cock.

HOW LEAVES ARE SAVED.

Moisture passes out of the leaves more rapidly than from the stems, and they are easily burned and bleached on a hot day. Proper slow curing enables the moisture to be drawn from the stems into the leaves and off from their surfaces. If the leaves are burned, they no longer draw moisture from the stems, and they be so dry as to drop off when handled, while the stems are far too green to stack or mow. Such loss of leaves may often be considerable. The average loss in harvesting forty-one different lots of alfalfa on the Manhattan agricultural college farm in 1914 was 12.43 per cent of the entire crop. In some cases as high as 48 per cent of the leaves were lost, which resulted in a loss of 27 per cent of the entire crop. As little as 6 per cent loss of leaves and 3 per cent loss of total crop resulted in several instances.

HAYING METHODS.

There can be no certain rule made as to how much time should elapse between cutting, raking, cocking, or hauling. Weather conditions vary greatly; the first crop of the season is usually heavy and cut when rains are apt to occur; succeeding crops are usually lighter and harvested in good drying weather, while the last cutting is usually quite green, is cut in cool weather, and is frequently difficult to cure. In midsummer alfalfa may usually be cut in the forenoon, raked in the afternoon or succeeding morning and stacked or placed in the mow at once. The first cutting usually requires one or more full days' curing in the swath and as much or longer time in the windrow. The tedder may frequently be used with profit in curing the first cutting when it is tall and heavy, but is seldom necessary in succeeding cuttings.

EFFECT OF RAIN ON ALFALFA.

Alfalfa wet with rain immediately after cutting will suffer little damage if the rainfall is not excessive. Curing will be delayed and the use of a tedder is desirable in such cases. Where rain falls after partial curing, the loss is greater, but in few cases is it so great as to render the crop a total loss. The hay, of course, is discolored, and cannot be readily marketed, but it is still a good feed when dried thoroughly before stacking.

Much injury is often done to the new growth in such cases because the cut crop is lying on the ground and smother-

ing it. Spots are easily killed out unless the wet hay is turned and the crowns of the plants covered by the hay exposed to air and sunlight.

WHEN TO PUT IN STACK.

Good judgment is necessary in putting alfalfa hay in the stack or mow. A mistake easily made is that of stacking as soon as the leaves are dry but before the stems have thoroughly cured. It is very difficult to say just when hay is dry enough to store. A slight excess of moisture within the plant due to the incomplete loss of natural sap will result in far less damage in storage than will a like amount of moisture on the outside of the hay, resulting from rain or dew.

The green alfalfa plant contains about 75 per cent moisture in the bud stage. The moisture content decreases as the plant matures, and may be as low as 60 per cent when seeds are beginning to form.

The average moisture content of field-cured hay in the forty-one cuttings referred to above, was 28.8 per cent. The lowest was 18.79 per cent, while the highest was 39.82 per cent, and could not have been successfully stacked or mowed in large quantities.

The greater part of all hay stacked contains 25 to 30 per cent of moisture, and there is danger of loss in storage if there is more than 30 per cent. After hay has been stored long enough to reach a constant moisture content it contains 8 to 10 per cent moisture.

DETERMINATION OF MOISTURE.

There is no easy method of determining the moisture content in the field, and judgment is based on appearance and touch. When a few stems are twisted and break easily, showing no juice at the twisted portion, it is generally safe to stack. However, if they are tough and do not twist apart easily, even though no juice may be forced out, there is danger of loss if the hay is stacked. This is not a positive rule, but will serve as a guide until more definite rules are established.

Most of the alfalfa hay in Kansas is stored in the stack. The hay barn is used mostly on smaller farms, but a cheap shed consisting of a roof with pole supports and boarded in along the sides five or six feet down from the eaves would be a paying investment for many of the larger producers. Such a shed will turn off the water which soaks into alfalfa hay very easily, and the sides closed at the top prevent the rain from blowing in as the hay settles. The shed should be provided with some form of horse fork and can be filled as readily as a stack can be made.

EFFICIENCY OF MACHINERY

Where alfalfa is stacked there is a considerable loss from bleaching and weathering. The larger the stack the less will be the proportionate loss from such injury, and all stacks should be

made as large as men and machinery will readily build them. Investigation made by the Federal Department of Agriculture indicate that the hay fork and sling add from 30 to 50 per cent to the efficiency of crews in hauling hay from cocks to the barn.

It was found that those who use hay loaders and haul hay direct from the field, can put away about one-third of an acre more daily per man than those who haul it from cocks, other conditions being equal. Three-men crews seem to be less efficient from the standpoint of acres cleared in a day than two- and four-men crews. Comparison of the results attained in haying with sweep rakes and without them shows an advantage of about 40 per cent in their favor.

PROTECT STACK BOTTOMS.

Hay near the bottom of a stack will spoil unless there is some foundation to keep it off the ground. Stack bottoms are best made of two layers of poles or a layer of poles covered with old boards. Old hay or straw which is thoroughly dry may be used where poles are not at hand. The top of the stack should be covered with canvas, boards, or metal covers. If nothing better can be found, a load of green alfalfa spread over the top will be better than topping with dry hay. Slough grass or old hay used on top of stack saves good alfalfa from spoiling.

Wound in Horse's Foot

M. L. L., Wallace County, writes that he recently bought a seven-year-old mare having a wire cut on her foot. It had not healed properly and sores have continued to burst out on top of the hoof. He is treating these with blue vitrol, but is not satisfied with the results and asks for a better treatment.

Dr. R. R. Dykstra of the agricultural college offers the following suggestion: "The wound is a result of a wire cut that has extended beneath the hoof or horny box. This simply means that at the present time drainage from the wound cannot take place, and, therefore, all dead tissue, pus, etc., stands in the pockets formed by the horny hoof. As the result of a constant irritation produced by these products a mass of exuberant granulation, commonly spoken of as proud flesh, has appeared around the margin of the wound. This wound should be treated by cutting off all the proud flesh, then probing the wound so as to find out its general direction and making an opening on the bottom of the foot sufficiently large so that its discharge will drain. The wound should be cleansed daily with some reliable antiseptic such as a 2 per cent solution of carbolic acid or a 50 per cent hydrogen peroxide solution. After this cleansing, a layer of cotton should be placed around the entire foot and bandaged in position. This treatment is to be re-

peated daily, permitting the upper openings to heal first. The wound at the bottom of the foot should be the very last to heal. If you provide good drainage, remove all the dead tissue and keep the wound clean, the chances are that it will make a good recovery.

"In this treatment another factor must be considered and that is if the wire cut has injured the piece of gristle or cartilage just above and towards the rear part of the hoof, the healing will be much slower, because the animal will virtually be affected with the condition known as cartilaginous quittor. This latter condition is a very hard one to treat, and I am satisfied that if the injury is of this nature you will require the services of a competent graduate veterinarian; in fact, I believe that even if the cartilage is not injured you will be well repaid by employing one.

"In conclusion I wish to state that the external application of remedies such as you are now using is absolutely valueless and may even be harmful on account of the suffering you are causing the animal."

Summer Pruning

Fruit trees need pruning during the summer as well as in winter. June or early July is the time to do summer pruning. It has less tendency to stimulate the growth of water sprouts than winter pruning. At this time the year's growth is already largely made. For the remainder of the season the trees are largely occupied in maturing the wood and developing the fruit buds. Wounds made during this season of the year heal better than those made in winter.

Pruning more than any other operation affects the size, quality and finish of the fruit, especially of those varieties which have a tendency to over-bear. It also has a tendency to regulate bearing, especially if it is systematically and regularly done.

In summer pruning, thin out some of the smaller and moderate sized branches in the outer portion of the tree. Those which help to shade the inner portion smother the smaller growth and prevent the fruit from maturing properly. In addition, pruning generally tends to lessen the cost and facilitates the performance of other operations, such as spraying and picking.

The rose aphid, a small green or pinkish plant louse, frequently attacks the new growth on rose bushes in the spring and throughout the summer. They cause an unhealthy, curled appearance of the leaves and the flowers are blighted. Simply turning a fine but forceful stream of water on them with the garden hose is quite effective, but the best remedy is the nicotine sulphate spray made from Black Leaf Forty, one to one and one-half teaspoonfuls to a gallon of water. A cheap atomizer costing fifty to sixty-five cents, can be used where there are only a few bushes to spray.

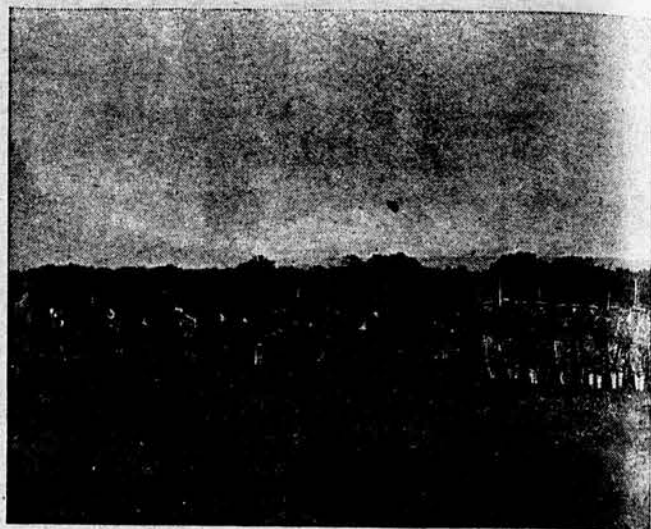
KANSAS GUARDS IN TRAINING



CLEANING UP AFTER MESS



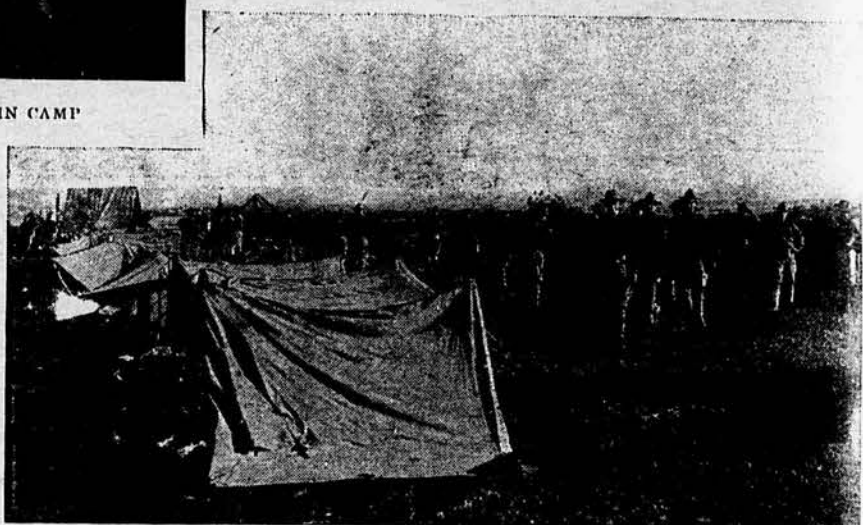
A LITTLE FUN IN CAMP



READY FOR INSPECTION



TARGET PRACTICE ON RIFLE RANGE



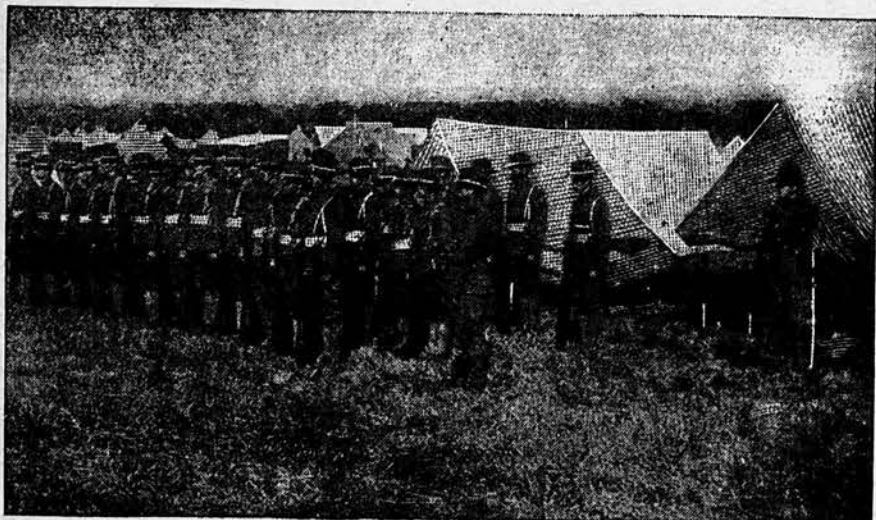
"PUP TENTS"—HALF TENT CARRIED BY EACH PRIVATE



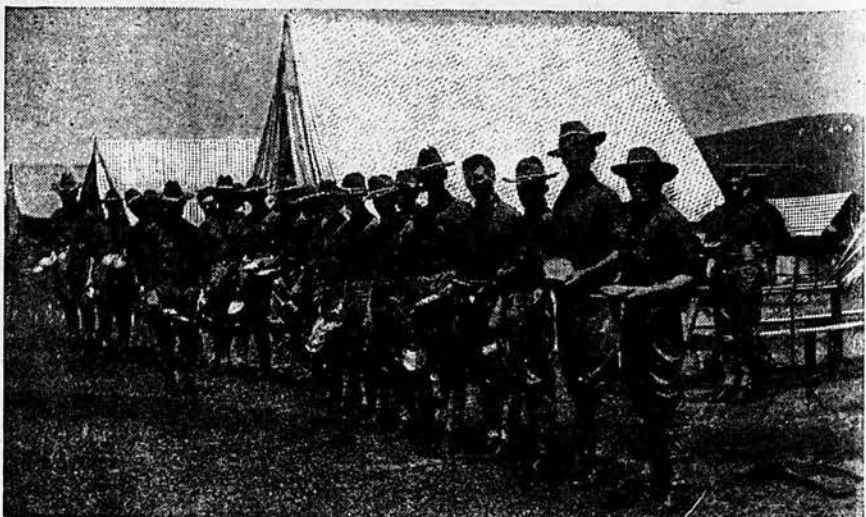
KANSAS GUARDS SETTING UP MACHINE GUN



AT MESS AFTER A HARD DAY'S DRILL



GUARD MOUNT—ONE OF THE DAILY ROUTINES



LINING UP FOR THE MESS CALL

These Pictures Show the Kansas Boys Drilling For Border Service



Buy Farm Implements Now

FARM implements have not been spared from so-called war prices. They, too, are soaring skyward in price, the same as all other materials. Since steel is a much needed article in warfare, it has gone higher in price than some other articles.

It is now time to buy farm machinery that will be needed for the next few years. Prices on steel are going to stay up, and will undoubtedly go higher, after the war is over. The warring nations are demanding enormous quantities of steel, which will tend to sap the steel-makers of all their surplus. Some companies are booked to capacity for a year in advance. After the war, steel structures, such as bridges, buildings, ships and other structures will have to be replaced. And the ship building industry has taken a decided advance in this country. All this means that steel will be a scarce article and consequently an expensive article after the war.

The implement companies had enormous quantities of steel on hand before the big advance in prices on steel. This foresight on their part saved the farmers from paying 40 to 50 per cent more for their machinery today than they would have had to pay if the raw material had been bought at present prices.

Only 2.9 per cent of all steel used in the world is used for farm machinery. This percentage is so small in comparison to all steel used that the implement makers can in no way influence the prices on steel. After the increase of \$5 a ton in price of steel the leading railroads of the country began buying great tonnages for delivery in 1917.

Farm implements are advancing in prices steadily. There has been an increase of 15 to 20 per cent in prices of all farm implements since the first of the year. Plows have increased as much as 21 per cent. And the prices on all farm machinery will advance as much in the next eight weeks as they have since the first of the year, according to the estimate of one of the largest implement manufacturing companies of the world.

Some of the haying machinery has escaped from the large advances in prices—such machinery as takes steel tubing in its construction. These machines have only advanced about 2 per cent. This is due to the fact that haying machinery makers had enormous quantities of steel tubing in stock before the advance in prices. Had it not been for this fact, haying machinery would be from 35 to 40 per cent higher than the lowest estimate. Prices on haying machinery next year will undoubtedly make a decided increase.

Stop and figure what these increases mean in dollars and cents. For example, a gang plow with 14-inch bottoms costing \$54.50 costs \$66 after an increase of 21 per cent. A 12-disk, with 7-inch disks, grain drill costing \$63.50, costs \$73.50 after an increase of 15.7 per cent. These are actual figures taken upon these articles, comparing the present cost with the cost at the first of the year. This spread of price is three or four times as much as the interest on the articles would be for a year. Therefore it will pay to buy farm implements before the next increase in price.

Such figures may discourage farmers upon first thought, but high priced machinery has its salutary effect. The old adage, "It is an ill wind that blows no one good," is true in this case. High priced machinery means that it will be given better care. The Kansas farmer will realize more than ever the necessity of a farm implement shed. Machinery that is well taken care of will last longer, do better work, and run easier than a rusty, gummed up machine. Consequently, this will mean better crops produced with less horse power. This saving alone will more than offset the high price of machinery. The farmer is also recompensed by the fact that his products are staples and are in demand the world over.

Profit and Number of Acres

The size of business often has much to do toward making the farm profitable. Farm management records show that farms are often either too small or too large for the most successful farming. There may be too few as well as too many acres. A man may not have enough land or he may be "land poor,"

thereby rendering all his acres unprofitable.

About thirty years ago a Wisconsin farmer with a large family was deeply in debt. His farm consisted of 120 acres, half of which was under plow. The remainder was woodland and expensive to clear. For twelve years the farmer had not been quite able to meet his interest. To him the whole farm consisted of unprofitable acres. He finally decided that the farm was too small for the most efficient use of the labor available. Having an opportunity, he bought an adjoining eighty acres of cleared land, going in debt the full amount of the purchase price. From that time on the farm was prosperous, and in ten years the entire farm was paid for and enough additional money saved to build a good house and barn. During this period there had been no great change in prices of farm products. The smaller farm had been unprofitable because the overhead expenses were too high for so small a business. In this case acres were made profitable by increasing their number.

In the early nineties a North Dakota farmer owned three quarter sections of land. His farm was quite heavily mortgaged and for a number of years he had not been able to pay interest in full. His family was small and for most of the work he had to depend on hired help. He concluded that under the circumstances he was working, or trying to work, too many acres. Finally he sold a quarter section and paid his debts. Seven years later he had \$5,000 in the bank. Increased prices of farm products during this period only account in part for this farmer's increased prosperity. In this case all the acres had been unprofitable largely because there were too many of them.—J. C. McDowell, in Yearbook U. S. Department of Agriculture.

Farm Concrete Construction

A book discussing in detail the fundamental principles governing the use of concrete, in language easily understood by those who have no special knowledge of the subject, has recently been written by R. A. Seaton of the Kansas Agricultural College. After a thorough discussion of the necessary properties of the materials used in concrete, it considers questions of the proportions and quantities of materials required, the construction of forms and the mixing and handling of the concrete. Full directions are given for these parts of the work, so that those who have had no experience with concrete can proceed with confidence.

Two chapters are devoted to a discussion of the principles of reinforced concrete. Rules are given for determining the strength of simple beams and columns, and for the design of cylindrical structures subjected to internal pressure, such as tanks and silos.

The methods used in finishing concrete surfaces, in the application of stucco, and in waterproofing and coloring concrete are considered in detail.

Special applications of concrete for which full directions are given, with dimensions, amount of reinforcing and drawings where necessary, are concrete building blocks, fence posts, sidewalks, floors and roads, tanks, cisterns and silos, and culverts and small highway bridges up to 20-foot span.

This book should be valuable to all those who are interested in concrete construction in rural communities, and especially so to those who desire to do some of the concrete work themselves. The book is published by the McGraw-Hill Book Company of New York.

New Method Destroys Gophers

A new method of killing gophers has been discovered in Colorado. The system is to attach one end of a rubber hose to the exhaust pipe of an automobile and poke the other end into the gopher hole, making the joint tight with a little dirt pressed down with the foot, thus filling the hole. Run the engine for a few minutes, and Mr. Gopher is done for.

Where the gophers are pretty thick, the man with the automobile and hose attachment is able to put a quietus upon large numbers of them in the course of half a day.



National Giant Inside Elevator

On cribs 28x38 ft. or less, with half pitch roof, it is not necessary to have a cupola. When cupola is necessary, we can save you from \$15 to \$30 by using the National Giant. Ask us why. We also save you the cost of digging a pit. Save you on the length of elevator required! This machine has more sensible features than any other elevator on the market. Spout swings around from side to side—fills crib directly back of elevator. Short delivery distance means less power, longer life. Also this elevator leaves corn on the cob, where it belongs. Ask us why. Write today for full details and get our very attractive prices for 1916. We'll send you plans and specifications on request. Ask for them. Terms arranged to suit. Write us today.

PORTABLE ELEVATOR MFG. CO., 836 E. Grove Street, Bloomington, Ill.

Write for FREE Crib Plans and Attractive Prices on these Wonderful Grain Elevators

Just the type machines grain farmers are looking for. Our National Giant Steel Elevators are rigid and meet increased strength demands of 36 to 48-foot elevator lengths because they have 16 angles to the section. (Ordinary elevators have only 6.) 4 wood ribs running full length and corrugated steel couplers and keener iron insure everlasting stability. Ribs also keep chain from dragging—lightening draft and eliminating noise. This machine has greater capacity, 8 inches wider than others. Crib 60 bushels in 8 to 10 minutes. Screen in bottom keeps out silk and shelled corn—preventing rotting. Write for special terms and attractive prices.

National Giant Steel Elevator

The National Section The Best in the World

GRAIN TIGHT

Hog Trough Type in use on all other makes

For All Kinds of Grain: Wheat, Oats, Barley, Shelled and Ear Corn, Etc.

World's Greatest Exhibition in Power Farming

All the big Tractor and Plow Companies in the United States are backing this show. Five days of practical education in Power Plowing, Harrowing, Disking, Seeding and Road Building, at the National Tractor Farming Demonstration.

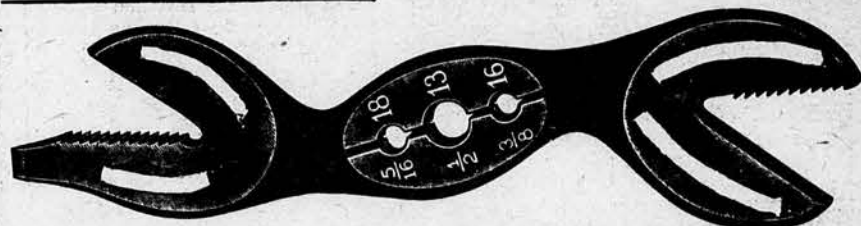
One Thousand Acres of Farm Land will be plowed. Two Hundred Tractors (all makes) will demonstrate. Accessory Exhibits will be complete.

Hutchinson, Kans.—Five Days—July 24-28

A NATIONAL FREE SHOW FOR FARMERS, DEALERS, EVERYONE!

Write F. W. Tyler, Hutchinson, for further information.

ALLIGATOR WRENCH AND HANDY TOOL FREE



The Alligator Wrench requires no adjustment; simple; always ready for use; never slips. Works in closer quarters than any other wrench. It is light, strong, compact. Easily carried in the pocket.

THREE DIES FOR CUTTING or cleaning threads in bolts used on farm machinery. It is drop-forged from the best steel, scientifically tempered, nothing to get out of order.

OUR SPECIAL FREE OFFER We will send the handy Alligator Wrench free and postpaid to all who send \$1.00 for a one-year subscription to Kansas Farmer, and 15 cents extra to pay packing and postage—\$1.15 in all. Address **KANSAS FARMER** --:-- **TOPEKA, KANSAS**

BARGAINS IN WHEAT LAND

POSITIVELY NO TRADES CONSIDERED.

This land has proven its ability to make 20 per cent net each year on the value asked. It is offered for sale, as the owner is ready to retire.

FARM NO. 1.

Harper County, Kansas, containing 160 acres; sandy loam with clay mixture; 90 acres in wheat, 20 acres ready for spring crops, 50 acres pasture. All fenced and cross-fenced. Running water, two wells. Four-room house, cave, etc. Stable for eight horses, cattle sheds and other out-buildings. Cash price, \$30 an acre.

FARM NO. 2.

480 Acres, Harper County, Kansas. 160 acres broke, 100 acres in wheat, 60 acres ready for spring crop, all good hard wheat land. \$25 an acre, cash.

FARM NO. 3.

160 Acres, 110 acres broke, 60 acres in wheat, 50 acres ready for spring crop; 50 acres mow land on creek bottom; all fenced, meadow cross-fenced; running water, well, granary and stock sheds; good hard wheat lands. \$25 per acre, cash.

FARM NO. 4.

74 Acres in Sedgwick County, Kansas. All broke, all fine alfalfa land; 6 acres in alfalfa, balance in wheat, was alfalfa; fenced; good house, well, barn for four horses, and usual outbuildings. Near station; 10 miles from Wichita. \$100 an acre. Balance of quarter in alfalfa and can be had for \$115 an acre.

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



The Proper Lubricating Oil for Your Tractor

is highly important. You have no single piece of farm equipment which costs more, or which performs such an important service. To use an inferior lubricating oil on these machines is poor management. Get an oil that is manufactured by reliable, experienced refiners, and made expressly for the lubrication of tractor engines.

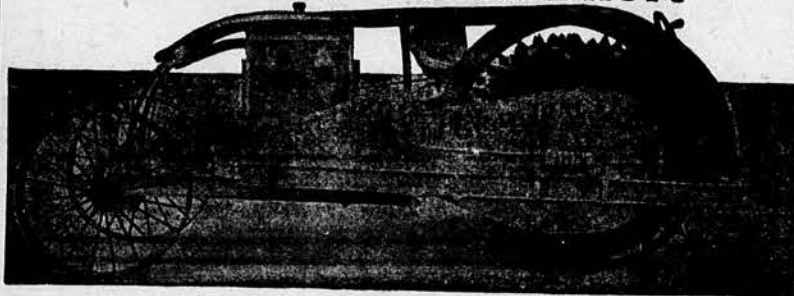
Stanolind Gas Engine Tractor Oil

is the oil to use in tractors where kerosene is used as fuel. It is made to withstand high temperature conditions. It adds power and life to your engine. It eliminates the trouble of scored cylinders. It reduces friction to a minimum. Where friction is minimized, repairs and exasperating delays are minimized. It is highly efficient for lubricating the bearings of all harvester machinery, and for heavy gearings of tractors.

Standard Oil Company
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The GRAY TRACTOR WITH THE WIDE DRIVE DRUM



Works Long Days During Hot Plowing Season

HORSES or an uncertain tractor are almost useless when it comes to plowing that must be done promptly even if the sun is sizzling. A Gray owner is always sure of being able to plow just when he wants to and work as many hours a day as he pleases. He is sure of getting his work done regardless of heat or short working period.

Model "A" 20-35 H. P., Weight 8,000 lbs.
Model "B" 15-25 H. P., Weight 5,500 lbs.

Sold On Approval—Catalog On Request.

GRAY TRACTOR MFG. CO., Power Farming Engineers
1034 Marshall St., Minneapolis, Minn.

Make An Automobile Trip To Hutchinson, Kansas

JULY 24-28, 1916

And attend the First National Celebration of the Tractor Farming Age at the NATIONAL TRACTOR FARMING DEMONSTRATION.

Good auto roads lead to Hutchinson from 200 miles in every direction. Great demonstration by 200 Tractors (all makes), by all Power-Lift Plow Companies and leading Road-Grading Machines. Complete Accessory Show. 1,000 Acres to be Plowed.

Five Days of Wonders in Power Farming

For further information write F. W. Tyler, Hutchinson.

READ KANSAS FARMER'S CLASSIFIED
ADVERTISING PAGE FOR READY BARGAINS



Cost of Raising Dairy Heifers

EVERY dairyman is concerned with the cost of raising his heifer calves. It is only through raising these calves that the discarded cows can be replaced. Those who depend on buying to keep up the herd, seldom can bring about much improvement except at considerable expense. Several experiment stations have taken up this question of finding what it costs to raise a heifer calf. The Wisconsin and Connecticut figures show that the cost up to two years of age is from \$1 to \$66. The Ohio station has just concluded such an investigation. The figures given are the averages of the records kept on 51 heifers—29 Jerseys and 22 Holsteins. This involves large enough numbers to merit consideration.

Kansas dairymen are raising heifers to improve their herds, and will be interested in the items of cost as worked out in these studies. The items other than feed are as follows: Value at birth \$5, labor \$11.50, bedding \$4.50, service fee \$1.50, tools, etc., \$1.50, shelter \$4, interest and taxes \$4.68, or a total of \$32.86. Nine dollars is credited for manure, leaving the net cost \$23.68. To this must be added the feed cost. The total cost of raising the Jersey heifers to two years of age was \$78.19, and the Holsteins \$81.80, the difference being due to the larger animals eating more feed. They were charged 30 cents a month for pasture the first year, and 90 cents the second. The pasture had to be supplemented with grain in order to keep the heifers growing properly.

The heifers were bred to calves at twenty-six and one-half months of age, and at calving time the cost averaged \$91.39.

Kansas dairymen will regard these figures as high. Heifers can be raised cheaper here than in Ohio. Kansas has many advantages over some of our older dairy states.

The high cost of heifers as brought out by these different studies, clearly shows the folly of raising inferior individuals. It costs just as much to feed a heifer sired by an inferior bull as one sired by a high class bull. The figures also show why dairymen are justified in asking good prices for well-bred dairy stock. As a Wisconsin dairy farmer recently stated, they cannot afford to sell really good heifers for \$60 or \$70. The Kansas men who insist on buying only cheap stock when they go to a dairy state, will get only culls, and we would be better off without these. We must expect to pay good prices for well-bred heifers that have been properly grown and developed.

The economical thing for the dairyman who is just getting a start, is to give the most careful attention to the feeding of his heifer calves, saving only those having the right kind of parents. Even though the cost of bringing a heifer up to calving time does seem high, it is the safest and most reliable way of adding to the herd and is cheaper in the long run than to depend on buying. Those who are just making a start must of course buy their foundation stock, and it is important that these be selected with care. A bunch of culls is not a very good start in the building up of a dairy herd.

This Ohio report also shows that fall calves can be raised more cheaply than can spring calves. This fits in well with dairying on the general farm, for there is always more time to devote to the cows and calves during the fall and winter months than during the busy season when the crops are demanding a great deal of labor.

Destroying Horn Flies

The little Texas horn fly is the most annoying of all the flies that bother our animals during the summer season. These flies breed in fresh cow manure, and applications of lime to the manure about the barn and yard will help to keep them in check. During the summer the manure dropped out in the open is usually baked so quickly by the sun that the maggots are killed. It is not an impossible job to treat the manure that accumulates each day with lime.

All kinds of flies breed in such filth as accumulate around the barn, and the house would be less bothered with flies if manure and all rotting material were

kept hauled out to the fields. There is hardly a farm where there is not a small pasture near the barn upon which the summer manure could be spread.

Spraying the legs of cows at milking time with some good fly repellent will give some relief. These fly sprays may not keep the flies away very long, but they help enough to make it worth while to apply them to the milk cows.

Cool the Cream

It is easy to keep cream in good condition in cold weather, but during the summer season it spoils quickly unless properly handled. The buttermaker cannot make good butter from sour, rancid cream, and now that cream is graded, it does not bring the top price unless it is first grade in quality. It will pay to give the cream proper care during hot weather.

Keeping all the vessels thoroughly cleaned and cooling the cream to the temperature of well water as soon as it is separated, is the secret of having good cream during the summer. A cream cooling tank is almost a necessity. It should be so arranged that water fresh from the well surrounds the cans. When the cream is separated it should be set in the water at once and stirred constantly until cooled to the temperature of the water direct from the well. It takes a long time for a can of cream to cool if it is simply set in the water and not stirred. Cream cooling tanks can be so arranged that all the water used for the stock is pumped through them. The water about the cream is thus nearly always at or near well temperature.

Many use home-made tanks very successfully in caring for cream. Others have not made the effort to provide a tank for cooling the cream, and as a result the cream they sell nearly always gets to the buyer in bad condition. Without a cooling tank of some kind, cream cannot be cared for properly during the hot weather.

Dairy Cattle Show

The American Royal is to have a rival this fall in the dairy cattle show which will be held in Convention Hall, Kansas City, Mo., September 18-23.

This new show is known as the Southwest Dairy Show. Six breeds of cattle will be shown—Guernseys, Jerseys, Holsteins, Ayrshires, Brown Swiss, and Dutch Belted. Special breed trophies have been donated by the various record associations.

This dairy show is only a natural development of the interest that is being taken in dairy cattle in the territory tributary to Kansas City. Dairy farming is increasing, and there are many new herds of pure-bred dairy cattle being started. State associations of several of the breeds have been formed.

The management of this show plan to make it as strongly educational as possible. A program of lectures and demonstrations will be given during the week. There will be a market milk show to which dairymen from all over the Mississippi Valley can enter exhibits of milk consisting of three quart bottles either of market milk or certified milk. No one is barred from this milk show. Manufacturers of dairy machinery and equipment have already made their plans to have extensive exhibits in the machinery section. There will be some ten or twelve different types of milking machines on display, also many types of separators and gasoline engines.

No breeder should expect every calf dropped to develop into an animal suitable for the breeding herd. Many, however, insist on selling every male calf for a bull. The breeder who will ultimately produce the best cattle, command the highest prices, and satisfy customers must keep his knife sharp and use it freely. We have too many scrub bulls in Kansas already, and should not have this number swelled by "pure-bred scrubs."

The soil is the foundation of the farmer's prosperity. Study the problem of the soil and see if you are giving your soil a fair chance to produce.



PEDIGREE A GUARANTEE

THE pedigree of a registered animal is simply a certified record of its parentage—a scheme for keeping track of its ancestry. An animal in its makeup is the result of combining the blood lines of a good many individuals. The parents, grandparents, and in fact all its ancestors have their part in making the individual. The more remote, the less marked will be the influence. It is important that every one of these many sources be right. An inferior animal in the pedigree, especially if it be fairly close, is sure to soil the stream and every such one found in the pedigree weakens it.

The pure-bred animal represents the results of most careful selection of all the individuals in its parentage. These are selected for their strong points—the points that are desirable to reproduce in the offspring—and in the selection just as much care is taken to eliminate such animals as could not add any good qualities.

Some fail to appreciate the value given to pedigree. They point to the fact that there are unregistered individuals just as good in themselves as is the pure-bred animal. The fact, however, that all the ancestry of an animal enters into its makeup to a greater or lesser extent, makes the pedigree record necessary. In the case of the grade there is no means of knowing how many inferior animals may appear close up in its pedigree and their qualities are apt to crop out in the offspring. The pedigree corresponds to a guarantee on a machine. Every part must be good. In the machine the make, the company back of it, is a guarantee that it is right in every part, and so the fact that an animal has a pedigree certified to by a reputable record association, makes it possible to pass judgment upon every part entering into its makeup. We want to know positively what its parents and grandparents were—what qualities they possessed—so we may be sure that the individual in question has the power to transmit only desirable qualities.

The pedigree enables the owner of a pure-bred animal to make this study. It is simply a guarantee of what is back of the animal. This knowledge is what gives pure-bred animals a value in excess of what they would bring on the open market simply as individuals.

Ten-Dollar Hogs in June

A couple of weeks ago hogs sold in Kansas City for \$10 a hundred—the first time this price has even been reached in the Kansas City market in June. The hog men who were so much worried last fall because of the sudden drop of pork on the market, have taken heart since the upward trend in prices has so strongly developed. There was apparently no good reason for this drop last fall. Many were greatly discouraged at that time, but live stock farmers who make a success of the business have learned that they cannot go out and in at every fluctuation of the market. There is no surer way to go "broke" in the live stock business. There will always be ups and downs in the market, and there will likewise always be those who will insist on selling out and quitting the business when the price is down and then just as anxiously trying to get back in when prices are high. They are always going out on a low market and getting in again on a high market. This is poor policy and should not be followed.

With present pork conditions there is much encouragement for the man with a good crop of pigs. It will pay to give them good care, feeding them a little grain in addition to the pasture, in order that they may reach good weights early in the season.

American Royal Show

The present prospects are that the American Royal Live Stock Show will be larger this year than in any previous year of its history. It will be held in Convention Hall, Kansas City, Mo., October 2-7. It is strictly a breeders' show, and this year will be devoted exclusively to beef cattle. Breeders of beef cattle are feeling much encouraged over the increased demand for good breeding stock, and are looking forward to this year's show with a great deal of eagerness. There will be more space available than last year, so the cattle can be displayed to better advantage.

The entire block across the street from Convention Hall will be used for stabling cattle.

More than \$12,000 will be offered in prizes in the breeding classes alone, and there will be more than the usual amount of money offered for carlots of range cattle. A calf class has been added to the range division of the show.

Buy Good Bull

In cattle improvement it is not enough simply to buy a registered bull. He must be good individually. He should be compact and blocky, broad, deep, low set, with straight top and underline, showing lots of constitution and masculinity. Look out for the bull that drops behind the shoulder, has a long face and narrow chest, because he lacks constitution. Also avoid the bull that has flat ribs, making a narrow back and hips, because it is on the back and hips that the highest priced cuts are found.

In buying a pure-bred bull his registration and the reputation of the breeder are the only means we have of knowing the value of the animal before he has been tried, and it is important to investigate before purchasing. It is quite easy to find a good bull for \$200, and one of this type will easily pay for himself the first year by adding \$5 per head to the value of the calves.

More Kafir-Fed Cattle

More cattle finished on kafir and other grain sorghums have been sold on the Kansas City market above the nine-

dollar mark this season than at any other time in the history of the yards. This is an indication that these grains are being given their true value by the cattlemen of the part of the country where they can be successfully grown. Apparently it has taken a long time for cattle feeders to grant this recognition to these grains.

A Kiowa County feeder has recently marketed part of a lot of 240 head that he has been feeding on ground kafir, feterita, and silage. The cattle sold brought \$9.15 a hundred. The ration was balanced with alfalfa and a little cottonseed cake. The ones marketed were fed less than 100 days and gained more than 2½ pounds a day. In view of the low cost of the feeds used, these cattle have certainly made a profit for the feeder.

With such results in full-feeding cattle on western-grown feeds, there seems to be little reason why more diversified farming cannot be practiced in that part of the state.

Demand for Pure-Breds

The prevailing demand for registered cattle breeding stock of various breeds is broader in its scope than has ever been known in the history of live stock husbandry, and this is reflected in the prices. While Shorthorns have had no spectacular prices, fortunately for the breed, the uniform range of values has been strong, furnishing the evidence of a substantial demand. In recent public sales over five hundred Shorthorns have sold for an average slightly above \$750 per head. One hundred and forty-three Shorthorns have sold in these public sales for \$1,000 or more each. Yet only five of the number exceeded \$3,000 and only one above \$4,000, this one, Lord Avondale, selling for an even \$5,000. It is this steady, even run of prices that reveals the healthy tone to the business and an analysis of the list of the purchasers and the purposes for which their investments

have been made, furnishes an even more substantial aspect.

The spread of prices at the beef market centers offers no encouragement to the scrub or inferior animal. The bidding is all in favor of the well-bred steer, and each year shows a more positive inclination in that direction. This and the recognized scarcity of good cattle is the basis of the present activity in the pure-bred cattle trade. The element of speculation is lacking; it is the practical beef producer and the dairyman who are the buyers, and this includes a growing trade with Argentina and other South American countries.

The breeder of registered cattle has long occupied an enviable position, and it is, from year to year, growing more so. It is the increasing recognition of the value of good foundation stock.—FRANK D. TOMSON.

Oilers for Hog Lice

Of the remedies commonly used for lice on hogs, crude oil is probably the cheapest and the most effective. It kills not only the lice but the nits as well at one application. The most convenient method of applying is by means of a hog oiler, of which there are several good types. These have the advantage of being always ready and need little attention except keeping oil supplied. The best type of oiler is one that enables the pig to get the oil to all parts of the body. The oil can also be applied with a sprinkler, a spray pump, or a broom or brush. If there is any indication of skin disease, the part should be scrubbed with a broom or brush so as to get the oil well into the skin. Where crude oil is used, it will be noticed that the skin and hair are improved in appearance. Where any of the coal tar dips are used, at least two applications should be made at intervals of seven days. Where the floors of the pens or sheds are of dirt, a liberal application of oil will keep down the dust as well as aid in killing lice.



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Kansas Farmer Dairy Club

Care Must Be Taken In Taking Samples For Test

IN ORDER to make the butter fat test reliable, the sample must be properly taken. We fear some of our Kansas Farmer Dairy Club members have not followed the instructions given in our issue of May 13 in taking their samples. A test of over 9 per cent butter fat could only occur in a cow almost dry. One cow recently completed a year's record with an average butter fat test of over 8 per cent, but it is so unusual that this cow is considered a freak.

Two samples sent in by members for the June test have tested over 9 per cent. This is so unusual that these tests will have to be verified before being placed in the records. We know all the members will be anxious to have their records accurate and we suggest that this article in the May 13 issue be referred to before taking each sample.

Remember, all the milk drawn must be in the pail when the sample is taken. It must be thoroughly stirred. Pour the milk from one pail to another two or three times and then immediately take out the sample. Only by so doing will the sample give the true butter fat test.

We have arranged to supply two-ounce bottles with the proper container for mailing. These will cost our club members 10 cents for each set of bottle and container. In taking the sample, enough should be taken from the morning's milk to fill the bottle half full. Fill the bottle with the sample from the night's milking. Unless the bottles are filled the milk will churn and it will be more difficult to make the test.

It is of no value to have a butter fat test that is inaccurate. You want to know exactly how much butter fat your cow is making—you can know this by getting an accurate test.

The per cent of butter fat is a fixed characteristic. A cow's milk will not vary much in test during the year. As the year progresses it will gradually get richer, the highest test being just before the cow goes dry. After you have once had a fair test made you can predict with a reasonable degree of accuracy how the test will run from week to week.

To increase the total quantity of butter fat, the quantity of milk must be increased. No method of feeding can vary the test.

Skim Milk Value

The question asked by Elise Regier, regarding the value of skim milk, will no doubt be of interest to all dairy club members, and for this reason we are herewith giving our reply to her:

To get at the money value of skim milk, it is necessary to know something about the results that can be secured from feeding it. Skim milk and corn go well together, each supplying the other's deficiency. In feeding skim milk to pigs, the best results will follow feeding one pound of corn to three pounds—about a quart and a half—of skim milk. Fed in this way, 100 pounds of skim milk is worth about 32 cents when corn is worth 60 cents a bushel. In feeding it to calves, the value will be about the same.

Father Helped Select Cow

I thought I would write and tell you how I am getting along. Father helped me buy my cow. I paid \$85 for her and she is five years old. She is giving between thirty and thirty-seven pounds of

milk a day. I am selling my cream to the creamery and I am giving part of my skim milk to the calf, the rest I am giving to papa.

I have not received a letter from my test yet, but I don't know why. I am going to write and see why they do not send me the test. I sent the milk about two weeks ago.

I will send you a picture in the next letter. But I want to say that my calf is doing just fine. Papa offered me \$10 right away for the calf.—HAROLD M. BENTZ, Marion County.

Milking Three Times a Day

I have read a few interesting letters in KANSAS FARMER, so I will write one also.

Have taken a picture of my cow and myself, but it is not very good, so I will have it taken again and send it to you later.

My cow is doing fine. She is now giving above seventy-two pounds of milk a day. I milk her three times a day. I sell the cream to the creamery and the skim milk to my father. If corn is worth 60 cents a bushel, what then is the value of skim milk?

I am glad I joined the dairy club. I read about it in KANSAS FARMER and learn much about it.

I sent a sample of milk to Manhattan June 19 but have not received an answer yet. Did I send that sample too late?—ELISE REGIER, Butler County.

Owens Three Head of Cattle

I received your letter yesterday and received the year's supply of records the day I wrote the other letter. I will send you the April blank in a few days.

My cow is sure a dandy. She is very gentle and the calf is in good condition. He is a rich, dark red. I now have three head of cattle—my cow, a heifer papa gave me last spring, and my cow's calf.

I will send you my blanks as soon as I hear how much the milk tested. Martha's cream is fine.—LELA MAE HAYNES, Rawlins County.

Cows Need Plenty of Water

Cows giving milk must have an abundance of water and it should be clean. Unless you have carried water to a milk cow until she would drink no more, you have no idea how much she will drink. Milk is over 80 per cent water, and this all comes from the water the cow drinks. Nothing will pull your cow down in milk flow more quickly than will lack of water. Be sure she has all she will drink every day even if you have to carry it to her.

Be sure and send for sample bottles and mailing cases if you have not already made arrangements for them. We can supply a bottle and mailing case for 10 cents. We can also send you corrosive sublimate tablets for 10 cents a dozen if you cannot get them at the drug store or cream station. Remember these corrosive sublimate tablets are deadly poison and should never be put near the mouth.

There is less loss from damaged hay in large stacks or ricks than in small ones, but a stack at its best is a makeshift in a humid climate.



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Preventing and Destroying Lice

POULTRY lice exist at all seasons of the year, but they are most troublesome during the summer, especially in July and August. They remain inactive while the weather is cold, but as soon as higher temperatures return they are out of their winter quarters, ready to attack the fowls. Even if the poultry house appears clean and no lice are visible, look out for them. The earlier you tackle them the better, before they become too active, for the longer you wait the more plentiful will be the hordes of the enemy.

Filth of all kinds furnishes a breeding place for lice. They abound where fowls are overcrowded. The little red mites will breed in the droppings and in dirty nest boxes. They hide in every crack and crevice, during the day, and come out on the roosts at night to annoy the fowls. These are more easily prevented and destroyed than the large gray lice, which seldom leave the fowl's body. Each individual fowl must be handled and a close search made. If lice are found, apply a little sweet oil or a little melted lard, to which has been added a few drops of the oil of sassafras. Drop it from a sewing machine can or a medicine dropper. Use only a drop or two, as grease often kills young chicks by closing up the pores of the body. By keeping a keen eye on the young poultry, the presence of lice can be detected by the following symptoms: Diarrhea, a drowsy or sleepy appearance. They will droop and mope, and become very thin and weak. Slow growing and constant crying are marked symptoms. When any or all of these appear, look on the head, neck, vent, and under the wings for the large gray lice. When young chicks seem to eat with difficulty, look on the throat in front for the lice, for a few lice on the throat will kill most chicks.

Keep a clean dust bath within easy reach of the fowls, and they will rid themselves of the little red mites. If they refuse to use the dust bath in the poultry house during the summer, spade up a fresh clean spot in the yard, and see how freely they will wallow on it. They like a moist place to wallow in, rather than a dry one. An unhealthy fowl will not dust itself regularly. Keep all such away from the others, and sprinkle them daily with fresh insect powder, being careful to get the powder well under the feathers. To make your own insect powder, take half a bushel of pulverized air-slaked lime, ten pounds of flower of sulphur and one ounce of crude carbolic acid. Stir well with a stick. When dry it can be safely handled. Drive all the fowls out of the house and give it a thorough cleaning, then throw the mixture over the roosts, walls, floors, into the nest boxes and into every crack and crevice. This may seem too much like work, but it pays. You cannot afford to neglect your poultry, allow lice to sap their blood all summer, and then look for a large supply of eggs in the fall and early winter. If the lice have gotten a good start on you, the task will be more laborious. The liquid process is then the only sure remedy. To a tubful of strong soapsuds add half a pint of crude carbolic acid. Saturate everything in the poultry house, walls, roof, nest boxes and floor. Close the house and burn one pound of sulphur in it. Repeat every week till the lice are all destroyed.

Kerosene emulsion is a speedy cure for lice, but considerable time is required to make it. Cut up half a pound of hard soap in a gallon of soft water; place on the stove; when the water boils and the soap is dissolved, remove and add one gallon of kerosene oil. Stir with a paddle until a creamy mess is formed, which becomes a jelly when cold. Add ten gallons of water or soapsuds from the family washing, and the emulsion is ready for use, to be sprayed all over the poultry house.

Remedy for Scaly Legs

A correspondent wants a remedy for an aggravated case of scaly legs, saying that the usual remedy of coal oil and lard failed to clean the legs. Maybe the inquirer did not apply the remedy long enough, for if persisted in this remedy will clean the legs of all scales. It will take several applications to take the scales from the legs of some fowls that are badly afflicted, and the lard and kerosene should be applied two or three

times a week for a month. If you want the legs of your scaly-legged fowls cleaned up in a hurry, so as to take them to some show or fair, you can accelerate the cure by adding a few drops of carbolic acid to the above remedy. Another plan is to anoint the legs with sweet oil, in which a few drops of carbolic acid has been mixed, then wrap the legs tightly with a cotton or woolen bandage. After the bandage has been on a few days, take it off and grease the legs again, or if preferred you can leave the bandage on and soak thoroughly with the oil and acid again. If carbolated vaseline is handy it will take the place of the sweet oil and carbolic acid, as one might, if not careful, put too much acid in the oil and hurt the fowl's legs. When you finally take off the bandage you will have to be careful of the fowls for a few days, for the legs will be very tender, and we have seen them bleed when the scales have been extra thick. If the hens see blood on the legs of other fowls they are apt to pick at them until their legs get very sore, so it would be well to isolate those hens that have been treated until such time as their legs are normal again. After the scales are off it is a good plan to rub the legs occasionally with sweet oil, without any acid, and this will keep them in good condition. Remember that these scales on the legs of the fowls are parasites and prey on the blood of the fowls, also that they are contagious and if a few fowls are affected they will soon communicate the disease to the balance of the flock.

See that the chicks are not overcrowded. Remember that as they grow larger they need more room.

Overfeeding often gets away with quite a number of chicks, but not as many as die from over-crowded conditions.

Shade for the chickens during hot weather is as essential as good food. They won't thrive if they have to be in the hot sun all day.

Avoid crowding by keeping in small flocks, and by providing roomy coops. Thin out if there are too many chicks.

Broody hens should be removed to slat-bottomed coops as soon as discovered. Leave them there till they forget it.

Clean fresh water lessens disease. Filthy drinking water is the source of much trouble. Clean the drinking pans frequently.

If hens are lousy, rub a piece of blue ointment, the size of a pea, into the skin just beneath the vent and on the under side of the wings.

Mites are sure to accumulate if the droppings are not removed from the poultry house every week, and the roosts sprayed with kerosene emulsion or a disinfectant.

After the grass gets tough, chicks can catch more bugs and worms and will grow better on loose soil. The cornfield furnishes ideal conditions for the raising of a young flock.

There can be no error in mixing cut vegetables and other soft food for the fowls, for their nature craves it. There are eggs in potatoes, and the squash adds a nice flavor to poultry meat. One of the best articles of diet for them is young clover cut fine, and they are very fond of it.

Give animal food to the hens in time, before they quit laying, and it will hurry them through the molting season. They will not then stand around looking haggard and miserable for weeks, but will go to singing, and soon be ready for business again. You will be sure of plenty of eggs in the fall.

Little chickens cannot be kept on grass to good advantage, unless they have some way of getting grit or are furnished with it, for they will soon droop and die unless they have something with which to grind their food. It is well to move the coop often so as to have a fresh supply of grass, but don't forget that they must also have their box of grit or shells in order to do well.



COUNT your fence posts and you will find one out of every eight has to be replaced this year. The same will be true next year, and the next. **PUT AN END TO THIS LOSS—end all repairs and replacements by using**

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Write F. W. Tyler, Commercial Club, Hutchinson, for further particulars.

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RANCH FOR SALE.
 1,280 Acres, two streams, two sets improvements; 175 acres under irrigation, fenced and cross-fenced, outside range. \$10.00 per acre. No trade considered. This is a bargain.

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 480 Acres Unimproved Wheat Land, one mile west of Shields, Lane County. Reference required.

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Lawrence, Kan. Will sell my new home there, or trade for North Central Kansas farm.

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One Thousand Acre Stock Ranch in Kansas to exchange for rental property or merchandise. **W. C. Bryant, Elk City, Kansas.**

20 ACRES, 2 1/2 mi. business center McAlester, Okla. 15,000; all tillable, dry black bottom; 11 a. cultivation; fine for truck, fruit and poultry. \$35 per a. Terms.

SOUTHERN REALTY CO., McAlester, Okla.

120 Acres Bottom, 100 cultivation, cotton, corn, alfalfa; fences hog-tight; large house. Terms. Owner, J. F. Greene, Hanna, Okla.

IDEAL FARM
 800 Acres adjoining town; two sets of buildings; every acre lays perfect; 250 acres of finest growing wheat, all goes with sale if sold before cutting, which will be about July 4th. Price, \$27.50 per acre. Will carry \$10,000 at 6%. No trades. Other bargains.

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OLD ESTABLISHED CATTLE RANCH.
"YOUR OPPORTUNITY"

1,120 acres improved, all smooth, best of soil, free from rock. Sheet water at 85 feet, 3 1/2 miles to shipping point. 5 1/2 miles to county seat. Fair house, barn, shedding, fence, etc. Price, terms, \$12 per acre.

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THIS WILL INTEREST YOU

Do you want to move to Topeka to educate your children? If you do, this modern five-room home near Washburn College will just suit you. New, only occupied ten months. A choice location. Must sell quick. \$3,200 takes it. Address **S. CARE KANSAS FARMER, TOPEKA.**

320 ACRES

Two miles of town, all smooth, tillable land, nicely located, nicely divided into farming land, meadow and tame grass, well watered, close to school, splendid neighborhood. Write for full particulars and descriptive booklet of farm bargains.

MANSFIELD LAND CO., OTTAWA, KAN.

LOUISIANA LAND

We are offering 25,000 acres of our cut-over uplands for sale and settlement. The price ranges from \$12.50 to \$25 per acre. Easy terms. Lands are located in Bossier County, La., near Shreveport, La., and adjoining on the east the celebrated Caddo Oil Field. We are offering a good investment. These lands will grow all kinds of agricultural and fruit crops, and are well adapted to stock raising. Write for booklet. Address **Land Department, S. H. Bolinger & Company, Shreveport, Louisiana.**

When Writing to Advertisers, Please Mention Kansas Farmer



Little Talks to Housekeepers

Helpful Hints Here for the Women Folks of the Farm

Suppose a neighbor should desire To light a candle at your fire, Would it deprive your flame of light Because another profits by 't? —Robert Lloyd.

Men and women are only children grown. If in the child has been cultivated the love of good reading and good companions, if in him has been rooted the principles of right living, all these things will be a part of him when he reaches manhood.

A nation is made great, not by its fruitful acres, but by the men who cultivate them; not by its great forests, but by the men who use them; not by its mines, but by the men who work in them; not by its railways, but by the men who build and run them. America was a great land when Columbus discovered it; Americans have made it a great nation. —LYMAN ABBOTT.

Table Appearance Important

While the way a meal is cooked has much to do with making it appetizing or unappetizing, the way it is served is also important. A well cooked meal served on a soiled table cloth has lost a part of its value.

Preserves and jams set on and off the table meal after meal without being

thought and care that will influence him to know the real value of life. He may even then fall short of the parents' hopes, but the struggle to live right will not be nearly so hard if the principles of right living are lovingly taught in the early years and appeals are made to his reason before it is too late.

Cockroach Remedy

The cockroach is a hard insect to destroy and success usually results only from long, careful, persistent treatment with either one of the better powders sold on the market for that purpose or with a mixture of three parts of flour with one part of plaster of paris. Set this dry mixture in a low flat dish where the roaches can reach it and put a saucer of water beside it. Any roach that eats and drinks at these two dishes will cease to be troublesome. Powdered sweet chocolate mixed with equal parts of borax and scattered about cracks and crevices will also help to reduce cockroaches. —Missouri College of Agriculture.

Home-Made Summer Drinks

When the heat of summer is oppressive, nothing is more refreshing than a cool, appetizing drink.

BABY

Will be Well and Happy If He

Has the Right Food
 Has a Bath Every Day
 And is Kept Dry and Clean
 Has His Meals Served on Time
 Sleeps Alone in a Quiet, Cool Place
 Breathes Fresh Air Day and Night
 Is Given Pure, Cool Water to Drink
 Is Dressed According to the Weather
 Is Protected from Flies and Mosquitoes
 Is Kept Away from Sick Folks and Crowds
 Does Not Have to be "Shown Off" for Visitors

NOBODY SHOULD KISS HIM ON THE MOUTH—NOT EVEN HIS MOTHER

BABY

Will be Unhappy and Cross If He

Is Fed at the Family Table
 Is Taken Up Whenever He Cries
 Is Allowed to Go Thirsty
 Is Not Kept Dry and Clean
 Is Taken to the "Movies"
 Is Kept Up Late
 Is Bounced Up and Down
 Is Bothered by Flies and Mosquitoes
 Is Given a Pacifier
 Is Dosed with Medicine
 Is Teased and Made to "Show Off"
 Is Not a Fresh-Air Baby

IT IS EASIER TO KEEP BABY WELL THAN TO CURE HIM WHEN HE GETS SICK

—Department of Child Hygiene
 Kansas State Board of Health

emptied and the dish washed, also mar the appearance of the table and weaken the appetite. Such things will be better relished if served in small quantities, returning to the jar any that is left in the dish.

The influence of the appearance of the meal upon the taste is greater than many realize, which must account for the carelessness of some housewives we have known, in this matter.

"Kicks and Cuffs"

"He's getting too old to be kicked and cuffed around" is a remark that reached our ears recently on a street car. We wanted to turn square around and look into the face of that mother—we know she was a mother for her young son went to the front of the car though she told him not to do so.

In the course of the conversation it developed that the object of the remark was a neighbor's son who had become unmanageable. We could not help pitying the child and wondering what his future would be, prepared for amid such influences.

Such parents are partly responsible for the need of reformatories and jails. They know not how to control their temper, it is meted out to the children, and they in turn follow their example until outside help is called in to restrain them.

What a pity it is that the moulding of manly men and womanly women is not recognized as the highest calling in the world, and that a child should be born into the world without receiving the

The use of sugar syrup will be economical in preparing drinks, as it will easily mix with the other liquid, whereas sugar is seldom dissolved thoroughly and consequently more is required to satisfy the taste. Stir a cupful of sugar in one-half cupful of water until it is thoroughly dissolved. Cook this from three to five minutes. This syrup can be made in large quantities and kept on hand.

A slice of lemon in a glass of iced tea adds a pleasant flavor. The tea can be made double strength and diluted. Tea is so easily made that it may be prepared at any time. Since indifferently made tea is neither palatable nor healthful, care should be used in buying and preparing this drink.

Iced coffee also quenches the thirst. The coffee left from breakfast may be strained, sweetened and diluted with cream and chilled. A tablespoonful of ice cream added to the cold coffee improves the flavor.

Fruit punch can be easily made. This requires one-half cupful syrup, one-half cupful cold tea, three-eighths cupful orange juice, and one-sixth cupful lemon juice. To this mixture add one-half pint ginger just before serving. A thin slice of orange will also increase the flavor. In preparing this, combine all liquids excepting the ginger, adding ginger and slice of orange at time of serving.

Mint punch is made by combining the juice of one orange and the juice of a half lemon. This is sweetened with one-fourth cupful syrup and diluted with



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Placed anywhere, **Daley Fly Killer** attracts and kills all flies. Neat, clean, ornamental, convenient, and cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Ask for **Daley Fly Killer** Sold by dealers, or 5 cent by express, prepaid, \$1.00.

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A special selection of pretty patterns. Large illustrations with complete instructions. Over 50 new designs applied to Handkerchiefs, Towels, Yokes, Curtains, etc.

Every page useful. Price, postpaid, 10c. Pattern Dept. **KANSAS FARMER** Topeka, Kan.

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TO SELL AT A BARGAIN
 Inside location, on a good street, near school. Seven-room house, all modern conveniences. Good barn. This proposition will interest anyone wanting a choice location and a good home. Priced to sell. No trades. Address

BOX 5, Care KANSAS FARMER

water until it is of suitable strength. Just before serving add mint leaves.

Blackberry nectar requires one cupful blackberry juice, two tablespoonfuls orange juice, the same amount of lemon juice, and four tablespoonfuls syrup. Combine these, strain, and cool. Another way of preparing this drink is to use one-half cupful of shredded pineapple, one-eighth cupful blackberry juice, the same amount of lemon juice, one-fourth cupful orange juice, and one-fourth cupful syrup. Dilute this mixture with water to the desired strength.

For grape nectar, use one-half cupful grape juice, one-half cupful water, juice of one-half orange, juice of one-half lemon, and two tablespoonfuls sugar. Mix these and dilute to the strength desired.

One-Egg Cake

1 cupful butter
1 cupful sugar
1 egg
1 cupful milk
1 cupful flour
2 teaspoonfuls baking powder
Cream the butter, add sugar gradually and the egg well beaten. Mix flour and baking powder and sift and add alternately with the milk to first mixture. Bake in shallow pan for thirty minutes.

Lemon Filling

1 cupful sugar
2 1/2 tablespoonfuls flour
Grated rind 2 lemons
1 cupful lemon juice
1 egg
1 teaspoonful butter
Mix sugar and flour, add grated rind, lemon juice, and egg slightly beaten. Put butter in saucepan and melt, adding mixture, stirring constantly until boil-

ing point is reached. Mixture must not be allowed to stick to bottom of pan. Cool before spreading.

Orange Filling

1/2 cupful sugar
2 1/2 tablespoonfuls flour
Grated rind 1/2 orange
1/2 cupful orange juice
1/2 tablespoonful lemon juice
1 egg slightly beaten

Mix ingredients in order named, cook ten minutes in double boiler, stirring all the time. Cool before spreading.

An Infallible Recipe.

Little Eunice was attending her first class in domestic science and was asked to tell briefly the surest way to keep milk from souring. And Eunice, who was an exceedingly practical child, gave this recipe: "Leave it in the cow."—Exchange.

Try cooking carrots every way that you cook potatoes. This lends variety which increases their palatability.

Summer Fashion Book, 10 Cents

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

FASHION DEPARTMENT — ALL PATTERNS TEN CENTS

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



No. 7768—Children's Dress: Cut in sizes 2, 4 and 6 years. A type of dress that will be popular with mothers and pretty if made in pique, gingham, cotton poplin or such fabric. The surplice closing of the front that is all over on one side, is the distinguishing feature. Edging or scalloping provides a neat decoration. No. 7760—Ladies' Shirtwaist: Cut in sizes 34 to 44 inches bust measure. Summery and graceful in its lines is this waist, which is gathered front and back to a "drop waist" in curved outline. The collar is made richer with edging and a deep cuff on the short sleeve is similarly favored. No. 7788—Children's Dress: Cut in sizes 4, 6 and 8 years. The blouse of this dress has a deep and fancy drop yoke from which the sleeves take their top part; the front edges of the yoke have eyelets for buttons. The plaited skirt is joined to an underwaist. No. 7791—Ladies' Negligee: Cut in sizes 36, 40 and 44 inches bust measure. This negligee has a deep cape collar which is in contrasting goods with lace or edging for a finish. An elastic band at the raised waistline brings the fullness into folds, giving graceful fall to the full length skirt section. No. 7795—Ladies' Skirt: Cut in sizes 24 to 30 inches waist measure. This very attractive model is made with yokes and has the side fullness gathered at the hips. Inverted plaits at each side of the front and back are features that aid in giving panel effect to the front and back of the garment. The shirring may be omitted. No. 7785—Ladies' Dress: Cut in sizes 36 to 42 inches bust measure. A dress that is up to the minute in fashion detail. At a glance we note the striking combination effect. The blouse is made of plain material. Use your own judgment about accepting the peplum that is offered. The skirt is cut in four gores.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 300,000 readers for 4 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order. SITUATIONS WANTED ads, up to 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

HELP WANTED.

GOVERNMENT FARMERS NEEDED—Big salaries. Permanent job. Light work. Write Ozment, 44 E. St. Louis, Mo.

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

WANTED FARMERS—MEN AND WOMEN, 18 or over, for government jobs. \$75 month. Steady work. Common education sufficient. Write immediately for list positions now obtainable. Franklin Institute, Dept. M-82, Rochester, N. Y.

CATTLE.

FOR SALE—TWO YOUNG REGISTERED Holstein cows, heavy milkers. H. J. Franklin, Melvern, Kan.

RICHLY BRED SHORTHORN BULLS, from good milking dams, at farmer prices. Schlegel Bros., Route 5, Ft. Scott, Kan.

FOR SALE—FOUR RECORDED HOLSTEIN bulls, seven cows, five heifers. Some fresh, some freshen thirty days. Write for what you want. F. A. Kinsey, Troy, Kan.

THE JEFFERSON COUNTY GUERNSEY Breeders' Association can furnish cows that will make good records in Kansas Farmer Dairy Club Contest. Klement Bros., drivers. H. A. Main, Secy., Fort Atkinson, 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.

BEE SUPPLIES.

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

HOGS.

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

WHITEWATER, KANSAS, June 19, 1916.

KANSAS FARMER, Topeka, Kansas.

It pays to advertise in KANSAS FARMER. We sold ten young Holstein sires since December last. Yours truly,

REGIER & SONS.

POULTRY.

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

500 BARRED ROCK BABY CHICKS, 10 cents each. Eggs, \$3 per hundred. Earl Summa, Gentry, Mo.

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

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

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

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

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.

POULTRY WANTED.

POULTRY WANTED. COOPS LOANED free. Cash offers on request. Daily remittance. The Copes, Topeka.

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.

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

FARMS WANTED.

FARMS WANTED—HAVE 4,000 BUYERS. Describe your unsold property. 614 Farmers Exchange, Denver, Colo.

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

DOGS.

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

FOR SALE—CHOICE THOROUGHbred Collie pups. Extra well trained parents. Males, \$8; females, \$5. L. A. Whitten, Geneva, Neb.

MISCELLANEOUS.

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

FOR SALE—LATEST PLAT BOOK OF Shawnee County, 44 pages, size 14 x 19 inches. Shows each township in the county, with name of each property owner on his land, also rural routes, school houses, railroads and complete alphabetical list of taxpayers in county outside Topeka and Oakland. Satisfaction guaranteed. Cloth binding, \$5.00. To close out remaining Bristol board binding will sell a year's subscription to Kansas Farmer and Plat Book for only \$1.50. Last previous county map sold for \$10. Send all orders to Kansas Farmer, Topeka, Kan.

THE STRAY LIST.

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

TRACTORS.

FOR SALE—CASE 10-20 GAS TRACTOR, never been used. Thos. Chipp, New Hampton, Mo.

REAL ESTATE.

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

PURCHASE A FARM HOME IN THE Downing dairy and stock raising section. Near Minneapolis and St. Paul. Fertile soil, prosperous community. Lands \$20 and up. Send for list. Coolidge Co., Downing, Wis.

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

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

WANTED

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

WANTED—TO LEASE A GOOD STOCK and grain farm. Can give first class recommendation. J. O. Powell, Olathe, Kan.

WANTED—NEW ZEALAND RED Rabbits, two does and buck. Give age and price, also weight of grown rabbits. A. E. Limerick, Jr., Columbia, Mo.

Miss Merrill, a teacher in a grade school, had trouble with Johnnie last week. Johnnie had trouble doing his work and the authorities finally discovered that his sight was defective. Miss Merrill sent Johnnie home with a note to his mother. He gazed at the note in horror, then at the teacher, and burst into tears. The note read: "Johnnie has astigmatism; do not let him return to school until he has been attended to."

Miss Merrill understood his grief better when she received a note from his mother. It read:

"I don't know what he had done, but I licked him for it. I can't find it on him, and he says he ain't got it; now you better lick him and see if you can find it."

HORSES AND MULES.



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.

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 Siroco (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

POLAND CHINAS



FAULKNER'S Famous Spotted Polands

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

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

POLAND CHINAS.

Poland China Boars

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

P. M. ANDERSON, Lathrop, Mo.

HENRY'S BIG-TYPE POLANDS

Fall boars, also gilts bred or open, sired by Mammoth Orange. Spring pigs by Mammoth Orange and Big Bob Wonder. JOHN D. HENRY, Route 1, Leecombe, Kan.

POLAND CHINAS

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

A. J. SWINGLE - Leonardville, Kansas.

LANGFORD'S SPOTTED POLANDS. Mr. Farmer, look this way. Pigs ready to ship. T. T. Langford & Sons, Jamesport, Mo.

GALLOWAY CATTLE.

GALLOWAY BULLS

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

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

SHORTHORN CATTLE.

VAIL HERD SHORTHORNS

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

Sycamore Springs Shorthorns

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

M. M. HILL - LAFONTAINE, KANSAS

RIVERSIDE SHORTHORNS

Headed by Prince Valentine 4th 342179. Families represented, Orange Blossoms, Butterflies, Queen of Beauty and Violets. H. H. HOLMES, Route 1, Great Bend, Kan.

LOWMONT SHORTHORNS.

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

OHIO IMPROVED CHESTERS

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

GOOKIN'S O. I. C's. For Sale—White King 36445 by Chief of All and out of Minnehaha. Spring pigs, pairs and trios, no kin.

F. C. GOOKIN, Route 1, RUSSELL, KANSAS

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 17999, a 3,400-pound bull; also a few good cows and heifers. AULD BROTHERS, FRANKFORT, KAN.

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.

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.

HORSES AND MULES.

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.

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A. M. DULL & SONS - WASHINGTON, KANSAS

POLAND CHINAS.

OLD ORIGINAL SPOTTED POLANDS

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

A. S. Alexander, Prop. Burlington, Kansas

BRED SOWS AND GILTS 100 Head, all immune, big-type Poland China sows and gilts, bred for July and September farrow. A few choice, October boars. Prices reasonable. THE DEMING RANCH, OSWEGO, KANSAS

H. O. Sheldon, Herdsman

HORSES AND MULES.

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, Charlton, Iowa. 47 Trains Daily

SHROPSHIRE SHEEP

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

BERKSHIRE HOGS.

BERKSHIRE BRED SOWS

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

E. D. KING - BURLINGTON, KANSAS

DUROC JERSEYS.

PATTERSON'S DUROCS

For Sale—Ten head of young Duroc Jersey cows, bred to one of the best bulls in the state for fall farrow; also spring pigs, both sexes. Price reasonable.

ARTHUR A. PATTERSON, Ellsworth, Kan.

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

G. M. SHEPHERD - LYONS, KANSAS

HEREFORD CATTLE.

Herefords and Percherons

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

WILLIAMS & SONS HEREFORDS

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

SOUTHARD'S MONARCH HEREFORDS

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

MULEFOOT HOGS.

Bargains in Bred Sows, Fall Boars and Pigs at weaning time. Pair no skin. History free. Sinn's Mulefoot Ranch, Alexandria, Neb.

Breeder's Directory

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

Contagious Abortion Serious

Stockman Should Realize Danger From Disease and Necessity for its Prevention

CONTAGIOUS abortion among cattle, the annual loss from which was estimated a few years ago to be \$20,000,000, is spreading so rapidly through the country that from an economic standpoint it threatens to become one of the most important of animal diseases. Formerly confined almost exclusively to dairy cows and farm beef herds, it has now found its way to the range, where losses in some instances have run as high as one-half of the calf crop. Here the conditions are such as to make its control difficult. For this reason it is important that stockmen should realize the seriousness of the disease and the necessity for the adoption of measures for preventing its spread.

At the present time sanitary and hygienic measures are the only means of control which have demonstrated their effectiveness. The drugs and proprietary preparations which have been advocated for the cure or prevention of the disease are regarded by the specialists of the Federal Department of Agriculture as ineffective, and their use can not be recommended. On the other hand, it is certain that proper disinfection of premises, and in particular of breeding animals, will do much to minimize losses.

METHODS OF TREATMENT

Recently preparations known as "bacterins," consisting of a suspension of the killed organisms of abortion, and serum obtained from infected animals, have come into use and can be obtained from several firms who manufacture biologic products. These products are still in the experimental stage, and much time must elapse before their true value can be determined. Notwithstanding this fact, this line of treatment offers the most scientific and reasonable method of combating the disease, and our only hope of eventually controlling abortion lies in the future development of an effective vaccine or serum.

The organism which causes the disease may be conveyed from cow to cow by means of the bull or may enter the system with contaminated food. All aborting animals and all showing a discharge should, therefore, be isolated from the healthy members of the herd in order to eliminate, so far as possible, infective material. Infected stables should be thoroughly cleansed with a standard disinfectant applied with a force or spray pump, the disinfection of the contaminated stall being repeated after each abortion. Manure and contaminated litter should be promptly removed and plowed under to prevent access to it by other cattle. Detailed instructions for the disinfection of both the cow and the bull are contained in Circular 216 of the Bureau of Animal Industry, which can be obtained from the Department of Agriculture, Washington, D. C.

Many herd owners fail to observe these precautions because they do not realize that the infection is present in their herds. The disease is insidious, it usually requires a long time to develop,

does not reveal itself by warning symptoms, and does not, indeed, appear to affect in any way the general health of the animal. In consequence, it is quite likely that the infection will have spread throughout the herd before the owner is aware of any danger. There are, it is true, certain tests which can be employed to ascertain the presence of the infection, but from a practical standpoint these possess some drawbacks. All infected animals do not abort. Furthermore, after two or three abortions, cows appear to acquire a natural immunity, and are thereafter quite capable of normal reproduction, although they continue to react to the tests. A positive reaction, therefore, does not necessarily mean that a healthy calf will not be born.

IMMUNE COWS GIVE DISEASE

On the other hand, the fact that several animals have aborted within a short period is in itself suggestive evidence of the disease. Furthermore, it sometimes happens that in cows which have acquired immunity, although apparently healthy themselves, the infection persists and they are able to transmit the disease to others. For this reason, when the infection has once established itself in a herd, the whole herd should be considered infected, and all abortions, retained afterbirths, and all tendency to sterility should be regarded as manifestations of the disease.

This does not mean, however, that all infected animals are to be disposed of. As a matter of fact, in herds in which the disease has gained a foothold, a cow that has aborted once or twice is in some ways more valuable than one that has not. It is safe to say that in practically no case do more than three abortions take place, and in the majority of instances there are not more than two. Cows which are not made sterile will in all probability resume normal reproduction. On the other hand, if they are removed to make way for fresh animals, there is a strong possibility that the newcomers already are, or soon will be, infected, and are actually further from immunity than the old ones. The elimination of infected animals is therefore not to be recommended as a means of controlling the disease, unless their value is not great enough to warrant the expense of treatment.

DISEASE HAS MANY COMPLICATIONS.

A train of complications often accompanies abortion, and of these retained afterbirth is perhaps the commonest. This, if neglected or improperly treated, may result in absorption of poisonous products, septicemia, and death. Also sterility may follow, ruining the cow for everything except slaughter. Calf scours, too, seems more destructive in herds affected with abortion.

These complications, together with the great loss in calves and the lessened milk production, make the wide and ever extending distribution of the disease a matter of tremendous importance, both to the dairy and beef industries.

Tractor Demonstration Educational Event

THERE will be five days of actual work at the tractor demonstration, including disking, plowing, harrowing, drilling, packing, rolling, cultivating, clod crushing, and road building. A rigid set of rules has been adopted and every company entering will be compelled to follow them to the letter. These rules were prepared by a committee representing the American Society of Agricultural Engineers. They were given in full in our issue of June 24. Those who expect to attend will be glad to learn that so strict a set of rules has been adopted.

It will take five special trains to move the tractors and other equipment entered for this series of demonstrations. There will be fully a thousand people with the exhibits. In all, sixty-two tractor and plow companies have entered, and a number of accessory companies.

This will be one of the greatest educational events in power farming ever conducted. More land has been arranged for at Hutchinson than was used last year. It will be easily accessible and the big tent housing the accessory show will be near at hand. This showing of accessories will be a most instructive feature because the development of power farming has called for a big line of supplies and those who attend can quickly acquaint themselves with all the various equipments necessary in successfully handling tractors and power machinery.

BUSINESS STATIONERY

At the prices quoted herewith you cannot afford to use anything but printed BUSINESS STATIONERY. Write for samples.

LETTER HEADS—Bond paper. White. 500 for \$2.50. 1,000 for \$3.00. Additional 1,000 \$1.50. If you wish ruled stock, add 75c per 1,000.

ENVELOPES—Commercial size. White. 500 for \$2.00. 1,000 for \$2.75. Additional 1,000 \$1.75.

ENVELOPES—No. 6. Commercial size. White. 500 for \$2.25. 1,000 for \$3.00. Additional 1,000 \$1.75.

ENVELOPES—No. 6. Special Addressed Envelopes. 500 for \$1.75. 1,000 for \$2.25. Additional 1,000 \$1.25.

BUSINESS CARDS—2 1/2 x 3 1/2 inches. No. 88. 500 for \$2.00. 1,000 for \$2.75. Additional 1,000 \$1.75. These can be supplied in square corners if you wish.

The following items are put up in pads of 100 if you desire, at no extra charge:

LETTER HEADS—Special Packet, size 6 1/2 x 9 1/2. Ruled. White. 500 for \$2.25. 1,000 for \$3.00. Additional 1,000 \$1.50.

STATEMENTS—No. 2. Regular size. 5 1/2 x 8 1/2 inches. Ruled. White. 500 for \$2.25. 1,000 for \$3.00. Additional 1,000 \$1.50.

STATEMENTS—No. 1. Special size. 5 1/2 x 8 1/2 inches. Ruled. White. 500 for \$2.25. 1,000 for \$3.00. Additional 1,000 \$1.25.

BILL HEADS—No. 2. Regular size. 7 x 8 1/2 inches. Ruled. White. 500 for \$2.25. 1,000 for \$3.00. Additional 1,000 \$1.50.

BILL HEADS—No. 1. Special size. 4 1/2 x 8 1/2 inches. Six ruled lines. White. 500 for \$2.50. 1,000 for \$3.25. Additional 1,000 \$1.80.

All prices are quoted delivered to you at your home address, prepaid. For this reason we ask remittance with order.

**KANSAS FARMER
TOPEKA, KANSAS**

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 5-8.
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—Douglass Agricultural Society, J. A. Clay, Secretary, Douglass; September 27-30.

Clay County Fair Association, W. F. Miller, Secretary, Clay Center; October 4-6.

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 5-8.

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. Flaley, 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 5-8.

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.

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

Lincoln County Agricultural & Fair Association, J. D. Ryan, Secretary, Lincoln; September 13-16.

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 5-8.

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 20-23.

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

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

Nesho County Agricultural Society, Geo. R. Bileau, 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.

Pottawatomie County—Onaga Stock Show and Carnival, F. S. Tinslar, Secretary, Onaga; August 30-September 1.
Pratt County Fair Association, J. M. Lucas, Secretary, Pratt; August 8-11.
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 8-6.
Saline County Agricultural, Horticultural & Mechanical Association, F. D. Blundon, Secretary, Salina; September 25-30.

FARM AND HERD

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

Address All Communications to Kansas Farmer and Not to Individuals

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

CLAIM SALE DATES.

Herefords.

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

Shorthorn Cattle.

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

Poland Chinas.

Sept. 16—T. H. Young, Stahl, Mo.
Oct. 10—Sigel Brown, Reeds, Mo.
Oct. 13—Dr. J. H. Lomax, St. Joseph, Mo.; sale at farm near Leona, Kan.
Oct. 14—T. J. Dawe, Troy, Kan.
Oct. 16—Walter B. Brown, Perry, Kan.
Oct. 19—H. E. Walter, Edinburg, Kan.
Oct. 24—Leonard & Russell, St. Joseph, Mo.
Oct. 25—U. S. Byrne, Saxton, Mo.
Oct. 26—Walter W. Head, St. Joseph, Mo.
Oct. 20—James Arkell, Junction City, Kan.
Oct. 21—P. M. Anderson, Lathrop, Mo.
Oct. 23—Forest Rose, Hemple, Mo.
Oct. 27—T. E. Durbin, King City, Mo.
Oct. 28—H. H. Foster, King City, Mo.
Oct. 31—Harry Wales, Peculiar, Mo.
Nov. 1—Fred B. Caldwell, Howard, Kan.
Nov. 4—L. R. Wiley, Sr., Elmdale, Kan.
Nov. 6—A. R. Enos, Ramona, Kan.

Spotted Polands.

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

Durocs.

Nov. 2—Lant Bros., Dennis, Kan.

The season is at hand when farmers and breeders will be looking around for suitable boars for use in their herds. A little space in Kansas Farmer will place your offering before them. Many of them are looking over the advertising pages every week to find what they want. You will find a little space used in Kansas Farmer now will be a good investment. Ask for our rate card and plan of selling live stock advertising.

A. S. Alexander, of Burlington, Kan., the well known breeder of Spotted Poland Chinas, reports a good demand for Spotted Poland breeding stock again this season. Mr. Alexander has one of the good herds of that popular breed, and his herd is drawn upon heavily for breeding stock.

E. E. Frizell, of Frizell, Kan., who owns one of the choice herds of Red Polled cattle, reports his herd coming along fine. He has a very fine lot of young stock in the herd at this time. Mr. Frizell also owns a very fine herd of pure-bred Galloway cattle.

Fred Chandler, owner of the noted Chandler Percheron farm at Charleston, Iowa, and one of the best Percheron herds in the country, reports the herd doing well this year. The large number of colts are a choice lot, and a feature at this time is the large number of choice young stallions.

H. L. Faulkner, of Jamesport, Mo., owner of the famous Highview herd of old original big boned Spotted Polands, reports a large number of early applications for catalogs for his August 9 bred sow sale. Mr. Faulkner will have a splendid offering for this sale.

G. M. Shepherd, of Lyons, Kan., the well known breeder of pure-bred Duroc hogs, reports his herd doing well. This year he has saved a large number of richly bred spring pigs that are growing out fine. He has the type that are profitable feeders and his herd is drawn upon heavily for breeding stock.

E. D. King, of Burlington, Kan., owner of one of the largest and best herds of Berkshire hogs now assembled, reports his herd doing well. This year he has a very large number of spring pigs. The breeding of his herd is the best of the breed. Mr. King has been breeding and feeding pure-bred Berkshires for many years and has found them very profitable.

Girod & Robinson, of Towanda, Kan., report their Holstein herd doing well. Their herd of pure-bred Holsteins is one of the good ones. They also have a big herd of high grade Holsteins.

Thos. D. Marshall, of Sylvia, Kan., owner of one of the good Jersey herds in Kansas, reports his herd making a good record this year. Mr. Marshall is breeding for producers. He has a very fine lot of young stock in his herd of Flying Fox and Eminent breeding.

F. C. Gookin, of Russell, Kan., the well known breeder of pure-bred O. I. C. hogs, will be at Topeka, Hutchinson and other State Fairs with his show herd again this year. Mr. Gookin owns one of the good O. I. C. herds, and this year he has a very fine lot of spring pigs, many of them sired by his great boar White King by Chief of All by Chief Select and out of the great sow Minnehaha. Mr. Gookin is keeping a choice lot of gilts by this boar in his herd.

HOLSTEIN CATTLE.

OLYDE GIROD, At the Farm.

HOLSTEIN FRIESIAN FARM, TOWANDA, KANSAS

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

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

GIROD & ROBINSON.

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

Remarkable Holstein productiveness. In 1915, from April 22 to April 28, the records of 670 cows were accepted to entry in the Holstein-Friesian Advanced Registry. As evidence of the high efficiency of purebred Holsteins these 670 cows, of which over one-half were heifers with first or second calves, produced in seven days, 279,121 pounds of milk containing 10,067 pounds of butterfat, an average per cent of 3.61 butterfat. Average production for each animal was 28 quarts of milk per day and 17 pounds of commercial butter per week. This is just a random showing of the wonderful things of which the big "Black-and-White" is capable.
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