

KANSAS FARMER

For the improvement

of the Farm and Home

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WIDE ROW PLANTING

Growing Corn or Kafir in Wide Rows Gives Ideal Seedbed For Wheat

By C. C. Gunningham, K. S. A. C.

PLANTING corn or grain sorghums in wide spaced rows is a good method of preparing ground for wheat and growing a crop at the same time. In this method of planting, a blank row is alternated with a planted one. The blank row is cultivated the same as the planted row in order to keep the weeds down and the ground in condition to absorb moisture. It is practically a summer fallow method of seed bed preparation for wheat.

Farmers in West Central and Western Kansas are confronted with the problem of readjusting their cropping plans because of the failure of a large per cent of the wheat. Considerable land that should normally be seeded to wheat this fall will have to grow corn or rowed sorghums or else be idle. It has been quite conclusively demonstrated that a better seed bed for wheat can be obtained where corn or grain sorghums are planted by the wide spacing method rather than in the ordinary manner, and that corn, kafir or other grain sorghum planted in this way is more likely to produce a crop of grain under dry weather conditions.

The greater yields secured from wide spaced corn and grain sorghums under dry conditions is due to the fact that these crops planted in this way utilize the moisture and plant food to a better advantage in the production of grain. The stalks and leaves are formed first and the grain last. In most seasons there is sufficient moisture to produce a good growth of foliage. The supply of moisture, however, is often exhausted before the grain is developed. Some years the grain fails entirely while in other seasons small, poorly developed ears or heads are produced. The problem is to keep the crop growing until it completes its development. To accomplish this it is necessary to provide moisture throughout the growing period. It appears that this is brought about to a considerable extent by planting the crops in wide rows. The supply of moisture is not increased in any way, but is so utilized that a larger per cent of it is available during the later period of growth or when the grain is being formed.

Where corn, kafir or other grain sorghum is planted in three and one-half foot rows, the roots when they become about twenty-six inches long, occupy the entire surface soil space between rows. In wide row planting the roots of the crop do not occupy all of the surface soil until they become forty-three inches in length. If the soil is moist to a depth of four feet, then the entire soil space from which moisture would be available would not be occupied until the corn roots attained a length of nearly four and one-half feet for the narrow spaced rows and nearly six feet for those seven feet apart. Because of the wide spacing, the moisture midway between the rows—especially that in the deep subsoil—is held in reserve for the later stages of growth, since the roots do not grow out into this soil until the plants become nearly full grown. During temporary periods of drouth, this reserve moisture is often sufficient to maintain the corn or sorghum in a flourishing condition until rains come, and occasionally

CORN PLANTED IN WIDE ROWS in the western part of the state will outyield corn planted in the usual manner.

WIDE SPACING OF GRAIN SORGHUMS is of advantage where moisture is deficient or where wheat is to be sown in the fall.

BLANK ROWS MUST BE CULTIVATED the same as the planted row in order to destroy weeds and serve moisture.

MOISTURE MIDWAY BETWEEN WIDE-SPACED ROWS can be held in reserve for later stages of growth.

STALKS AND LEAVES of crop develop first, the roots reaching the middle of the row by the time moisture is needed to mature grain.

WHEAT SOWN ON WIDE-SPACED corn or kafir land often produces larger yields than on summer fallow.

CORN OR KAFIR IN WIDE ROWS can be grown with the same labor that is necessary to summer fallow.

GRAIN OUTPUT WILL BE INCREASED by wide row method and ideal seed bed for wheat prepared at same time.

it may complete the development of the crop. In either case the chances of obtaining a yield of grain are greatly increased.

During the past five years the wide spacing method of planting has been

quite conclusively tried out by the branch experiment stations in Western Kansas and by farmers throughout that part of the state. With corn, increased yields or yields as good as from narrow planting were secured in most tests ex-

cept in the wet season of 1915. The few tests conducted with grain sorghums—kafir—indicate that oftentimes grain can be produced under conditions where the crop would otherwise fail to head because of lack of rain during the period when the grain is forming. Where conditions are such that the crop matures when planted in the ordinary way, little if any increase in yield can be expected, and under favorable conditions the yield will likely be reduced. Wide spacing of grain sorghum is advisable only where there is a likelihood that the crop will not produce grain because of lack of moisture and where it is desirable to follow the crop with wheat.

There are several advantages in cultivation that should make the wide spacing method of planting popular, even though nothing else is gained. The weeds most difficult to control are those that come up in the row near or on a line with the crop. Since only half as much row space is planted, the liability of trouble from this source is reduced 50 per cent. In cultivating, the two-row cultivator may be used, straddling the rows in the same manner that the one-row implement is employed in going over single spaced rows. This does away with the necessity of trying to watch two rows at the same time. Also the two-row cultivator may be used without trouble in cultivating crops planted by a single-row lister. Crops planted in the ordinary way with a single-row lister cannot be cultivated to good advantage with the two-row implement unless the rows are uniformly spaced. This requires more careful planting than is ordinarily possible with the single-row lister. With the double spacing method it is not so essential to make the rows the same distance apart.

After the crop becomes too high to cultivate by straddling the rows, implements requiring two horses may be used in cultivating double-spaced corn or sorghum. This is important, for the work can be accomplished much more rapidly and at less expense than it could be done if it were necessary to use comparatively narrow implements drawn by one horse.

One of the most important advantages gained in planting corn or sorghum in wide rows is that the ground is left in excellent condition for wheat if properly tilled. Growing wheat on such land, especially after corn, is often more satisfactory than on summer fallow. The wheat does not make the overgrowth of straw characteristic of that on summer fallow, while the stalks tend to hold the snow during the winter and to prevent soil drifting. A two-horse drill can be utilized in seeding between wide-spaced rows, and a more uniform stand of wheat can be secured in that there are less rows of stalks to interfere with the drilling.

In planting corn or sorghums in wide-spaced rows the rate of planting should be thicker in the row than when planting in the ordinary way. However, the rate per acre should not be increased.

To obtain any benefit from the wide spacing or rowed crops, it is absolutely essential that the space between rows be kept free from weeds. Nothing is gained if weeds are allowed to rob the crop of the moisture between rows.



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FOOD REGULATION

The government will undoubtedly undertake some sort of control of prices and markets during the war. The Lever bill bearing on this matter was introduced in Congress May 3, and this bill will doubtless be used as the basis for any legislation passed at this session. The purpose of the bill is to stimulate production, facilitate distribution, reduce waste, assure fair prices, prevent injurious speculation, and protect the public against all kinds of extortion.

Food regulation is a most complex proposition. We do not believe there will be any need for enacting laws to keep up prices of food products this year, but producers who are being urged to go to extra expense in order to increase the output should have assurance that the government will stand back of them and see that they get a square deal. If there is any price-fixing at the present time, it should take the form of guaranteeing a minimum so that farmers who respond to the appeal for increased production need not fear a possible loss.

A rather interesting proposition was recently made to the government by the Northeast Nebraska Live Stock Breeders' Association. This was made in the form of an open letter to Secretary Houston, commenting on the offer of the Chicago packers to either permit the government to fix prices on their products or turn their plants over to the government to operate. It says:

"If Mr. Armour proposes to turn over the packers' plants to the government and run them for the benefit of the government for a minimum profit, we will not allow him to be more magnanimous than we. We, too, will turn over our plants. We will turn our farms over to the government and operate them for the government on the basis of three per cent on the investment. This is only a bondholder's percentage, and the bondholder does not give his services, as we propose to do, without extra wage or salary. This offer is bona fide and we are prepared to stand by it. * * * We desire some security for the future. No stockman today knows what to do. The tendency is to cash corn and quit the producing of finished beef. This would be a national calamity and in some way must be averted. Secure to the feeder and producer of corn-fed beef and pork adequate remuneration for his labor and feed, and the future supply of corn-fed beef and pork is assured."

It is not likely that the government will go into either the farming business or the packing business, but the mere fact that such an organization makes an offer of this kind directs attention to the need of protecting farmers and meat producers against unfair demands of consumers.

USE HIGH SCHOOLS TO SAVE FOOD

There are in Kansas 225 high schools having equipment for teaching girls domestic science. In the present emergency when every agency possible is being used to increase our food supply, this equipment might well be made of service in the preservation of vegetable and other food products. The school board in each of these towns where high schools have domestic science equipment could make this possible by employing the teacher of domestic science for the entire vacation period. The high school equipment could then be turned over to the community for canning, preserving and drying fruits and vegetables. A most important part of the program for conserving food is the preservation of our garden and orchard products.

Mrs. Cora G. Lewis, member of the State Board of Administration, suggests that clubs of high school girls could be organized by the domestic science teacher during the vacation and the equipment divided so as to have two periods a day—from nine to twelve in the forenoon and from two to five in the afternoon.

Mother and daughter clubs could also be organized. If necessary, extra pressure cookers could be bought for canning where the money is available.

Placing a small canning plant in the basement of the high school building would be worth far more to the community than it costs, if proper provision can be made for its use. This is by no means a purely town proposition. By the use of automobiles it is possible for both country and town women to use the domestic science departments of the various high schools for community canning work.

ENLIST YOUR COWS

We wish to commend the National Dairy Council for the forceful manner in which it is appealing to dairymen all over the country to enlist their cows in the service of the nation. No man reading the statement being circulated by the Council can be indifferent to the importance of using every effort possible to promote better dairy methods and to give every dairy cow in the land a fair chance to demonstrate her capacity as a conserver of food. Every man milking cows should be inspired by the publicity

work of this organization. It is not only keeping to the front the wonderful capacity of a good cow as a food-making machine, but is spending large sums of money in educating people to the value of dairy products as food.

If you did not read the article, "Conserve Dairy Cow," in last week's issue of KANSAS FARMER, turn to it now, and also read the statement of the National Dairy Council on another page of the same issue.

KANSAS ROAD LAWS FREE

Farmers of Kansas are vitally interested in good roads. The new road laws passed at the last session of the legislature are now being put into operation. The highway commission has recently been in session in Topeka working out tentative road systems.

The four big road laws, including the automobile law, the bridge law, the one creating the highway commission, and the improved road law, have been put in form for distribution by the Kansas Good Roads Association. Any one or all of them are free for the asking. Address Kansas Good Roads Association, Columbian Building, Topeka.

Safety of Country Depends on Farmers

IN THIS great time, when every citizen must do his part, the President has made his chief appeal to the men who live on the land. He is right in doing so, for the safety of our country just now is in the hands of our farmers. What I mean is not merely our safety and the safety of our Allies in the matter of food. I mean that the safety of the United States against foreign invasion hangs on the decision of the farmers of the forty-eight states.

The two great weapons in this war are arms and starvation. The war against German arms will be won or lost in France—the war against starvation will be won or lost in America. The Kaiser cannot whip the French and English armies and the English navy while England has food. But it is still possible that the German submarines may be able to keep food enough from reaching England to starve her into submission.

If the submarines win, the first item in the Kaiser's terms of peace will be the English fleet. With the English fleet in his possession, the Kaiser will be master of the world.

What will happen to us then? Every man who stops to think knows the answer. We shall have money, food, labor, land—everything that is desirable in the world, except the power to protect what we have. Experts estimate that it will take us nine months to get ready to meet a German army of even 150,000 men, with modern artillery. Under such circumstances, would the Germans treat us better than they have already treated Belgium and France?

Even if the armies of our Allies should crush the German military power this summer, before the shortage of food can reach the point of want, the world would still need vast quantities of American food. But if they do not, only one course can make us safe, and that is to grow food, enough on our farms for ourselves and our Allies, and to put ships enough on the sea to carry the food, in spite of the submarines, to the men who are fighting our fight.

If the war lasts beyond this summer, it will be the American farmer who will win or lose the war, who will overcome militarism and autocracy, or allow them to spread and control the world, ourselves included.

This is no fanciful picture, but sober fact. Many a man will make light of it until he comes to think it over, but I venture to say that few will treat it lightly after careful thought. It is no more impossible than the great war itself appeared to be, only a few days before it began.

It is true that we can greatly increase the available food supply out of grain now used in making liquors, and by reducing household waste. But when these two things are done, and done thoroughly, they will not be enough. The final decision will still rest in the hands of the men who raise our food in the first place.

The clear duty of the Nation is to guarantee the farmers a fair price for their crops when grown, and a reasonable supply of labor at harvest. The clear duty of the farmer is to raise food enough to win this war for democracy against Kaiserism.

No such responsibility has ever rested on any class of men since the world began as rests today on the farmers of America.—GIFFORD PINCHOT

GRAIN WASTE AT MARKETS

Much grain is wasted at our central live stock markets. The elimination of waste is an important part of the food conservation and production campaign now being conducted all over the country. Prof. W. A. Cochel has been making some estimates on the waste which occurs in feeding hogs at our live stock markets. As a result of his investigations he makes the statement that a saving of over two million bushels of corn annually could be made in the United States by limiting the amount fed to hogs on the market to two bushels a car. This estimate is based upon the supposition that the eastern, central, southern and western markets and the smaller packing plants in the corn belt follow the same practices as do the nine markets west of Chicago.

At these nine hog markets west of Chicago there was unloaded during the year 1916, 33,056 cars of hogs for slaughter. The prevailing custom at all these markets is to feed hogs all the corn they will eat from the time they arrive until they are weighed up to the packer. This amounts on an average approximately to six bushels per car, or a grand total at these nine markets of 1,823,136 bushels. Practically all of this corn is an absolute waste, a great deal of it going into the sewer directly from the pens. The hogs are slaughtered before they are able to digest and assimilate that which they have eaten.

For humane reasons it is of course necessary to feed a reasonable amount of corn, but two bushels to a car would be ample to prevent suffering. Shippers may object to this because of the fear that it would affect the sale of their hogs. But if all the markets were on a uniform basis the price paid for hogs would probably be based on the absence of fill rather than the presence of it.

Two or three hundred vacant lots in Beloit have been donated by the owners for the summer to be used in reinforcing the food drive that is now being made by the Kansas State Council of Defense. The commercial clubs of the town have employed a teacher of agriculture in the high school for the summer, to supervise the work of planting these lots to gardens. School boys will do the work. Mrs. Carrie McClintic, a Kansas State Agricultural College graduate, has been appointed overseer of the work of canning the vegetables and fruits.

Morris County has employed A. L. Clapp as agricultural agent. Mr. Clapp was graduated from the Kansas Agricultural College in 1914. Since then he has had a year's experience as foreman of the agronomy farm at the college, one year as manager of a ranch in Colorado, and one year as teacher of agriculture in the high school at Castle Rock, Colorado. His headquarters will be at Council Grove.

Inquiries are being received relative to the planting of Mexican beans. These beans stand dry weather well and in the extreme western and southwestern part of the state many farmers have raised small fields of them with good results. Yields in excess of 300 pounds an acre have been recorded at the Tribune branch experiment station in Greeley County. Three hundred pounds will pay well at the present prices.

With live stock selling at higher and higher prices and with feed going up, many may be tempted to sell their breeding stock. This will be killing "the goose that laid the golden egg." Keep the breeding stock and raise more stock—it will pay. In one great country the farmers sold their sows last year when the pigs were weaned. This year pork is higher in that country, and the farmers have no pigs to sell nor sows to raise more. It would have paid them well to have kept the sows to supply the nation with pork.

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KANSAS FARMER

May 19, 1917

GENERAL FARM INQUIRIES

Something For Every Farm—Overflow Items From Other Departments

INQUIRIES have been received concerning the Schrock kafir which was discovered at Enid, Oklahoma, in 1912. This variety of kafir is believed to be a hybrid between some kafir and a sweet sorghum. It was once thought that it might be found valuable for both grain and fodder, but tests show that the tannin in the seed lessens its value as a grain crop. It may prove of value as a silage sorghum, but this quality alone will not warrant its general adoption.

It has also been claimed that it is early and has great resistance to drouth. The Federal Department of Agriculture states that it requires fully 100 to 120 days to mature and this of course would make it of little value in Kansas. It has been tested with other varieties at Hays, Kansas, and at Chillicothe and Amarillo, Texas, but none of these tests have indicated that it is worthy of general adoption. It has made good yields at the southern stations but on account of the presence of tannin in the seed which effects its feeding value it could not be recommended because of its yielding qualities.

It is inadvisable to experiment with new varieties at a time when high production is most desirable. Both the federal department of agriculture and the state experiment stations are advising against the use of new untried varieties of the sorghums. The experiment stations are continually on the lookout for improved varieties, but the average farmer can hardly afford to conduct experiments of this kind.

Growing Mexican Beans

J. S., of Clark County, writes that he plans to put out five to ten acres of Mexican beans and desires information as to the proper time to plant, whether to plant in hills, on top of the ground, or to list in shallow furrows. He states that he has had no experience in growing beans and is unable to find any one in that vicinity who has had experience.

So much has been written about the growing of beans that many will probably put out a few acres this year who will have as little knowledge and experience as to the proper methods to follow as our correspondent. In order to supply the most reliable information possible on growing this crop, we asked C. C. Cunningham, who has charge of the co-operative experimental work conducted by the agricultural college, to furnish the desired information, and his reply follows:

"It is by no means certain that the growing of Mexican beans will prove a profitable undertaking. In 1911, 1912, 1913 and 1914 the agronomy department co-operated with farmers throughout Western Kansas in trying out Mexican beans as a field crop. In only one of these four seasons did the beans prove to be profitable. In 1912, yields ranging from four to 16.5 bushels per acre were reported. In 1913—a very dry season—the crops were badly injured or destroyed by the excessively hot, dry weather. In 1914 nearly all of the co-operators reported that the beans made a good growth of vines but for some reason pods failed to set. Similar results were reported for 1911. Our conclusions are that Mexican beans are not a sufficiently profitable crop to warrant growing on a field scale in Kansas. However, if the season should prove to be a favorable one, the crop might prove to be profitable this season because of the high price being paid for beans.

"The preparation of the ground for Mexican beans will necessarily be governed by local conditions. Where fall plowing can be practiced safely without danger of the soil blowing, this method is to be preferred. Early spring plowing gives satisfactory results, providing the ground is moist and is worked subsequently to settle it into a good seed bed. Under average conditions, early spring disking, with one or two diskings later in the season to kill weeds and keep the soil in good tilth, is probably the most practical way of preparing the ground.

"Beans are very susceptible to frost and should never be planted until all danger from that source is past. The middle of May is the best time to plant. The temperature and moisture conditions are usually favorable at this time and the beans germinate promptly and make

a rapid growth, thus making it possible to cultivate and keep down weeds to better advantage.

"Planting in very shallow furrows with a corn lister is the most practical way. The seed should be covered about two or three inches deep. About twenty pounds of seed is required to plant an acre. One bean should be dropped every six to ten inches.

"Sufficient cultivation should be given to keep the ground free from weeds and in good tilth. This is very important and satisfactory results will not follow unless the beans are well cultivated. The later cultivation should be shallow to avoid injuring the roots."

A circular which gives considerable information regarding the growing of beans in Kansas will be mailed by the Kansas Experiment Station, Manhattan, on request.

Treating Calf for Scours

R. F. A., Marshall County, writes that he recently shipped in a small Holstein calf. The first few days it seemed all right, drinking its whole milk well. It then began to scour and he gave it a teaspoonful of salts. Following this it became weaker, grinding its teeth and refusing its milk.

This subscriber enclosed a stamp for immediate personal reply. The information given may be of value to others who are having similar trouble.

Scours in calves is usually caused by some mistake in feeding, such as over-feeding, irregular feeding, sour milk, dirty milk, or dirty pails. Almost any of these things is liable to bring on this trouble. Usually reducing the amount of milk given about one-half, seeing to it that it is perfectly clean and fresh and being fed at the right temperature, will correct the trouble. It would have been a great deal better had he given from two to four tablespoonfuls of castor oil in the milk instead of the salts.

In persistent cases the United States Department of Agriculture recommends the giving of a mixture of one part of salol and two parts of subnitrate of bismuth in doses of from one to two teaspoonfuls two or three times a day, the dose depending on the size of the calf.

A remedy that the editor has found very effective in his own experience is blood meal. Use a teaspoonful or two dissolved in milk. This blood meal is a packinghouse by-product. It can usually be purchased from feed dealers, although in a small town it may be more difficult to get it. It is also a good plan to dilute the milk used with one-third lime water. Lime water is made by pouring water on a little lump of fresh lime. After it has slaked and settled the water can be poured off the top. Parched flour added to boiled milk is a remedy sometimes successfully used. In using any of these remedies, give the milk in small quantities and often.

Destroying Pocket Gophers

In a recent issue we answered an inquiry relative to destroying pocket gophers. T. S., one of our readers in Riley County, writes us that he thinks no farmer has any excuse for permitting these pests to take his alfalfa fields. His method is to poison them. His method of preparing and using the poison follows:

Into one-half pint of boiling water put one-eighth ounce of strychnine pulverized, one teaspoonful salt, and stir well; corn, three-fourths pint, raisins one pound. Stir this thoroughly, then add two tablespoonfuls flour and stir in enough corn meal to absorb moisture, if any. Stir the whole mixture well.

Take a three-fourths-inch rod or stick and prod around the fresh mounds until a run is found, drop a spoonful of the poison in the hole. Close hole again, being careful not to drop dirt on the poison. Use spoon or paddle, as the

touch of the bare hand will spoil the bait for Mr. Gopher. Use poison while fresh.

This will work equally well for moles, only omit the raisins and substitute corn.

The committee on injurious mammals of the State Council of Defense is urging the destruction of gophers as a most important conservation measure. They state that gophers can be destroyed for 25 cents a dozen—a low price considering the fact that these little animals destroy fully 10 per cent of the alfalfa of Kansas every year, in addition to damaging other crops. Destruction of the gophers will mean an annual saving of millions of dollars to the state.

It is a comparatively simple matter to eradicate these pests, says this committee. Grain treated with a poisoned syrup may be inserted in their burrows. An effectual poison is sold at cost by the agricultural college. Another method is to use small pieces of apple or sweet potato poisoned with a few grains of strychnine. Trapping is a slower but surer method of eradicating gophers.

The committee is ready to furnish detailed information to any one or to arrange special co-operation with groups of persons planning to eliminate the pests from a considerable area.

Oats for Brood Sow

N. E., Johnson County, one of the boy readers of KANSAS FARMER who is raising a litter of pigs, asks about feeding oats to the sow. He says corn chop is so high that he decided not to buy any more and is feeding his sow at present only weeds and clover and slop. They have some oats and he asks if oats soaked before feeding would be good for her. We believe this boy was doing the proper thing in not buying more corn chop now that it is so high. By feeding the sow plenty of weeds and clover she will not require as much grain. Of course, a sow cannot give a lot of milk for the pigs on weeds and clover alone, and we would by all means advise giving her some oats. Oats make a fine grain feed for a brood sow. They are a better milk-making grain than is corn. They are not so good, however, for fattening hogs.

Protect Cabbage from Worms

Every year we receive inquiries on the prevention of insect injury to cabbage. Such inquiries have not begun to come in yet this year, but it is only a question of time, and we are going to suggest right now that those who set out cabbage plants take measures to destroy the worms before the leaves are riddled. In other words, go after the worms as soon as the plants have been set out.

Dusting the leaves with a poisonous mixture is a practical method of destroying the cabbage worm in patches of ordinary size. One pound of paris green or two pounds of finely powdered lead arsenate is mixed with ten pounds of hydrated lime or dry flour. The mixture is placed in a flour sack or in a can with top or bottom finely perforated. The operator walks between two rows, with a bag or can in each hand, and shakes out the poisonous dust so that it settles on the leaves. Worms eating of these leaves will die in a day or two.

The work should be done when the leaves are dry and there is little wind, and repeated at intervals of one to two weeks, depending on how often the rains occur. There may be four or more generations of cabbage worms in a year, so that constant vigilance is necessary.

For patches of three acres or more, spraying with a barrel pump or other large sprayer is suitable. Half a pound of paris green, or one and one-half pounds of lead arsenate, or three pounds of paste lead arsenate may be stirred into fifty gallons of water for the spray. The addition of two pounds of soap or three pounds of flour in paste form will cause the liquid to adhere better to the smooth cabbage leaves.

Thousands of cattle have been sacrificed in Kansas because of dry weather and parched pastures. If the owners had provided silos and laid by a reserve of silage for such emergencies, many could have held the stock until they were ready to go.

Agricultural Production Committee Makes Timely Suggestions

AMATTER of first importance is the testing of representative samples of all sorghum seeds to be planted. They are abnormally low in growing quality this year. It is taking big chances to plant such seeds without first testing them.

It is highly essential to prepare a good seed bed where sorghum crops of any variety are to be planted. A good seed bed will help to overcome poor quality of seed. It is easier and less expensive to kill weeds before the crop is planted than afterwards. Where corn is planted, it is highly essential to look after the cultivation of the same while the weeds are young and easily killed. One cultivation while the weeds are delicate will do more to get rid of them than two cultivations ten days later.

Land that is to lie fallow during the summer should be plowed five or eight inches deep because it will absorb and hold more water than if plowed four inches deep or less, and water is what counts in Kansas.

Cultivation of fallow land should begin as soon as the weeds have thoroughly started, or as soon after sorghum planting is out of the way as possible. Only such cultivation should be given thereafter as is necessary to keep down most of the weeds. The surface soil should not be worked into a dust-like condition; rather it should be left rough or cloddy.

Kansas often loses thousands of tons of the first cutting of alfalfa hay through damage by rain. Unusual care should be exercised this year to guard against every possible loss or waste. Our meat supply depends upon an ample supply of good feed. Feed is going to be worth money this fall.

A great many farmers, especially those living in districts where the winter wheat was killed, are beginning to worry and wonder where they will secure good seed for planting next fall. There isn't going to be any question about obtaining plenty of good sound seed for every farmer who wants to plant wheat next fall. The state will produce from fifty to seventy million bushels of good wheat this year. Almost all of it will be fit for seed, and it will very likely be sold for less money at harvest time than wheat can be bought for today. The wheat we now have is needed more for bread than for seed next fall.

Ask the school boards of the various communities to hire the teacher of agriculture and home economics for the summer months to supervise the garden work of the boys and girls, and see that all the garden surplus is canned or preserved by drying or storage.

Conduct a special campaign for increasing the planting of garden beans and sweet corn, and the canning and drying of these two standard garden crops. Emphasize that sweet corn, even field corn, is extremely palatable when dried in the roasting-ear stage, and will keep indefinitely. Should there be a shortage of cans, much corn should be preserved by drying.

Start a movement to save all glass jars, bottles, etc., that might be used in place of tin cans. Tin is high and cans will be scarce.

The above are all trite suggestions and without doubt most of our readers are striving as best they can to carry them out. It is a good idea, however, to systematically state in concise terms a program such as is outlined by this committee.

Supplementing Pastures

THE dairyman who wishes to make the most profit from his business cannot afford to let his cows suffer for feed at any season of the year. Right now is a good time to recall what happened last summer and previous summers that tended to reduce the milk flow. We will remember how short and dry the pastures were and how the cows suffered from flies during this season of the year. If during these periods, in which it is so hard to keep up the milk flow, summer silage had been available, or some supplemental forage crops that could have been fed to the cows green, this period would not have been so serious in its effects on the production of the herd. Recalling these conditions which we are compelled to face almost every summer should serve as a lesson to provide against their future occurrence. Now when we are planting the spring crops is the time to plan for these periods so trying to the dairyman.

The seasons do not differ much. Each summer is almost sure to have its dry spell when green feed in the pastures will be short. In some years it may come earlier than others, but cows are almost sure at some time during the summer to suffer for feed and need some protection from the excessive heat and the flies.

To provide against this shortage of feed a small plot of ground close to the barn can be prepared and portions of it seeded at intervals to various forage crops such as cane, Sudan grass, or sweet corn. With such crops to fall back on we can feed our cows during the hot dry spells and keep up the milk flow.

flow. One of the great losses that every dairyman must sustain each year is that occasioned by allowing the cows to fall off in milk flow and run down in condition during these trying periods to such an extent that several months of good feeding will be required to get them back into condition and bring up their milk flow to what it should be. When cows have fallen off in milk it is almost impossible to get them back to normal production.

The most successful dairymen are those who recognize that no matter what the season of the year, the cows must have an abundance of feed or they cannot be maintained in such a condition of health and thrift as to enable them to produce milk profitably. It is just as necessary to provide a supply of feed for these dry, hot periods of the summer as to lay in a store of feed for the winter.

winter. Dairy men generally are coming to recognize that there is no cheaper or better feed for the winter period than good silage. Silage is equally good to supplement short pastures during the summer seasons. In fact on most farms where milk cows are kept the feeding of silage in the summer is more practical than the feeding of soiling crops. Almost every dairyman who has had a silo for preserving feed for the winter soon begins to plan for a summer silo. In the western part of the state pit silos can be made and filled with kafir or cane to be used at any time when it may be needed. Silage has been fed from pit silos at the Hays Experiment Station that had been stored for three or four years. The dairy herd at Manhattan has for a number of years been fed silage the year round. Cows can be changed from pasture to silage with very little effect on the milk flow. This is not true when the attempt is made to supplement pasture with dry roughage. The important thing is to provide palatable feed for dairy cows the year round. Unless this is done they will not return the highest profits.

Selecting Dairy Cow by Type

The essential functions of the dairy cow are milk production and reproduction. L. W. Wing, Jr., of the Missouri College of Agriculture, points out that the most accurate methods of determining these are: Milk production by means of the scales and the Babcock test; reproduction by breeding records.

There is only a small proportion of the cows used for dairy purposes of which such records are kept. This necessitates the employment of some other method of selection. In the breeding of high producing animals through several generations it has been observed that there are certain characteristics of the conformation which are correlated with

large production. These characteristics are namely: Extreme angular form, carrying no surplus flesh but in good physical condition; prominent development of the udder and veins, and the symmetrical development of the barrel with large capacity. After one becomes familiar with these external characteristics it is possible to select cows producing 300 pounds of fat per year from those producing 150 pounds. The difficulty comes in picking the animal that will produce 500 pounds of fat per year as compared to the one producing 400 pounds.

The selection of animals by this method is rather uncertain. The farmer makes the largest majority of his selections in this manner and should be familiar with its limitations. In order to judge the animal with much accuracy she should be in milk and at the best stage in her lactation period. A cow that is dry offers very little upon which to base opinion as she has a tendency to take on flesh. Cows that have been underfed are in no condition to be judged. It is hard to tell what heifers will do from appearance before calving. Sometimes the cow that has all of the external appearances does not have the stimulation to produce milk. Until records are kept of more animals or some other means devised for selection, the selection by type should be used and it is up to everyone interested in dairy cattle to become familiar with it.

Grade Herd Production

A grade Guernsey cow named Sue produced 50,134 pounds of milk and 2,169 pounds of butter fat, equivalent to over 2,700 pounds of butter in the four years from January 1, 1913, to January 1, 1917. She is one of a herd of seventy-five grade Guernseys kept near Greeley, Colorado, by H. D. Parker. Mr. Parker is building up a herd of pure-bred Guernseys and already has about thirty. In the meantime, the grades are preparing the way for their aristocratic sisters. Sue's yearly average of production amounts to 12,533.5 pounds of milk and



GRADE GUERNSEY COW, EDITH

636.19 pounds of butter fat, but of course long time records are of most importance in considering the value of any animal.

The record of Edith, another grade Guernsey in the same herd, is nearly as remarkable as that of Sue. From January 1, 1914, to January 1, 1917—three years—Edith produced 24,141.7 pounds of milk and 1,535 pounds of butter fat, equivalent to 1,920 pounds of butter. This makes her yearly average 11,380.6 pounds of milk and 512 pounds of butter fat.

The production per cow in the entire herd for the calendar year of 1916 was 7,421.9 pounds of milk and 349.14 pounds of butter fat, equivalent to 436.4 pounds of butter; and the average production of those in milk for the entire year was 10,179.2 pounds of milk and 447.87 pounds of butter fat. Such a herd of grade cows of any breed indicates clearly the service to the dairy industry which can be done by purebred sires from ancestry of known producing capacity.

Tests made at the Kansas Experiment Station show that silage from the sorghums is superior in most cases to that made from corn, and this is especially true where the corn is grown with limited moisture and dried by hot winds before it is put into the silo.

War and a food shortage is turning the attention of everyone to the home garden. No one can afford to neglect the garden at this time.



WORN BEARINGS

What do they mean?

THE repair man says: "That knock? Worn bearings." Tightening will temporarily remedy the trouble. Refitting or renewing is the only permanent remedy. But it is more important to know what will help prevent this expensive operation.

To the eye, the surface of a bearing is smooth. But under the microscope it has a very different appearance. You see a succession of little hills and valleys.

Now, imagine the engine in motion.

What happens?

Surfaces are in motion. Unless protected by a correct film of lubricating oil, the microscopic hills of metal meet and rub. The engine - power overcomes this resistance, but tiny particles of metal grind off.

By degrees the snug fit becomes a loose fit. Noise follows. To correct this condition now, the bearings must be refitted or renewed.

The only protection against undue wear of bearings is the thin film of oil.

This thin film of oil must be highly elastic. It must fill-in the valleys. It must cushion the peaks and withstand pressure. It must stand up under the heat of service. These requirements call for oil of the very highest quality and of the correct body and character.

Gargoyle Mobiloils meet these requirements with scientific exactness. Used as specified in the Chart of Recommendations they effectively cushion the bearing surfaces, and meet the most severe demands of service and heat.

In buying Gargoyle Mobiloids from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container. If the dealer has not the grade specified for your car, kindly write our nearest branch, giving dealer's name and address.



Mobil oils

CORRECT AUTOMOBILE LUBRICATION

Explanation:—The four grades of Gargoyle Mobiloils, for engine lubrication, purified to remove free carbon, are:

Gargoyle Mobiloil "A"
Gargoyle Mobiloil "B"

Gargoyle Mobiloil "E"
Gargoyle Mobiloil "Arctic"

In the Chart below, the letter opposite the car indicates the grade of Gargoyle Mobiloils that should be used. For example, "A" means Gargoyle Mobiloil "A," "Arc" means Gargoyle Mobiloil "Arctic" etc. The recommendations cover all models of both pleasure and commercial vehicles unless otherwise noted.

Model of	1917	1916	1915	1914	1913
CARS	Simple	White	White	White	Simple
Abbott-Detroit (8 cy)	Arc	Arc	Arc	Arc	Arc
Allen (8 cy)	A Arc	A Arc	A Arc	A Arc	A Arc
(Mod. 13-34-35)	A Arc	A Arc	A Arc	A Arc	A Arc
Apperson (8 cy)	Arc	Arc	Arc	Arc	Arc
Barnum (8 cy)	A Arc	A Arc	A Arc	A Arc	A Arc
(8 cy)	Arc	Arc	Arc	Arc	Arc
Avery (Mod. 8-2 C 1 ton)	Arc	Arc	Arc	Arc	Arc
Baker (8 cy)	Arc	Arc	Arc	Arc	Arc
Bell	Arc	Arc	Arc	Arc	Arc
Cadillac (8 cy)	A Arc	A Arc	A Arc	A Arc	A Arc
Cad.	A Arc	A Arc	A Arc	A Arc	A Arc
Chalmers (Mod. 6-90)	A Arc	A Arc	A Arc	A Arc	A Arc
(Mod. 6-90)	A Arc	A Arc	A Arc	A Arc	A Arc
Chandler Ship	Arc	Arc	Arc	Arc	Arc
Chevrol.	Arc	Arc	Arc	Arc	Arc
Cole (8 cy)	A Arc	A Arc	A Arc	A Arc	A Arc
Dart (Mod. C)	A Arc	A Arc	A Arc	A Arc	A Arc
Detroit (8 cy)	Arc	Arc	Arc	Arc	Arc
Dodge	A Arc	A Arc	A Arc	A Arc	A Arc
Dodge	A Arc	A Arc	A Arc	A Arc	A Arc
Empire (8 cy)	Arc	Arc	Arc	Arc	Arc
Federal	E E	E E	E E	E E	E E
Ford	A Arc	A Arc	A Arc	A Arc	A Arc
Franklin	A Arc	A Arc	A Arc	A Arc	A Arc
Grant	A Arc	A Arc	A Arc	A Arc	A Arc
Haynes	A Arc	A Arc	A Arc	A Arc	A Arc
Hudson (Super 30)	A Arc	A Arc	A Arc	A Arc	A Arc
Hupmobile	A Arc	A Arc	A Arc	A Arc	A Arc
I. H. C. (air)	A Arc	A Arc	A Arc	A Arc	A Arc
I. H. C. (water) (2 cycle)	A Arc	A Arc	A Arc	A Arc	A Arc
I. H. C. (water) (4 cycle)	A Arc	A Arc	A Arc	A Arc	A Arc
Interstate	A Arc	A Arc	A Arc	A Arc	A Arc
Jefery	A Arc	A Arc	A Arc	A Arc	A Arc
(Com 1 ton)	A Arc	A Arc	A Arc	A Arc	A Arc
King (8 cy)	A Arc	A Arc	A Arc	A Arc	A Arc

Model of	1917	1916	1915	1914	1913
CARS					
Almont Kar.	Arc	Arc	Arc	Arc	Arc
" " Com'l.	Arc	Arc	Arc	Arc	Arc
" " (Mod. 40)	Arc	Arc	Arc	Arc	Arc
Lexington	Arc	Arc	Arc	Arc	Arc
Lombard	Arc	Arc	Arc	Arc	Arc
Marmore	Arc	Arc	Arc	Arc	Arc
Maxwell	Arc	Arc	Arc	Arc	Arc
Micheli	Arc	Arc	Arc	Arc	Arc
Minicelli (8 cyl.)	Arc	Arc	Arc	Arc	Arc
Moline	Arc	Arc	Arc	Arc	Arc
" Knight	Arc	Arc	Arc	Arc	Arc
Monroe	Arc	Arc	Arc	Arc	Arc
Moon (6 cyl.)	Arc	Arc	Arc	Arc	Arc
National	Arc	Arc	Arc	Arc	Arc
" (12 cyl.)	Arc	Arc	Arc	Arc	Arc
Oakland	Arc	Arc	Arc	Arc	Arc
Optimobile	Arc	Arc	Arc	Arc	Arc
" (8 cyl.)	Arc	Arc	Arc	Arc	Arc
Overland	Arc	Arc	Arc	Arc	Arc
Packard	Arc	Arc	Arc	Arc	Arc
" (12 cyl.)	Arc	Arc	Arc	Arc	Arc
" Com'l.	Arc	Arc	Arc	Arc	Arc
Prairie	Arc	Arc	Arc	Arc	Arc
" (6-40)	Arc	Arc	Arc	Arc	Arc
" (6-30)	Arc	Arc	Arc	Arc	Arc
Roadster	Arc	Arc	Arc	Arc	Arc
" (12 cyl.)	Arc	Arc	Arc	Arc	Arc
Runabout	Arc	Arc	Arc	Arc	Arc
" (6 cyl.)	Arc	Arc	Arc	Arc	Arc
Sixes Arc.	Arc	Arc	Arc	Arc	Arc
" Com'l.	Arc	Arc	Arc	Arc	Arc
Premier	Arc	Arc	Arc	Arc	Arc
Regal	Arc	Arc	Arc	Arc	Arc
" (8 cyl.)	Arc	Arc	Arc	Arc	Arc
Reo	Arc	Arc	Arc	Arc	Arc
Saxon	Arc	Arc	Arc	Arc	Arc
Steamer-Knight	Arc	Arc	Arc	Arc	Arc
" (8 cyl.)	Arc	Arc	Arc	Arc	Arc
Stephens	Arc	Arc	Arc	Arc	Arc
Studebaker	Arc	Arc	Arc	Arc	Arc
Suits	Arc	Arc	Arc	Arc	Arc
Vauxhall	Arc	Arc	Arc	Arc	Arc
" (6 cyl.)	Arc	Arc	Arc	Arc	Arc
Westcott	Arc	Arc	Arc	Arc	Arc
White-Knight	Arc	Arc	Arc	Arc	Arc
Willys Six	Arc	Arc	Arc	Arc	Arc
Winston	Arc	Arc	Arc	Arc	Arc

YOUR TRACTOR

also may be lubricated efficiently with Gargoyle Mobiloils. On request we will mail you a separate Chart specifying the correct grade for each make and model of tractor.

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Kansas Farmer Dairy Club

Buying Dairy Cows

DAIRY CLUB members will get their first lesson in dairying when they purchase the cow to be used in the club work. Last year we told the boys and girls joining the club that the pedigree of the man from whom the cow was purchased is as important as the pedigree of the cow. There are a good many things to consider in buying cows for a dairy herd. In fact the very best dairymen seldom buy cows. They have found it almost impossible to depend on this means of replenishing their herds. After once getting a start with a few good animals, they breed and raise their own cows. In this way they know absolutely the history and condition of every animal added to the milking herd.

You who are joining the Kansas Farmer Dairy Club are beginners and will have to buy cows. In doing this you will be doing what every dairyman has had to do in the beginning. You will be making your first investment and the cow purchased, if a good one, may be the foundation of the future herd. If she is carelessly selected and is found later to have serious defects, or possibly even diseases that make it necessary to get rid of her, the investment will not be a paying one. Not only will there be loss, but it will be necessary to begin over again.

We hope you will not buy your cows hastily. Too much is at stake in making this initial purchase and it will pay to go about it deliberately and systematically. Professor Reed in the special article which he wrote last year for club members, on dairy cow selection, advised picking the cow from a herd where all the ancestry is known. If the owner of the herd is also known personally and can be depended upon for every statement made, the buying of the cow will be greatly simplified. Such man can usually be depended upon to start the beginner with a cow or heifer that will be satisfactory.

In buying a cow or a herd of cows, it is important to know positively that they are free from disease. The two most dreaded diseases among dairy cattle are tuberculosis and contagious abortion. Dairy cattle cannot now be shipped into Kansas without having passed the tuberculin test.

The cow bought should always be purchased subject to the tuberculin test. If the purchase is made from a man personally made, who tests his herd regularly and the animal in question passed at the last test, this might be accepted as satisfactory. If there are reactors in the herd it would be better to insist on a test before accepting the cow.

The presence of contagious abortion in the herd is sometimes difficult to determine. In buying a cow, the history of the herd as to calves lost should be investigated. A thoroughly honest man would not attempt to sell a cow from his herd if he knew he had contagious abortion. If the results of the investigation of the herd show that quite a number of abortions have occurred, it should be viewed with suspicion even though the owner may not be willing to admit the presence of this serious disease. Here again the honesty and integrity of the man is of considerable importance. If he succeeds in concealing the truth, a cow might be purchased that is infected with the germs of contagious abortion and not only would the calf be lost, but the production of the cow would be seriously affected. This disease is hard to cure and other cattle on the home place might become infected.

In buying bred cows or heifers, as our dairy club members will have to do, it is always important to have the exact breeding date, likewise the name of the sire. We would urge that our club members insist on having this information supplied positively for the cows they buy. Since October 1 is set as the latest day on which a record can start, this is important. A guarantee should be secured that the cow is bred and in calf, and provision made for rebreeding or adjusting the transaction so that the member can be sure of having a cow that will be fresh within the required time limit. This sort of guarantee is a good one to get, no matter what are the circumstances under which a cow is purchased. The mere statement that the owner thinks the cow will be fresh is not sufficient.

If the cow is purchased from a man having personal knowledge of the animals in his herd, he should be asked to state positively either in writing or in the presence of witnesses, that the cow is all right in every particular, has no "blind teats," is not "breachy," or a kicker, and has no other bad habits or defects that would make her unsatisfactory as a milk cow. If the cow must of necessity be bought from a man who is not in a position to supply all this information, the cow herself should be investigated most closely, and you would be justified in asking assistance from others having experience with dairy cows. Cows with a part of the udder spoiled, having teats with extra openings or other deformities, or that are hard milkers, are to be avoided. It takes more than a skin with the markings of some dairy breed to make a satisfactory milk cow. Many have bought cows recklessly, paying little attention to the real requirements of dairy animals.

In counties where there are agricultural agents you should consult with these men about the cow you buy. They are familiar with the different herds of the county and will gladly direct you to farms where you can get what you want. They will also be willing to assist in making selections if their advice and help is desired. The banker should likewise be consulted frequently in this matter of purchasing the cow. He can give good advice relative to the kind of guarantee that should be required from men from whom cows are purchased. KANSAS FARMER will likewise give help in locating suitable cows for members of the club, when this help is requested. We are anxious to have you get good cows. Unless you start right, you are apt to be disappointed later. Some of the members of the first club were very much disappointed in their cows.

Cow Getting Too Fat

My cow is giving about twenty-two pounds of milk a day now, and I have decreased her feed considerably because I found she was putting it upon her back instead of in the milk pail.

I paid \$107.50 for my cow and have \$102.99 back on the note, leaving \$4.51 yet to pay, besides the interest. She is almost paid for and when she is I will let you know. I pay the bank 8 per cent interest.

I feel I have been successful as a Dairy Club member and I wish all the other members success.—MAX HOLLISTER, Harvey County.

A given amount of corn in the form of silage will produce more milk than the same amount when shocked and dried.



Buy Early This Year

THIS year, American farmers have need of first-class equipment in harvesting machines, twine, and binder repairs. Buy none but well-known, long-tried machines and buy early. The early buyer alone can be sure of securing the necessary repairs and new machines to take care of his grain harvest.

Buy good twine, and buy it now. This is no time to be thinking about saving a cent or two on twine, but to think of the dollars that good twine will save in the field. Our advice to every farmer is to buy at once the full amount he is going to need, and not alone to buy it, but to go to the dealer, get it, and take it home.

Champion, Deering, McCormick, Milwaukee, Osborne, and Plano binders now cost less in the amount of farm produce required to buy them than ever before. But prices of all manufactured goods are likely to go higher without much warning, while there is no chance at all for them to go lower this season. The safe thing to do, therefore, is to buy now, at present prices, for immediate delivery.

Your local dealer has done his share to insure the harvesting of your grain. See him as soon as you can and arrange for the repairs, twine, or new machines you are going to need this year.

International Harvester Company of America

CHICAGO

(Incorporated)

U S A

Champion Deering McCormick Milwaukee Osborne Plano

Hail

ARE YOUR CROPS PROTECTED ?

You know the deadly work of hail. Within a few hours all your crops can be destroyed. Your income is gone. Your labor is wasted.

What a sense of security you have when your crops are protected against hail in a safe and conservative company. Don't risk another day, but insure now in a company whose officers are bonded to the State of Kansas for \$50,000.

THIS IS THE COMPANY

that first put the insurance in force from the moment the application was signed and the premium paid. Always has adjusted all losses, no matter how small. We ask for your application on our past record. Don't wait for the storm, but write us for full particulars or see our agent before you insure your grain.

THE GRAIN GROWERS HAIL INSURANCE COMPANY

Elmer F. Bagley, Secretary, Topeka, Kansas.

GET MY PRICES



BEFORE YOU BUY Be sure and get my prices! Before buying a gasoline engine (manure spreader, cream separator or tractor) of any make, or kind, or price, please ask for and read Galloway's 1917 catalog—the biggest, most important book and greatest money-saver for my customers I ever put out! Get my proposition to you and compare it with all others; then be your own judge! We are actual manufacturers and sell direct to you from our factory. We specialize on the lines we offer. We were first to offer engines, separators, spreaders direct from the factory at one small profit. We have made the manufacturing and selling of these lines a life business. You can't afford to buy a gasoline engine or any of the other Galloway lines until you first get our prices and our proposition. Get my price before you buy! Cash or Time.

HERE'S THE REAL PROOF!

I can't give it praise enough. I had a 6 h. p. Galloway engine belted to my 10 in. corn mill and it does the work where an 8 h. p. of another make did not. M. P. BISHOP, DEERFIELD, ILL.

It has not cost me one cent for repairs. Am now buying a 2 1/2 h. p. engine and washing machine for the home. Consider the Galloway simplest engine made. A. POLAK, DUNOVISKY, ILL.

I found the 10 h. p. Galloway simplest, most powerful, best governed engine I ever saw and \$225 cheaper. HENRY WESTMAN, MILTON, WIS.

My 8 h. p. Galloway was 1 year old this fall. Works perfectly—good for 15 yrs. yet. HAROLD W. BARNES, DUNFEL, ILL.

THE WM. GALLOWAY CO., 315 Galloway Station, Waterloo, Iowa

IN buying dairy cows to be used in the work of the Kansas Farmer Dairy Club, if possible buy from a herd where the ancestry of the cows is known. Buy from a man whose reliability and honesty is not questioned.

Buy only tuberculin tested cows. Do not buy from a herd where contagious abortion is present.

Secure a positive guarantee that the cow is bred, is in calf, and will calve before October 1, which is the last date on which a record can start.

Secure a guarantee that the cow has no bad habits and has no faults or defects that would make her unsatisfactory as a milker.

Watered Stock in Farm Land

By Theo. Macklin, Professor of Agricultural Economics, K.S.A.C.

EVER since the Grange first started in 1867, the farmers of America have been fighting monopoly in whatever form it appeared. The railroads especially were the object of reform. However, because of the railroad method of cleverly hiding excessive earnings by means of watering the stock or inflating the capital value, the original idea of the farmers' movement to effectively solve rate problems has never been fully realized. In other words the railroads have been able to make the farmer accept the supposition that rates were fair because railroads paid a normal rate of interest on their capital stock. Nothing was said to explain whether the amount of the capital value of the railroads was fair or not.

From the business farmer's standpoint this same problem faces him in the question, "Is there any watered stock in the capital value of your farm?" If so, does not this watered stock hide part of your actual labor income? It is fully worth one's while to know whether poor business management or merely incorrect calculation is the cause of a low labor income.

When a non-speculating farmer buys land he does so in order to make money out of farming instead of by the usual way of profiting from a rise in value of the land. His first question is, "How much can I pay for a given farm?" The decision, if made on sound business principles, will be based on what profits the farmer can make beside paying day wages for his own time and that of his family. The certainty of market prices, the probable yield of the farm and the cost of marketing his products might justify him in saying, "I see my way clear as a cash renter to outbid Mr. Jones for the 160-acre farm by paying a cash rent of \$1.69 an acre. According to its earning power with the mortgage costs at 6 per cent, I could pay (100 divided by 6 equals 16 2/3 multiplied by \$1.69) \$28.17 an acre for the farm. But Mr. X is holding the farm for \$65 an acre. He says that he could not make a labor income farming, and for the last two years had the farm let to a tenant. His calculations were like this: Interest on land at \$65 an acre, \$3.90, or \$624. Total net income including interest on land value but excluding the family's living for the year, \$1,024. Deducting \$624 interest on land value left him a labor income of only \$400. The question is, Did Mr. X know his real labor income? On the basis of correct calculation he did not. The trouble with Mr. X was that the real productive value of his land was only \$1.69 an acre for renting, or \$28.17 for purchase, instead of the \$65 for which it was held. Now Mr. X arrived at his labor income of \$400 after deducting \$624 from \$1,024. As a matter of fact this \$624 consisted of \$270 interest at 6 per cent on the real capital value of \$28.17 an acre, and the other \$353 which he called interest on land value was actually part of his real labor income. Instead of \$400, his labor income was \$753.60, besides the living for himself and family for a year.

Coming back to the proposition of renting or buying this 160-acre farm, it is simply this: If I rent the land at \$1.69 an acre I will be farming at a cost for land of 6 per cent of its real value of \$28.17. If I buy the farm from Mr. X at \$65 per acre it will cost me \$3.90 interest a year instead of \$1.69, or in other words while I would make 6 per cent on the real or earning value of the land, I would have to pay in order to become an owner 13.8 per cent interest on the earning value. This is too high a penalty to become an owner. I tell the boys to whom I lecture that they should be shrewd and look out for this watered stock in land. If they can't get land at a price based on its value for farming, they had better leave farming and go into a line of work where they base their calculations on sound business principles. A farmer can't keep on farming when he has to have more go out than it is possible to bring in. And I think maybe this watered stock is far too common in Kansas farms. The young men are "wise to it," as we say, and are not to be fooled into any sieve-like business where there is plenty of hard work and more going out than coming in.

Sorghum for Syrup

Some of our readers are asking if it would not be a saving of money in these

days of high-priced sugar to go back to the old practice of making "sorghum molasses."

The agriculture committee of the State Council of Defense has considered this question and in view of the present high price of sugar it is their conclusion that where a sorghum mill is available, the growing of cane for manufacturing the syrup may prove very profitable in supplementing the sugar.

The varieties of sweet sorghum ordinarily grown in the state can be utilized for syrup. The varieties best adapted

for this purpose are the Orange and early strains of Sumac in Eastern Kansas and the Western Orange and Red Amber in the western part of the state. Black Amber is not so satisfactory but may be the only one available.

Sorghum for syrup production is planted and cultivated in practically the same way as corn. In Eastern Kansas surface planting or planting with a furrow opener attached to the planter gives better results than listing, while the latter method is preferable in Central and Western Kansas.

The proper time to plant sorghum is about ten days after the best time to plant corn. Sorghum for syrup should be planted thinner than for forage or silage. For best results the plants should

be five to seven inches apart in the row. Sorghum for syrup should be cut when the seed is in the late milk or the dough stage. The best grade of syrup is obtained when the leaves, heads and suckers are removed and only the main stalks used. When this practice is followed the work must be done by hand. Large commercial factories, however, do not remove the leaves before crushing.

A ton of sorghum will furnish from 700 to 1,200 pounds of juice, from which eight to thirty gallons of syrup may be made, depending on the sugar content of the juice. The production of the syrup per acre will vary from a few gallons to as much as 300 gallons, depending on variety grown, season, soil, and method of growing and manufacturing.

TRY HOG-TONE

60 Days FREE Treatment FOR ALL YOUR HOGS

If I don't make your hogs make you more money—produce more pounds of pork for you from the same amount of feed—I don't want your money! I am giving you the same opportunity to prove this that I gave Jno. W. Crane, hog raiser near South Whitley, Indiana. He writes: "I selected four pigs out of my bunch—three were runts. I weighed them and they averaged 85 pounds. I fed them Hog-Tone for four weeks. Then sold them eight weeks from time I weighed them and they averaged 221 pounds per hog."

Mr. W. O. Gandy,
President
Avalon Farms
Company

You Can't Pass This By!

icine on any hogs no matter how healthy they appear to be, and prove it to your own satisfaction. If it doesn't do it I don't ask you to pay a cent.

I know I am safe in making this guarantee. I know what Hog-Tone has done and is doing for the herds of other hog raisers. I also know that the market price of hogs is going higher every day—and is bound to go higher from now on. There is a serious hog-shortage. Especially a shortage of high-grade porkers—hogs absolutely free from worms—big hogs with sound, clean flesh! Worms are killing off the hogs! "More hogs may be lost from worms this year than from hog cholera, and many cases of apparent cholera are only worms,"

Avalon Farms Hog-Tone is the only Veterinary Remedy ever sold with a guarantee to produce a definite percentage of profit. I guarantee it to produce 400% profit on the cost of the medicine.

says Dr. J. T. Dinwiddle, Veterinary Specialist of the South Dakota State College. "Nearly every hog is infested with worms," declares the U. S. Dept. of Agriculture. The malignant Throat Worms—Stomach Worms—Liver Worms—Lung and Bronchial Worms weaken the hogs—affect every sow's litter—make million of hogs easy victims of cholera, scours, thumps, rheumatism, enteritis, gastritis—rob surviving hogs of nourishment their food should bring, cut down their weight and quality at marketing time. Grasp this opportunity to try

AVALON FARMS HOG-TONE

The Liquid Worm Killer and Hog Conditioner To Treat All Your Hogs for 60 Days—FREE—At My Risk!

Avalon Farms Hog-Tone Costs Very Little

I will ship you one \$1.00 bottle of Hog-Tone for each eight hogs in your herd—the day the coupon below, filled in, reaches this office. That will be sufficient to treat your hogs 60 days or more, according to size. This will mean just 12 1/2 cents per hog for all the treatment—and that treatment is guaranteed by me to give you a 400 per cent profit over and above the cost of the Hog-Tone treatment, at marketing time. This is the same opportunity that these men grasped—and made money by doing so.

M. S. McFadden, Poland China Editor of Swine World (who feeds about 1000 hogs annually near Bloomer, Illinois) advises: "I received Hog-Tone and gave it a test on five pigs. Our farm manager says that it is the best worm-expeller he ever used. The pigs fed on Hog-Tone have made 25 per cent larger gains than those not fed on Hog-Tone."

John Heinman, R. F. D. No. 5, Decatur, Ind., states: "I fed the Hog-Tone to a lot of hogs that had the scours. Some of my pigs had their backs turned up like a rainbow. In less than two weeks I could not get to the trough to feed them. I do not know exactly what the gain on this lot of hogs was, but I could see a great change in them."

Avalon Farms Hog-Tone is a highly concentrated liquid medicine FOR HOGS ONLY. It contains highly important medical ingredients which are liquids and which cannot be combined in Medicated Salts, Stock Feeds or Condition Powders of any kind.

Avalon Farms Hog-Tone is safe. It is very easy to treat your hogs with Avalon Farms Hog-Tone. IT IS EASILY MIXED WITH ANY KIND OF SLOPS, WITH THE DRINKING WATER OR DAMPENED FEED. It is only given every third day for the first six weeks and after that only once a week. 100 per cent strong.

Thoroughly proved on Avalon Farms, near Fort Wayne, Indiana. Cleans out every kind of worms that infest hogs. By doing so, it gives protection to your hogs from easily contracting Cholera, Rheumatism, Scours, Thumps, caused by worms and indigestion. Enteritis, Indigestion and other diseases that destroy literally millions of hogs. A simply wonderful tonic and conditioner—gives hogs voracious appetites, aids digestion, helps them thrive, grow and put on fast increases of flesh. Makes hogs eager for their feed.

Avalon Farms Hog-Tone is the best known tonic for sows during gestation. Its use insures strong healthy pigs. It is the reliable worm expeller which is safe to use at this time.

Don't Send a Penny! Just Mail Me

Simply tell me how many head of hogs you have—write down your name and address— and mail to me. I will immediately ship you enough Avalon Farms Hog-Tone to treat your hogs for 60 days! You simply pay transportation charges. Treat your hogs according to directions. If at the end of the treatment you are not completely satisfied—simply return the labels to me and you don't owe me a cent.

Grasp This Opportunity—Mail the Coupon to Me Today!

AVALON FARMS COMPANY, W. O. GANDY 661 Rand McNally Bldg., Chicago President



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There is no charge for this medicine. I will ship you immediately enough AVALON FARMS HOG-TONE to treat your hogs for 60 days. I am to pay nothing now except transportation charges. I agree to report results to you at end of 60 days and pay for the Hog-Tone at that time if I have done all that you claim. If it does not, I will return the labels to you and you agree to cancel the charge.

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W. O. Gandy, President, Avalon Farms Co., 661 Rand McNally Bldg., Chicago, Ill.



Use of Feed Produced

ALMOST every year low grade feed material goes to waste in Kansas. Sometimes it is because of lack of capital to buy the necessary stock, or there may be a shortage of labor to properly harvest and store the feed. These and other reasons result in much of this class of feed being lost in so far as production of food value is concerned.

In the present emergency the Kansas Council of Defense, through its live stock committee, is planning to procure enough live stock to consume the surplus feed that will be raised in the big agricultural campaign for increased production now being conducted.

Products—such as straw and corn and kafir stalks—often burned or otherwise wasted, will be available for feed and should be used, the committee points out. It is possible to winter cattle on wheat straw—of which there will be an abundance in Kansas—with the addition of a little cottonseed cake. The committee is making plans for obtaining enough cattle so that there will be no waste of possible feed products in this war year.

The labor situation is most serious. Competent farm hands should be kept on the farms so far as possible. If they enlist in the army, they should be detailed back to the farm, according to a resolution adopted by the live stock committee.

The resolution points out that "Kansas and other agricultural states are short of experienced farm labor and inexperienced labor is almost worthless to the farmer." With a decreased supply of labor, the resolution goes on to state, it is useless to expect increased production. The first crop of alfalfa will be ready to cut in from two to three weeks, and a heavy increase in the labor supply will be necessary if it is to be cared for properly. We need this alfalfa for our stock. An army is of little use without an abundance of food and the feeding of our Allies is of even more importance than to send them men. Saving the alfalfa is of the greatest importance to our program of increased live stock production and the trained farm hand working in the alfalfa field is performing a greater service to his country than the man enlisted as a soldier in the banks.

Using the Land

When some people are plowing up their lawns for planting to food, it may look sinful to leave land uncropped, but we must show our patriotism by using our reason, as well as our muscle. With all land in crops that there is labor to care for, it would be wrong to plant

more—even if some of the land upon which wheat has failed must be idle. If possible, such idle land should be prepared early for the next year's crop. The best field of wheat I saw during a recent trip of 400 miles was on land which was summer-tilled. In 1913 the men who planted kafir on summer-tilled land raised good crops of grain.

We suggest that this is not the only year we shall need to produce food. Also, that we should not let the hysterical efforts of recent converts to the dignity of "the food producing job" cause us to cease using the knowledge, skill and reason we possess. — J. E. PAYNE, Oklahoma.

There are certain points that must be kept in mind when constructing a pit silo in order that it may give the best satisfaction when completed. In brief, they are as follows:

The silo must be located in firm, dry and well-drained soil, and therefore is not adapted to humid districts.

The silo must have a curb extending a few inches above ground and a little below the frost line.

The walls should be plastered from three-fourths to one inch thick.

The walls should be washed with a cement coat to make them air- and water-tight.

The walls must be absolutely perpendicular and smooth, so that the silage will settle evenly.

A covering must be provided that will keep out dirt, trash, domestic animals and children, and also provide for a free circulation of air.

If walls become dry before plastering they should be sprinkled lightly. This helps the plaster to stick, and keeps it from drying out too rapidly.

In view of the shortage of wheat the wheat farmer can make no mistake in planning for maximum production in 1918. It will require no guarantee of a minimum price to insure wheat production being profitable, although we believe the President should be given authority to fix minimum prices in case an unforeseen emergency should arise that would threaten the producer with loss.

Where land is to be fallowed in preparation for wheat, cultivation should begin as soon as the weeds have thoroughly started, or as soon as possible after sorghum planting is out of the way. Only such cultivation should be given there-

Reports furnished by S. D. Flora, Meteorologist, Weather Bureau

[illegible]

MORE rain fell in Kansas this month than in any other month since last June, and almost as much as during the five previous months combined. The monthly amounts were above normal in nearly all parts except some of the western counties and by the end of the month the moisture in the ground was sufficient for present needs in that part of the state.

Crop prospects were greatly improved. Wheat that survived the long winter's drouth greened up, made a fine growth, and stooled out. Pastures, oats, and alfalfa each made a fine growth, and a great deal of early truck and gardens were planted with the ground in excellent shape.

You will find a hustling "partner" in Admiral Power Press. Smooth running; free from needless parts. Low fuel costs. Thoroughly tested engine incurs dependable service for all conditions of field work. Saws, grinds, feed, etc.

"The Hay Press With the Mastic"
Holds unbeatable records for baling greatest amount of hay in shortest time at lowest expense for hay.
H. M. McDaniel of California, Mo., made 4000 last year in spare time, after baling 12,000 on his own. He says: "The mastic farmers have tried for years. The mastic the Admiral has made for me is the best I have ever used. It makes the hay bales stronger, heavier, faster and better looking baling. The Admiral pays for itself in record time. Give me a sample extended to you. Write for Ray." **RAY**

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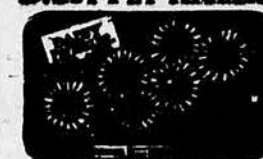
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Remember the late crop of tomatoes, peppers, egg plants, and celery. Plants for this purpose can be raised in a box in the house, or can be grown outside.

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after as is necessary to keep down most of the weeds. The surface soil should not be worked into a dust-like condition; it should rather be left rough or cloddy.

Seed Wheat Next Fall

The agricultural production committee of the Kansas Council of Defense points out that there will be no question about obtaining plenty of good seed for every farmer who wants to plant wheat next fall. Some concern has been expressed about the matter in places where the wheat has winter-killed.

The state will produce from fifty to seventy million bushels of wheat this year, it is estimated by the committee. Almost all will be suitable for seed. The wheat now on hand is needed for bread more than for next fall's seeding.

The Federal Department of Agriculture in its May 1 forecast gives Kansas a possible production of forty-two million bushels, and the United States 366 million bushels. The final estimate of last year's production is given by the government as 481,744,000 bushels, two years ago (1915) 673,947,000 bushels, and the average for 1910-1914, 494,654,000 bushels.

For Best Results

Test your seed.

Prepare a good seed bed for sorghum crops.

Cultivate corn while the weeds are young and easily killed.

Guard against damage to the first cutting of alfalfa through rain.

For summer fallowing, plow land five to eight inches deep.

Maintain a campaign for increasing the planting of garden beans and sweet corn for canning and drying these two standard crops.

The foregoing are suggestions made by the agricultural production committee of the State Council for Defense for keeping up the big Kansas food drive.

Plant Parsnips and Carrots

Parsnips and carrots are used very sparingly by the average family. These vegetables are easily grown and merit a much more extended use. Half a dozen rows at each, 100 feet long, at a cost of 25 cents for parsnip seed and 10 or 15 cents for carrot seed, will make quite an addition to the food supply.

One important feature of parsnips is that they will keep in the ground. Freezing does not hurt them. A supply should be put in the cellar or "pit," to be drawn on when the outside crop is frozen up. The great service of parsnips is as a connecting link in the vegetable succession, for a month or two after the ground thaws. Then they occupy an important place in the menu of the housekeeper who knows their value.

Ground Fence Wires

This is the season of the year when electrical storms are frequent. Often lightning strikes wire fences. We noticed in a daily paper this week that seventeen steers valued at over \$100 each were killed by one stroke of lightning on a Saline County farm. When lightning strikes a wire fence the electric current will follow the wires until it shoots off to some near-by object. If horses or cattle are standing near they are likely to be killed. A storm will always drive the stock along until they come to a fence, where they will bunch up and thus make it possible for a number of animals to be killed by an electric bolt striking the fence.

If the fence is properly grounded, however, it will carry the electric current directly into the ground. Ground wires should be placed at intervals of twenty rods. Use a No. 8 or 9 galvanized iron wire. A rod or a small cable is better, but is more expensive. Twist the wire two or three turns around each fence wire, and by means of a crowbar set it in the ground to a depth of four or five feet. In a dry section it is better to sink the wire deeper until it comes into contact with moisture, since a dry earth makes a poor conductor of electricity. Grounding pasture fences in this manner will greatly lessen the danger of losing animals from lightning.

Potato Bugs and Blight

In our issue of April 28 we answered an inquiry relative to protecting potatoes from Colorado potato beetles, but the subject of preventing insect and fungous injury is of sufficient importance to bear repetition.

If the potato beetles are attacking

potatoes just as they are coming through the ground, the fall grown insects should be picked off by hand. The plants may later be sprayed with four pounds of arsenate of lead paste or one pound of paris green to fifty gallons of water. In case paris green is used, one pound of freshly slaked lime should be added with every pound of the poison.

If the potato patch is small, good results may be obtained by dusting paris green or powdered arsenate of lead upon the plants by means of a perforated tin can or a cloth bag. A heaping tablespoonful of either of these ingredients should be mixed with one quart of flour or hydrated lime and used while the dew is still on the plants.

The early blight, which is a foliage fungus disease, will become serious if it gets started. Growers should not take a chance on its appearance. This plant disease causes spots on the leaves in the beginning and later the leaves dry up and hang on the plant. Diseased plants will not form tubers. Rainy weather is favorable to this disease.

In order to prevent the occurrence of epidemics of the early blight, Bordeaux mixture sprays of 4:4:50 strength should be used. In order to obtain the best results, sprays should be given at intervals of about a week, beginning when the plants are six inches high. The earlier sprays are very important. Bordeaux sprays should be continued well up to flowering stage.

Bordeaux mixture is copper sulphate, or blue vitrol, lime and water. The 4:4:50 strength means four pounds of the vitrol, four pounds of lime and fifty gallons of water. To prepare it, dissolve the vitrol in half the water to be used, and slake the lime in another vessel and dilute with the balance of the water. Then strain and put the two solutions together and stir thoroughly.

When spraying for the early blight and the Colorado potato beetle, a combination spray of Bordeaux mixture 4:4:50 and three to four pounds of arsenate of lead paste or one pound of paris green to fifty gallons of spray is used. When paris green is used an equal amount of lime should be added.

The flea beetles, which sometimes do considerable damage, may be controlled by the combination spray if the under sides of the leaves are also well sprayed.

Certain potato diseases, such as wilt and blackleg, cannot be controlled by spraying. Growers should tear out suspicious looking plants, otherwise these plants may form tubers which will spread the diseases.

Tomatoes Important Crop

In our issue of May 5 we gave some valuable suggestions on growing tomatoes. As a vigorous grower, a high yielder, and a vegetable which can be completely utilized—both fresh and canned—the tomato is outstanding among its garden neighbors.

It is not too late yet to set out tomato plants. In order to have a uniform supply of fresh tomatoes beginning at the first ripening and lasting until frost, it will be necessary to plant several varieties. The following varieties are suggested, arranged in the order in which they mature their fruit: Earliana, John Bair, Landreth, Chalk's Early Jewel, Bonnie Best, and Trucker's Favorite. Dwarf Champion and Improved Dwarf Stone are good varieties of the tree sort.

Cultivation should begin as soon as the plants are set in the soil and should be continued as long as the vines will permit. Moisture, when deficient, can often be profitably supplied from a near-by pump or hydrant. Care should be taken to stir the soil after each rain.

The yield of tomatoes can often be increased and the picking season lengthened by pruning and staking the vines. They are usually pruned to two or three stems and are then tied to stakes or trellises with soft material which will not bruise the plant.

Two Litters a Year

The cost of pork production can be reduced somewhat by having brood sows farrow two litters a year. From early June to early August many "grass widows," as sows which have produced a spring litter are called, are sent to market. The most economical use of these animals is to make them produce a fall litter. These sows can be bred as soon as they have weaned their spring pigs. Fall pigs are ready for market when there is a scarcity of marketable hogs and when the price is relatively high. They may be fed for spring market or may be finished on summer pasture.



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Demand for Better Cattle

PURE-BRED cattle are coming into their own. The world-wide shortage of meat is having its natural effect in stimulating increased production, and those who would get into the game of producing beef seem to realize the necessity for using the best of breeding stock. The scrub is on the run and will continue to decrease in numbers.

B. O. Cowan, who is known to all Shorthorn breeders, recently pointed out that four or five years ago when the price of beef cattle in our markets showed such a rapid and unexpected advance in value, most stockmen began to realize that the announced shortage in cattle was something more than a prediction—it was a stern reality. The price of feed in the country had something to do with the sudden enhancement of values that sent fat steers up to \$10 and \$11 per hundred, but persons in touch with market conditions and with the cattle industry could plainly see that the question of supply was an important factor.

Live stock journals sounded a warning of depleted farms and abandoned ranges and counseled farmers to breed more cattle. At that time Mr. Cowan contributed an article to farm papers calling attention to the fact that while there had been a large increase in the value of steers, both fat and stockers, there had been practically no enhancement in the price of pure-bred Shorthorns, and advising farmers to lay the foundations of herds while these cattle were going at such moderate prices and so be prepared for the brisk trade in cattle that there was good reason to believe was coming. Some took advantage of the opportunity and began breeding Shorthorns and so are now reaping a financial reward, but to many others opportunity knocked in vain and they continued to grow corn and pay high prices for feeders.

The price of pure-bred Shorthorns increased slowly, but hardly kept pace with the increase in the value of steers until during the last eight or ten months. A demand for them so sharp and insistent has sent values up to a level that will give abundant reward and great encouragement to those breeders who were loyal to the breed and who maintained their herds during years when prices were low and profits small. And while it is a hopeful and an encouraging condition of this active buying that among the buyers are many new men, it is one of the anomalies of trade that farmers who refused to buy Shorthorns when they were selling so low a few years ago are now eager to get them at four or five times their values at that time. But in this case, as in some others, it is "better late than never." The purchase of a foundation at that time would have been a very wise investment, but purchases of good cattle made now and handled with intelligence will give a good return to the investor.

The success of raising and selling pure-bred cattle of any breed depends on the quality of stock and on the intelligence and skill of the breeder as a feeder, fitter and salesman, but to the farmer who does not wish to raise pure-breds, there is still strong encouragement to grow steers for the markets, either finished or as feeders.

The prices for steers that have prevailed for five years should encourage farmers to raise them in every community, as they did in the days before the competition of free grass on the western ranges drove cattle from farms in the corn belt.

Sheep Need Dipping

A dipping vat is necessary in the sheep business. The flock should be dipped at least once a year and in case of ticks and scab as often as necessary. This dipping should be done in warm weather. Sheep should always be dipped after shearing. The ticks will leave the old sheep after shearing and go to the lambs. A lamb that is covered with ticks should be dipped.

It is advisable to examine the flock in the fall and if ticks are present the sheep should be dipped again. Dipping

not only kills parasites, but tends to improve the general health of the animal, giving a more luxuriant growth of wool.

In dipping the sheep use a large tank so that it is possible to totally immerse each animal in the liquid. Any of the coal tar dips make a good solution. The sulphur dip has also proved satisfactory.

Duroc Association Offers Prize

R. L. Hill, field secretary of the National Duroc-Jersey Record Association, has just written us that the association has decided to offer a cup to the student doing the best judging work on swine at the International Live Stock Show at Chicago. The purpose of making this offer is to promote not only the Duroc-Jersey breed but the hog business generally.

Jersey Breeders to Organize

Plans are under way to organize a Kansas Jersey Breeders' Association. A call has been issued to the breeders of Jerseys in the state and all others interested in this breed to meet in Holton, Kansas, on Decoration Day, May 30. Over forty breeders of Jerseys in the state have joined in sending out this call.

The Holton Business Men's Association will give a banquet in the evening to visiting Jersey breeders. For further information regarding this proposed organization write to R. J. Linscott, Holton, Kansas.

Co-operative Wool Sale

The sheep breeders of Gage County, Nebraska, at a meeting held last winter at Beatrice decided to pool their wool clips this spring and sell together. Also to buy sacks and twine together.

The week of May 28 was chosen as the time when the wool is to be delivered at warehouse in Beatrice. Warehouse receipt will be delivered on receipt of each clip.

Bids to be asked for and sale to be made the following week, actual expenses pro rated and checks for net receipts mailed to each owner.

If enough wool is received to make it worth while an expert grader will be hired to grade all wool before the sale. The expenses for this will be around one-half cent per pound or less.

Wool buyers say that this co-operative selling plan should net the wool producers from one to one and one-half cents and possibly two cents per pound above the prices that they could afford to pay individuals for small lots of wool because of the large saving of time, traveling expenses, hotel bills, etc., by the buyer. The wool grower will have the advantage of competition among buyers as several will be present. That alone should be much better than putting wool into the hands of one buyer and taking whatever he is willing to give.

This wool sale is an illustration of what can be accomplished through organization. Gage County has a farm bureau, its agent being L. B. Rist. He and J. H. Tubbs, director of sheep in the Gage County Breeders' Association, will have charge of the wool sale. The selling expense will be low. The more wool that is received and sold, the less the pro rata expense will be.

This sale is not limited to Gage County. Any sheep owner is welcome to consign his clip to this sale. It will be handled and sold the same as the rest. Already the managers have partial promises of the clip from the University of Nebraska flock, one clip from Kansas and one from Fillmore County.

Arrangements have been made so that seven-foot sacks can be offered at 70 cents each and jute twine at 15 cents a pound. If the same company buys wool as sells the sacks, they will return the price of the sacks. In figuring the number of sacks needed, allow twenty to twenty-five fleeces per sack and about twenty fleeces per pound of twine. This will be a good place to sell pelts, tags and loose wool.

Consignments and inquiries should be sent to J. H. Tubbs, Beatrice, Nebraska.

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Preserve Eggs For Winter Use

ONE-HALF of the yearly egg crop is produced in March, April, May and June. More eggs are produced than are consumed. Egg dealers put this surplus into storage and sell when production is light. Cold storage is the practical commercial way to preserve eggs, but for home use other satisfactory methods can be employed.

There are many methods of preserving eggs for winter use, such as packing in bran or salt, or covering in lime water, but water glass ranks second only to cold storage.

Water glass is known chemically as sodium silicate and can be obtained at any drug store. Mix one gallon of this with nine gallons of water which has been previously boiled. This solution should be placed in some container such as a stone crock or jar. The eggs can then be put in the solution and used when desired.

The containing vessel should be kept in a cool place, preferably an odorless cellar. The vessel should be covered with a board to exclude dirt and trash. The only attention required is that water be added occasionally as evaporation causes the solution to become thick and jelly-like.

Eggs preserved in this manner will be good for use next winter. The preserved eggs do not absorb any undesirable flavors from the water and are excellent for baking or boiling, but are not so good for frying, as the albumen or white of the egg will absorb water from the solution and become watery. If the eggs are to be boiled the shell should be pierced with a needle to prevent cracking.

In selecting eggs too great care cannot be exercised. Only clean, unwashed, fresh, strong-shelled eggs should be used. Infertile eggs are better than those from a flock where male birds are present. If possible the eggs should be stored the day they are laid. If this is impossible, they should be candled and those which show effects of heat, incubation, or which have large air cells, should be discarded. Spring-laid eggs are better in quality and are less likely to be bad than those produced in summer. One gallon of water glass will make enough solution for fifty dozen eggs.

Another method of preserving eggs is to coat them with a commercial egg preservative. Such preparations close the pores of the egg so that air and germs of decay are excluded and evaporation is prevented. Some patience is required to thoroughly coat the egg, but this is repaid by the ease with which the eggs can be handled, as they can be stored in egg cases.

The cost of these preservatives is about one cent a dozen. If such eggs are sold, they must be offered as preserved eggs.

Growing the Cockerels

The cockerels on most general farms are really the by-product of pullet production, and should be finished out for market as rapidly as possible. At the time the pullets are put on free range, the cockerels may be given a mash containing corn meal, wheat bran, shorts, and meat scrap, in equal parts by weight. Sour milk may be fed in addition. The mash and milk should be kept before them constantly, and a grain ration fed in connection with it. The wet mash at noon on very hot days is desirable for the cockerels, just as in the case of the pullets. There should be a constant and plentiful supply of grit and granulated bone or oyster shell.

Cracked Eggs Spoil

Over thirteen million dozen eggs, most of them laid in the spring, spoil in cold storage simply because their shells have been cracked slightly between the hen and the cold room. Just a little more care in handling eggs on the farm, in getting them to the country collector, in packing them properly in cases for shipment, in handling the cases as fragile shipments, will greatly lessen this enormous and important waste of valuable food. The U. S. Department of Ag-

riculture, therefore, urges every one who has anything to do with getting eggs to the storage markets to exercise unusual care this year to prevent them from being even checked. Once an egg shell is cracked, even so slightly that the eye can not see it, germs and molds find ready entrance into the egg and spoil its contents. Nature has provided the egg with a delicate protective gelatinous coating, which as long as it is intact tends to keep out air and germs. Once this coating is pierced, the keeping quality of the egg is lessened immediately. Five per cent of the 2,400,000,000 dozen eggs put in cold storage, the specialists find, spoil because they were checks; that is, eggs so slightly cracked that they could not be detected in quick handling during the spring rush of storing the bulk of eggs for winter use.

Overcoming Egg Shortage

Reports from the largest egg buyer in Kansas show that the egg production is from 20 to 40 per cent lower than it was a year ago, and last year's production was below normal. The government reports 38 per cent less eggs in cold storage on April 1 than at that time last year.

The nation is confronted with a serious shortage of laying hens. We can help out this phase of the food supply problem by hatching more chicks than usual this season.

Because of the high feed prices many sold hens last fall that ordinarily would have been retained for breeding purposes and egg production. The low egg production this spring has been due to the shortage in laying stock and to the failure on the part of poultry raisers to feed their hens adequately.

Give the laying hens more feed. They should have a good feed of grain at night and all the sour milk they can use during the day. Use the cheapest grain feed available, whether corn, kafir, or feterita.

It is too common a practice on the Kansas farms to let the hens shift for themselves during the spring and summer, or, at most, to throw them a little grain. Birds fed in this way seldom give a profitable production the following fall and winter. The most serious shortage will come next November, December and January, unless precautionary measures are taken.

Keep on hatching until the first of July and have an abundance of young chicks to help bolster up the food shortage. Well fed chicks will weigh three pounds in fifteen to seventeen weeks, and this is a profitable time to put them on the market. It gives a larger carcass for food and is just as profitable for the farmer. A three-pound chick will eat eight to ten pounds of feed in addition to what it picks up on the farm. There is money in them even at the high price of feed.

The pullets should be well fed so that they will be ready to lay before cold weather. Caution should be taken not to develop small breeds too early, for pullets laying before September 15 are apt to molt in the fall, and thus lose three months of egg production.—Ross M. SHERWOOD.

A good yet cheap lice powder can be made by mixing three parts of gasoline with one part of cresol, and gradually stirring in plaster of paris or building cement to take up the moisture. This mixture is dried, after which it is ready to apply thoroughly to the mature fowls.

Prune your flowering shrubs after the blossoming season is over. Pruning causes a vigorous growth and most of next year's flowers will be on this year's growth.

Tells Why Chicks Die

E. J. Reefer, poultry expert, of 4635 Reefer Bldg., Kansas City, Mo., is giving away free a new book which tells of a simple home solution that raises 98 per cent of all chicks hatched and cures white diarrhea over night. All poultry raisers should write for this valuable free book.—[Adv.]



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Just to be good, to keep life pure from degrading elements, to make it constantly helpful in little ways to those who are touched by it, to keep one's spirit sweet and avoid all manner of petty anger and irritability,—that is an idea as noble as it is difficult.—EDWARD HOWARD GRIGGS.

Clothes Moth Time Is Near

When the tiny, yellowish moths are seen flying about the lighted lamp, this should be a warning to the housewife that unless the household woollens are cared for immediately she will quite likely find them moth eaten. The moths seen around the lamp do not eat the woollens—they have no mouth parts. But these little moths are busy laying their eggs and unless these eggs are destroyed there will be a good crop of tiny caterpillars in a few weeks time, and these caterpillars do the damage to the woollens.

There are a number of ways to protect against moth damage so far as the storing part is concerned, but before storing the same treatment is necessary in all cases. If there are eggs on the garment when it is stored, these eggs will hatch and the caterpillars will do their destructive work. Moth balls, cedar shavings, tobacco, or any of the other odors so commonly used in packing away woollens, are merely repellents and any eggs that may be in the garments at the time of storing will hatch and damage will be done the clothing.

As soon as the use of woollens, furs, etc., can be dispensed with in the spring, they should be thoroughly aired and sunned and brushed and beaten before being packed away. The brushing and beating will remove any eggs or young larvae which cannot be seen. After this treatment the woollens or furs can be safely packed away by enclosing in several wrappings of strong paper so sealed that the moths cannot enter to lay their eggs, or in strong paper or muslin bags which can be securely tied to prevent the moths entering. The addition of the moth balls, cedar chips, tobacco, or other repellents to these packages will make them unattractive for the moths and they will lay no eggs among them after being so packed.

Woolen garments that hang in the closet during the summer should be aired, sunned and brushed every two weeks or at least once a month during the summer in order that any eggs that may be laid among them will not remain long enough to hatch.

The safe keeping of woollens during the summer requires care and time, but the assurance that the garments will be whole and ready for use in the fall, is worth all the care and time required.

Baby's Third Year Feeding

At the beginning of the third year the child's diet may be increased by adding more solid food, especially meats and vegetables. Every healthy child of three should have at least one food a day from each of the following five groups:

1. Milk and dishes made chiefly of milk (most important of this group in children's diet); meat, fish, poultry, and eggs.
2. Bread and other cereal foods.
3. Butter and other wholesome fats.
4. Vegetables and fruits.
5. Simple sweets.

The meats should be beef, boiled, broiled, or roasted, lamb chops, the white meat of chicken, or delicate fish. All meat should be free from fat, gristle, or bone and finely minced when given to the child.

Eggs should be very soft boiled, cod-dled, or poached, or soft scrambled. Fried eggs should never be given to a child, but the grated or mashed yoke of a very hard boiled egg may sometimes be used.

Meat broths made from mutton, beef, or chicken have little nutriment, but if these are thickened with arrowroot or corn starch, and especially if milk is added, they become a valuable food. Well cooked vegetables, strained and added

to warm milk, are not only good foods but serve to teach the child to like vegetables.

Cereals should be thoroughly cooked and served with milk or thin cream and a very small amount of sugar or none.

Bread for a child should be at least two days old. Toast, zwieback, or hard crackers may be given once or twice a day.

Baked potatoes moistened with a little butter, thin cream, beef juice, or platter gravy may be given.

Asparagus tips, spinach, stewed celery, squash, string beans, carrots, young peas, well cooked and mashed, or put through a puree sieve, are all good for a child. A small portion of one of these vegetables may be a part of the child's dinner each day.

Fruits may be continually used. At this age sweet oranges, baked apples, or stewed prunes are most useful. The juice or mashed pulp of fresh ripe pears or peaches may be given in the third year, but there is much danger in using overripe or green fruit, as well as in giving too much. It is especially necessary to be careful in hot weather when fresh fruit decays rapidly. Bananas should never be given to a young child.

A child under four years of age should never have dried or salted meats, sausage, pork, game, liver, kidney, goose, or duck. Fried and raw vegetables, hot fresh breads, cakes and pastries, salads, candy, syrup, tea, coffee, beer, cider, and soda water are all unsuitable foods for a child.—Children's Bureau, Federal Department of Labor.

Canning Season Is Here

Rhubarb and greens are ready for canning, and every quart of these products that is put away now will sharpen the appetite next winter and will help in keeping the living cost reasonable.

No housewife need say she cannot can according to the new methods because she does not have the necessary equipment. Very few homes there are without wash boilers, and a wash boiler can very easily be converted into a hot-water bath outfit. A reasonably tight-fitting lid and a false bottom make it a hot-water bath outfit. This outfit is so named because the jars or cans are kept partially or wholly submerged in hot water during the process of sterilization. The false bottom is necessary in order to keep the jars from resting on the bottom of the boiler too near the fire. A few pieces of wood laid in the bottom and heavy wire or tin placed on them, will answer very well, or a fitted bottom of perforated galvanized iron can be used. It is necessary for the water to circulate, under the jars, so a solid bottom must not be used.

Following are the recipes sent out by Otis E. Hall, state leader of boys' and girls' club work of the Kansas Agricultural College and U. S. Department of Agriculture co-operating.

Wash and clean the fresh stalks. Skin may or may not be removed. Cut stalks into pieces that will pack best in jars so as to leave as little space as possible. Blanch one to two minutes. By blanching is meant the process of boiling. That is, plunge into rapidly boiling water and keep boiling one or two minutes. If boiling is checked too much by the cold rhubarb, do not begin counting time until the water gets back to the boiling point. After blanching, plunge into cold water and pack in glass jars—never use tin cans for rhubarb. Add hot syrup of thickness desired, or hot water, and partially seal. Before beginning the canning make sure that the cans are clean and scalded, also the lids. See that no pieces of rubber from rings used the year before are on either lid or can shoulder. Also be sure there is no rust on the lid if a screw-top can is used. Use good quality rubber ring and place before putting on lid. After filling jar, turn lid slightly—about as much as can be done easily with thumb and little finger. Place jars in boiler and sterilize fifteen minutes. Then with a cloth in each

hand, remove jars as soon as safe to open boiler and turn lids good and tight. Do not set in a draft after removing from boiler.

The fifteen-minute sterilization period means that the jars should be left in the boiler fifteen minutes after the water begins boiling around them.

Spinach, Swiss chard, or mixed greens should be blanched fifteen minutes and sterilized three and one-half hours if packed in pints. Add one level teaspoonful of salt to each quart.

Cavaliers Asked to Mobilize

D. D. Mayne, principal of the school of agriculture, University farm, St. Paul, Minn., has issued a call to the members of the Farm Boy Cavaliers of America to mobilize. He calls upon them for the production of more food and for the prevention of waste in the service of their country. This he urges in keeping with the four principles of the organization—service, thrift, loyalty and honor.

All farm boys in America, furthermore, are called upon to enlist with the farm boy cavaliers in the patriotic service of food production and conservation.

Mr. Mayne says that the completion of one or more of the achievement projects of the order will not only advance the farm boy in the organization, but

will help him to do his bit for his country and humanity.

The Farm Boy Cavaliers is an organization similar to the Boy Scouts, but planned especially to fit the activities of the boy on the farm. We have one troop in Kansas. It was organized by Paul Studdard, of Leavenworth, who is also a member of the Kansas Farmer Dairy Club. Paul will gladly write to other boys in the state who may be interested in the organization of a troop of cavaliers.

Order glass jars early, is the advice of the Council of Defense to every family. The preservation of fruits and vegetables this summer will be a big item in Kansas' war work, and offers opportunities to every household in the state to be of service to the nation.

Promises unkept cause disappointment and a loss of faith in people. Especially is this true if the promises have been made to children. Recently there has come to our notice the disappointment of a boy and several of his classmates because of an unkept promise made them by their school teacher. While these boys may still respect their teacher, undoubtedly much of his influence with them has been lost through this unkept promise.

FASHION DEPARTMENT—ALL PATTERNS TEN CENTS

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



No. 8068—Girls' Dress: Cut in sizes 6 to 12 years. For a junior, this dress design is in very good taste. Many buttons, braid and fringe add to the splendor of the frock, which has a waist on the plainest lines, set off with a collar of contrasting goods and outlined with fringe. The sleeves may be long or short. No. 8069—Ladies' Shirts: Cut in sizes 36 to 42 inches bust measure. It adds to the fascination of this blouse to have the fronts extended in tab effect and crossed just below the line of the bust. The sleeves are easily full and gathered into cuffs that are trimmed to match the collar and revers in opposing color. No. 8078—Girls' Dress: Cut in sizes 6 to 12 years. The strong tendency for original effects in girls' dresses shows in this one, with a box plait down the center front and three tucks either side of the plait, in the waist body. The skirt is a full plaited model, joined to the side edges of the fronts. No. 8079—Ladies' Dress: Cut in sizes 36 to 44 inches bust measure. This one-piece frock lays claim to having the newest style features because of the marked simplicity, grace and straightness of line. For smartness the collar deserves the better half of credit that is shared by the pointed girdle which draws in the fullness at normal waistline without any fitted effect. No. 8084—Ladies' Skirt: Cut in sizes 24 to 32 inches waist measure. On simple lines but with a distinguished air, this skirt is cut in two gores that are gathered at the top and gracefully draped from yokes that are mounted on a raised waistline. No. 8085—Ladies' House Dress: Cut in sizes 36, 40 and 44 inches bust measure. The collar that marks the style of the hour found its way to this practical house dress. Another notable feature is that the garment is cut in one piece, with the fullness neatly gathered on an elastic at the waistline. A pocket is added either side of the skirt for convenience.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 60,000 farmers for 5 cents a word per week. No "ad" taken for less than 50 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 35 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

HELP WANTED.

FARMERS WANTED—\$75 MONTH. MEN and women. U. S. Government jobs. War means hundreds vacancies. Common sense education sufficient. Write immediately for list positions obtainable. Franklin Institute, Dept. C-82, Rochester, New York.

REAL ESTATE.

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

IF YOU WANT TO SELL OR EXCHANGE your property, write me, John J. Black, Desk C, Chippewa Falls, Wisconsin.

FOR SALE—A FEW GOOD FARMS AND Western Kansas wheat land. Rogers Land Co., 528 East Douglas, Wichita, Kansas.

FOR SALE—RANCH 1,200 ACRES, 300 cows, 2,000 acres leased land will go with place. Buy of owner. S. C. Revely, Centerville, New Mexico.

FARM AND PROPERTY WANTED EVERYWHERE. If you want to sell, try me. One per cent commission after sale. If you want to buy, get my Farm Journal. Hahr's Farm Agency, 800 Broad St., Newark, N. J.

ATTENTION, FARMERS! 300 RICH, choice Eastern Oklahoma and North Louisiana farms for sale and rent on easy terms. We have already located hundreds of families who have made good. Best opportunity ever offered to farmers to get homes of their own from the owner. Write James P. Allen, Claremore, Oklahoma.

HORSES AND MULES.

FOR SALE—BAY SHETLAND PONY, weight 500 pounds; buggy harness, \$75.00. John Seybold, 114 E. Eighth, Topeka.

JACK FOR SALE ON TRADE—FIVE years old, gray, 14 hands Jack measure; excellent breeder. Sacrifice price. Harry Ellison, Eureka, Kansas.

BUSINESS CHANCES

UNCLE SAM OIL COMPANY PAYS \$40,000.00 cash dividend June 12. Stock purchased now participates. Price, \$10.00 per thousand shares. A. L. Burton, 401 E. Douglas, Wichita, Kansas.

FREE FOR SIX MONTHS—MY SPECIAL offer to introduce my magazine, "Investing for Profit." It is worth \$10 a copy to any one who has not acquired sufficient money to provide necessities and comforts for self and loved ones. It shows how to become richer quickly and honestly. Investing for Profit is the only progressive financial journal and has the largest circulation in America. It shows how \$100 grows to \$2,000. Write now and I will send it six months free. H. L. Barber, 431.25 W. Jackson Boulevard, Chicago.

THE STRAY LIST.

TAKEN UP—BY S. L. WALTER, OF Cedar Township, Smith County, Kansas, on April 10, 1917, one cow, color red, about 4 years old, no horns, thin in flesh, no brands. J. F. Bennett, County Clerk.

TAKEN UP—BY ROY WEHLGEGHAGEN, of Dudley Township, Haskell County, Kansas, on April 25, 1917, one stray horse, color black, age two years. Branded with an open A. And the said Roy Wehlgehagen, the taker-up, resides in Dudley Township, said county. His post office address is Sautana, Haskell County, Kansas. A. R. Henage, County Clerk.

DOGS.

SCOTCH COLLIE PUPS FOR SALE. BOX 111, Inman, Kansas.

COLLIE PUPS FROM GENUINE STOCK dogs that drive from the heel. E. L. Dolan, Route 2, Platte City, Missouri.

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

LUMBER.

LUMBER, MILLWORK, FENCE POSTS—Wholesale mill prices. Send carpenter's list for freight prepaid estimate. Keystone Lumber Company, Tacoma, Washington.

WANTED

WANTED—REGISTERED PERCHERON mare. Give details, description, price. Fred Perkins, Oswego, Kansas.

THRESHING MACHINES.

FOR SALE—AN AVERY GAS THRESHING and plow outfit. Address J. E. Wallace, Route 4, Abilene, Kansas.

TRACTORS.

FOR SALE CHEAP—ONE HART-PARR tractor with plows and one two-ton Ree truck. Sticky Bros., Moundridge, Kan.

FARM SIGNS

PAINT YOUR OWN FARM SIGNS. EASY with our patterns and instructions. Send for copyrighted booklet entitled "Naming the Farm," containing 200 suitable names and sample pattern and introductory offer. C-N Sign Co., Box 15, Jackson, Minnesota.

CATTLE.

120 HEAD OF HIGH GRADE HOLSTEIN cows and heifers, priced for quick sale. H. F. McNutt, Oxford, Wisconsin.

HOLSTEIN CALVES FROM TESTED dams. Blue Label Stock Farm, Route 6, Whitewater, Wisconsin.

CALVES—HOLSTEINS, SHORTHORNS and Guernseys. A few specially fine ones, \$12.50 to \$25. For catalog write Ed Howey, South St. Paul, Minn.

HIGHLY BRED HOLSTEIN CALVES, either sex, 15-16ths pure, crated and delivered to any station by express, charges all paid, for \$25 apiece. Frank M. Hawes, Whitewater, Wis.

HOLSTEIN CALVES—TEN HEIFERS and two bulls 15-16ths pure, 4 to 6 weeks old, \$15 each, crated for shipment. Also one pure-bred heifer, three months old, \$75. These calves are nicely marked. Four Way Farm, Whitewater, Wis.

HOLSTEIN BULL FOR SALE. TWO years old; weight, 1,600 pounds. The total milk of dam for the last five months is 8,954.1 pounds, testing 4 per cent. Must sell, having only a small herd and the offspring are all heifers. No bad habits. Jay B. Bennett, Holton, Kansas.

FOR SALE—VERY CHOICE HIGH-grade Holstein calves, either sex, three to six weeks old, at \$17 per head. Or if you want dairy cattle any age, I will buy them on a commission from the best herds in Southern Wisconsin. Albert M. Hanson, Whitewater, Wisconsin.

HOGS.

DURO BOAR PIGS—FARMERS PRICES. Best of breeding. Chester McWilson, Rice, Kansas.

TREES, SEEDS AND PLANTS.

BROOMCORN—DWARF, \$2.50 PER BU. Leu Sanders, Atlanta, Kansas.

FOR SALE—SWEET POTATO SLIPS. 100, 30c; 1,000, \$2.25, delivered. W. D. Hayman, Stillwater, Okla.

ALFALFA SEED FROM NORTHWEST Kansas, 95% pure, good germination, \$5.50 per bushel. Geo. Bowman, Logan, Kansas.

WE SAVE YOU MONEY ON ALL FORAGE crops, seeds and seed corn. Write at once for samples and prices. Watson Bros. Seed Merchants, Milan, Missouri.

CABBAGE AND TOMATO PLANTS: Offer fine large plants and quick shipment. Our plants are growing in 3,000 towns. Tomato for canning offer Greater Baltimore and Red Rock, the variety used by Van Camp, Rider and all the Giant Canneries, also Chalk's Jewel, Matchless, New Stone, Favorite, Paragon and Dwarf Champion Tree varieties. 100, 40c; 200, 70c; 500, \$1.25; 1,000, \$2.00, prepaid. Cabbage plants: Surehead, Charleston, Jersey, Winningstadt, Copenhagen, Flatdutch, Allseasons, 100, 40c; 200, 65c; 500, \$1.00; 1,000, \$1.50, prepaid. We can ship quick. Cabbage bringing \$200 ton. No order too large. None too small. Ozark Seed & Plant Co., Nashville, Arkansas.

Real Estate For Sale

360 ACRES CREEK BOTTOM FARM. 160 acres fine alfalfa, wheat or corn land; 20 acres meadow; 180 acres pasture; \$5,000 worth of improvements. Splendid oil and gas prospect. Bargains. Act quick, only \$45 per acre. M. T. SPONG - FREDONIA, KAN.

Eastern Kansas Bargain

200 Acres, all first class land, no stone, highly improved, fine location. Must sell at once. Low price, easy terms. Send for full information. Address Owner. LOCK BOX 367 - IOLA, KANSAS

Creek Bottom Farm 160 Acres, 5 miles alfalfa, timber, on fine road; near school; good buildings, \$55 per acre. Write for list. T. B. GODSEY - EMPORIA, KANSAS

200 ACRES, 1 mile city, this county, 1,000, splendid fence and water. 20 acres cult., fair imp.; 30 acres more tillable; bal. pasture. \$11 per acre. Terms. SOUTHERN REALTY CO., McAlester, Okla.

320 IN JUDITH BASIN. A snap at \$4,000. Box 440, Roy, Montana

Kill the worms and insects that infest the leaves by using a mixture of powdered arsenate of lead and air-slaked lime, half and half. Dust over the plants through a cheesecloth bag in the morning when the dew is on.

V. E. Lawrence, of Salisbury, Missouri, is one of the live boosters in that state for pure-bred stock. His specialty is Aberdeen-Angus cattle and he owns one of Missouri's good herds of that popular and profitable breed of beef cattle. His herd was established thirteen years ago with carefully selected foundation stock from the best herds in the country, and since that time Mr. Lawrence has made it a rule to use only the best sires in his herd, and by careful mating he has succeeded in building up a herd of the low-down, blocky, easy-feeding type. The best families of the breed are represented in his herd and a feature at this time is the fine lot of heifers of breeding age.

FARM AND HERD NEWS NOTES

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

Address All Communications to
Kansas Farmer, and Not to
Individuals

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

CLAIM SALE DATES.

Jerseys.
May 31—R. J. Linscott, Holton, Kansas.
June 26—Dr. J. H. Lomax, St. Joseph, Mo.
Sale at farm near Leona, Kansas.

Double Standard Polled Durhams.
June 8—Ed Stegell, Straight Creek, Kan.

Poland Chinas.
Aug. 15—H. L. Faulkner, Jamesport, Mo.
Oct. 4—Dr. J. H. Lomax, St. Joseph, Mo.
Sale at farm near Leona, Kansas.
Oct. 6—J. S. Byrns, Saxton, Mo.
Oct. 16—H. B. Walter & Son, Edinham, Kansas.

E. S. Engle & Son, of Abilene, Kansas, owners of one of the great producing Holstein herds in Kansas, report their herd making a fine record again this year. Engle & Son have succeeded in building up a herd of producers. They have the record breeding that insures profitable Holsteins.

R. T. Krelpe has announced a closing out sale of Shetland ponies to be held May 24. On that date he will close out his entire herd of Shetland ponies at public auction.

Segrist & Stephenson, of Holton, Kansas, owners of one of the heavy producing herds of Holsteins in the West, report their herd making a splendid record again this year. Their herd now consists of thirty females, all of record breeding. They have a herd of consistent producers that have repeatedly held state records in the various classes.

M. E. Peck & Son, Salina, Kansas, are making a great success with the combination of Holstein cattle, Hampshire hogs and alfalfa on their 200-acre river bottom farm near Salina. They have a class of cattle that are real dairy cows. They are supplying a number of cows to members of the Kansas Farmer Dairy Club. A feature of the herd at this time is fifty head of large well-grown-out two-year-old heifers that will freshen in late summer and fall.

The indications are that the dispersion sale of R. J. Linscott's famous Register of Merit Jersey herd to be held at Holton, Kansas, May 31, will be one of the big sale events of the year. Jersey breeders throughout the country are manifesting great interest in this sale on account of the very desirable lot of Jerseys that will be offered. While Mr. Linscott's decision to disperse this great herd is to be regretted, it is to be hoped that at least a big per cent of the herd will remain in Kansas.

E. D. King, of Burlington, Kansas, reports his Berkshire doing well. Mr. King is one of the successful Berkshire breeders in the West and for years his herd has been noted for high class breeding and quality. A feature of the herd at this time is the choice lot of young stock, including an extra lot of fall boars.

A. S. Alexander, of Burlington, Kansas, reports his herd of old original big-boned spotted Polands doing fine. Mr. Alexander succeeded in saving a fine lot of spring pigs this year that are growing out fine. They are by some of the best boars of the spotted breed and the sows in his herd are noted for their size and quality.

Redman & Son, of Tipton, Missouri, owners of one of Missouri's choice Jersey herds, report their milking herd making a fine record this year. They have a very fine lot of young stock in the herd at this time, mostly of Golden Jolly and Nable of Oaklands breeding.

John Linn & Son, of Manhattan, Kansas, owners of one of the good herds of pure-bred Ayrshire cattle in this state, report their herd making a good record this year. Theirs was the first privately-owned Ayrshire herd in this state to begin the A. R. test, and the records made by this herd in the past show them to be consistent and highly profitable producers. They have a fine of Ayrshire breeding that insures profits and a feature of their herd at this time is the choice lot of young stock, including a number of bulls out of heavy producing dams.

The forty-ninth annual meeting of the American Jersey Cattle Club, held at the Waldorf-Astoria on Wednesday, May 3, at which every state but one was represented, disclosed that the year just ended has been the most successful in the history of the club. The secretary's report showed the finances of the club to be in excellent condition, and also showed a substantial increase in the amount of business transacted. During the year 36,117 Jerseys were entered in the herd register and there were 34,499 transfers recorded, indicating an increase of 17 per cent over the year before in the sale of Jerseys, which is the largest increase in transfers that has been recorded for over twelve years. Eighty-four new members were admitted to the club during the year, bringing the total membership up to 649 as against 592 the year previous. There are now one hundred applications for membership pending, and it is expected that the club membership will soon be over 700. A report on extension work brought out the fact that Jersey breeders are boosting the breed and its products more energetically than they have ever done before, and that great results have been attained by the

CLOSING OUT SALE OF
SHETLAND PONIES
MAY 24th, 10 A. M.

WRITE FOR CIRCULAR.

R. T. KRIEPE

310 East Fourth St. TOPEKA, KANSAS

RELIABLE POULTRY BREEDERS

WYANDOTTES.

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

WHITE WYANDOTTE EGGS—STOCK
from (Fishel World Best Direct) \$2.50 for
48, prepaid. S. Peltier, Concordia, Kansas.

CHOICE ROSE COMB SILVER WYAN-
dottes, \$1 for 15; \$5 for 100. Mrs.
Phillip Schuppert, Arrington, Kansas.

SHUFF'S "BEAUTIFUL" SILVER WY-
andottes. Eggs—Fifteen, \$1.50; fifty, \$3.50;
hundred, \$8. Mrs. Edwin Shuff, Plevna, Kan.

EGGS—SILVER LACED WYANDOTTE.
Fifteen, \$1; hundred, \$5. Chickens, 10c each.
Lawrence Blythe, White City, Kansas.

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

IF YOU WANT THE BEST SILVER
Wyandottes, Barred Rocks or White Crested
Black Polish breeding stock or eggs, write
to William Neiders, Box T, Cascade, Iowa.

PURE-BRED WHITE WYANDOTTE AND
Single Comb White Leghorn eggs, \$1 per
fifteen, \$5 per hundred. A. F. Hutley,
Maple Hill, Kansas.

EGGS—SILVER LACED WYANDOTTES,
fifteen, \$1; fifty, \$3. Duck eggs—Rouen, Per-
kin, Indian Runners, twelve, \$1.25. Buff
Orpington and Muscovy duck eggs, twelve,
\$1.50. Fred Kucera, Clarkson, Neb.

PHEASANTS.

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

breeders in their respective localities in
stimulating interest in the breed. Field
workers attended over 500 meetings in the
interest of the breed, and have been instru-
mental in organizing many state and local
associations. It is planned to carry on this
work more vigorously during the coming
year. Mr. D. Munson, of St. Paul, Minnesota,
was unanimously re-elected president of the
American Jersey Cattle Club; Ed Cary, of
Carlton, Oregon, F. J. Bannister of Kansas
City, Mo., W. Gettys of Athens, Tenn., and
George Batten of New Jersey, were elected
members of the board of directors for a
term of three years. At a meeting of the
board of directors following the annual
meeting, E. W. Sessions of Utica, New York,
was elected vice-president. R. M. Gow was
reappointed secretary.

C. W. Taylor, the well known Shorthorn
breeder of Abilene, Kansas, owns 1,800 acres
of valuable farm and pasture land. Mr.
Taylor has 800 acres of wheat that looks
as though it would yield thirty to thirty-
five bushels per acre. Last year he raised
corn that made a yield of seventy-five
bushels. Three cuttings of alfalfa averaged
two and one-half tons per acre for each
cutting. His pastures are about the best in
the country, and a large amount of the
credit for the richness of the soil on this
farm is due to the fact that for thirty years
a large herd of Shorthorn cattle has been
kept on the farm and all the waste and
manure has been carefully hauled back on
the land. The farm is kept new and the
land is always productive, and the live stock
end of the business is one of the most
profitable. About 100 head of both Scotch
and Scotch-topped Shorthorns are now on
the farm, some of them from famous blood
noted families of milking Shorthorns that
have been bred both for beef and milk re-
cords. A feature of the herd at this time
is twenty-five young stock bulls from ten
to eighteen months old. All of them are of
the type that improves herds.

V. O. Johnson, cashier of the Aulne State
Bank, president of the Marion County Here-
ford Breeders' Association, and proprietor of
the Fashionable Stock Place, is one of the
live boosters for registered live stock. Mr.
Johnson purchased a number of Hereford
cows from the famous herd of R. H. Hazlett
at El Dorado, Kansas, and they are bred to
the champion bull, Rockside 6th. Mr. John-
son has at the head of his herd Beatrice
more 3d also purchased from the Hazlett
farm. Of late Mr. Johnson has had a great
demand for dairy stock and to meet the
demand Mr. Johnson purchased from the
Helendale Farm, at Milwaukee, Wisconsin,
a number of pure-bred Holstein cows and
the great breeding bull, Walker Korndyke
DeKol. From these matings he is develop-
ing a splendid herd of Holstein cattle. He
also has one of the good herds of Poland
Chinas. The herd sows purchased to found
this herd were premium winners such as
Sankist, Vanity, Big Defender, Josie Jumbo
and Big Maid, headed by four great breed-
ing big-type boars, Johnson's Big Fashion,
Fashionable Price, Chunch's Fashion and
Big Wander. While Mr. Johnson is inter-
ested in the banking business, a large part
of his time is devoted to promoting the live
stock interests of his community. A fea-
ture of the Poland China herd at this time
is eighty-five fine spring pigs that are com-
ing along in good condition.

Park E. Salter, of Wichita, Kansas, is im-
porting to Kansas a number of high-class
Shorthorn cattle. The herd now numbers
more than 200 head and is headed by three
of as good bulls as will be found on any
breeding farm. Two are imported—Bapton
Corporal and Newton Friar—and Rosewood
Dale is a home-bred bull of the great Avon-
dale. Mr. Salter is building a valuable herd
and improving and stocking his farm with
a class of cattle that will do a lot of good
to the breeders of our state. Bapton Cor-
poral is probably one of the best imported
bulls that has ever come across the water
and Kansas should feel honored to have in
our state such a valuable bull, sired by
Hoar First and bred by the famous breeder,
J. D. Willis, of Wiltshire, England. Mr.
Willis had selected this bull to use in his
herd, but was finally persuaded to sell him
at a long price to come to America. His
dam was one of the best cows in Mr. Willis'
herd and there is probably not a better two-
year-old bull or one with a better pedigree
in America. Mr. Salter has on hand fifty
imported Canada cows and is planning on
holding a sale at Wichita on November 9,
and will offer a draft of cows and heifers
bred to his three herd bulls.

PLYMOUTH ROCKS.

WHITE ROCK EGGS, \$4 PER HUN-
dred. Nora Lamaster, Hallowell, Kansas.

EGGS—CHOICE BARRED ROCKS,
thirty, \$1.50; hundred, \$4.50. Catharine
Beightel, Holton, Kansas.

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

HIGH QUALITY BARRED "RINGLETS,"
100 chicks, \$15. Eggs, \$5. Edward Hall,
Junction City, Kansas.

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heavy laying strain, \$4.25 per hundred.
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Prices eggs reduced after May 10. No. 1
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both matings, from Chicago winners. Eggs,
\$3 for fifteen. Send for catalog and list.
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PRIZE WINNING BARRED ROCKS—
Four entries, five prizes, State Show 1917.
Eggs, special mating, \$2 to \$5; farm stock,
\$1. C. D. Swaim, Geuda Springs, Kansas.

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Eggs—Fifteen, \$5; thirty, \$9; fifty, \$13;
thirty, \$5. Chickens, 50c and \$1. Italian bees.
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SINGLE COMB RED EGGS, GOOD FARM
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hundred. W. J. Honeyman & Sons, Hillside
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PURE-BRED ROSE COMB RHODE
Island Reds. Eggs for hatching, \$1 per fif-
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Breeder for twelve years. \$1.50 per setting
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from high quality, both combs, Rhode Island
Reds. Fourteen years breeding. Mating list
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Island Reds that have shape, size and color.
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vigorous stock. Eggs, \$5 per hundred. The
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Buff Orpingtons exclusively, bred for size,
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BARRED AND BUFF ROCKS—SINGLE
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Eggs, \$1 each after April 1. Will book or-
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Fine layers. Mrs. Will Torgeson, White
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Laced Wyandotte eggs, \$1.25 per sixteen by
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HIGH SCORING LIGHT BRAHMA EGGS
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SINGLE COMB BLACK MINORCA EGGS,
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EGGS FOR HATCHING FROM HOGAN'S
laying strain of Single Comb White Leg-
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OUR SINGLE COMB WHITE LEGHORNS
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Big enough for service. Sired by Baron Easton. Better get busy if you need a bull this spring.

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

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120 Jersey Cows and Heifers

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

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Mitchell Junior—a 40 h. p. Six
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7-Passenger—48-Horsepower
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The latest Mitchells will show you that John W. Bate is a master at building cars.

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And no other car has Bate cantilever springs. They make the Mitchell ride like an aeroplane. In two years' use, on many thousand cars, not one of these springs has broken.

100% Over-Strength

But the chief Mitchell extra is double strength in every vital part. In the past three years we have doubled our margins of safety. We are making the Mitchell a lifetime car. Three of these cars have already run over 200,000 miles each. That's 40 years of ordinary service.

Over 440 parts are built of toughened steel. All safety parts are vastly over-

TWO SIZES

Mitchell—a roomy, 7-passenger Six, with 127-inch wheelbase and a highly-developed 48-horsepower motor.

Price \$1460 f. o. b. Racine

Mitchell Junior—a 5-passenger Six on similar lines, with 120-inch wheelbase and a 40-horsepower motor— $\frac{1}{4}$ -inch smaller bore.

Price \$1195, f. o. b. Racine

Also six styles of enclosed and convertible bodies. Also new Club Roadster.

size. All parts which get a major strain are built of Chrome-Vanadium.

In these days of high steel prices, any car which is built this way is either rare or costly.

Everything You Want

Mr. Bate has worked 14 years to combine in Mitchells everything you want. He spent one year in Europe, to glean the best ideas from there.

Before designing this year's Mitchells, his artists and experts examined 257 new models. So all the known attractions are combined in these Mitchell cars.

One Size, \$1150

The smaller Mitchell—Mitchell Junior—costs only \$1150. Yet it is a powerful Six, with a 120-inch wheelbase. You never saw such value in a car around this price.

But the larger Mitchell offers special value. See both sizes. See the extra features, the extra beauty and the extra strength. You will want a Bate-built Mitchell then for the car you buy to keep.

If you don't know the nearest Mitchell dealer, ask us for his name.

MITCHELL MOTORS COMPANY, Inc.
Racine, Wis., U. S. A.

