

KANSAS FARMER

For the improvement



of the Farm and Home

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CONSERVE DAIRY COW

Dairying Inevitable as Basis of Permanent Agriculture

THE dairy cow is one of Nature's greatest conservation agencies. The inevitability of dairying as a basis of permanent agriculture must be accepted as one of the established principles of food production. In the food situation now facing this country our first and foremost concern should be to save dairy cows and use every effort possible to promote increased production of milk, butter and cheese.

"No program of national preparedness for the impending food crisis in the event of war is wise nor complete without sharp emphasis of conserving and increasing our national stock of dairy cows."

This striking statement was made by M. D. Munn, president of the National Dairy Council. "We must, of course, bend all our efforts to the prevention of a war shortage in food stuffs of all kinds," said Mr. Munn, "but when prices for beef begin to rise, dairy cattle must not be slaughtered nor dairy feeds diverted to other uses."

The National Dairy Council is composed of 280,000 dairymen, dairy cattle breeders and representatives of all allied dairy interests. Its purposes are to build a greater and better American dairy agriculture—resulting in improved soil fertility and better farm life—to encourage every American consumer to have a keener appreciation—like European nations—of the high food value of dairy products.

The Council believes its mission is patriotic. It holds that a wider use of dairy products on the tables and in the kitchens of our American homes will mean a healthier and cheaper fed nation. Its slogans are: "Drink and use more milk." "Eat and cook with more butter." "Ice cream is not alone an excellent dessert, but a real food." "Cheese is the staff of life of many nations; why not in U. S. A.?" "Dairy products—palatable, nourishing, economical—are Nature's best food."

The fundamental proposition of this organization is that the dairy cow is mankind's greatest friend. She produces man's best, most serviceable food, and one of the cheapest.

A 1,200-pound steer, ready for mar-

THE DAIRY COW is mankind's greatest friend. She produces man's best, most serviceable food, and one of the cheapest.

A GOOD DAIRY COW produces each year for about seven years, 900 pounds of edible nutrients, or as much in her lifetime as is produced by seventeen steers.

IN ENERGY-GIVING POWER, one quart of milk is equal to eleven ounces of sirloin steak, or three-fourths of a pound of round steak, or eight and one-half eggs, or 10.7 ounces of fowl.

IN MAINTAINING OUR FOOD SUPPLY, first and foremost consideration should be given this remarkable, natural, food-making machine—the dairy cow.

DAIRYING IS INEVITABLE as a basis of permanent agriculture. The cow is one of Nature's greatest conservation agencies.

NO PROGRAM of national food preparedness is complete that does not include conserving and increasing our stock of dairy cows.

ket, contains only about 360 pounds of actual food. A dairy cow at two years of age begins to produce and yield daily thereafter about 900 pounds of edible nutrients in the year, and will continue to produce the same amount for seven years thereafter; that is, she produces during her actual life 6,300 pounds of human food. In other words, it takes seventeen steers to produce the same amount of human food as a dairy cow produces during her lifetime.

The figures given above are from the Minnesota University. It might be further pointed out that the steer, before he pays for any of his food, is in debt to his master for two years, and, upon payment, ceases to live, while the cow pays for her food daily as she goes.

On behalf of consumers of dairy products the widest publicity should be given to the bulletin issued recently by the Federal Department of Agriculture, dealing with the great food value and economy of milk and milk products, and showing milk to be an economical food even at a price of 15 cents a quart.

"In energy-giving power, one quart of milk is equal to eleven ounces of sirloin steak, or three-fourths of a pound of round steak, or eight and one-half eggs, or 10.7 ounces of fowl," says the bulletin.

We should bear in mind, also, the significance of the heart-rending appeal made to the German reichstag by Field Marshal von Hindenburg. He cries for fat—fat—fat—fat for his soldiers and fat for the weakened people.

The fate of Germany may hang upon the question of fat. At no time in history has the value of fat assumed so ominous a meaning.

A plentiful stock of dairy cows means not only the quickest, richest and most continuous transformation of feed into human food, but above all, it means a daily dependable supply of butter fat—the finest of all fats—and forestalls the possibility of such deep distress as is experienced in the shortage of fat by unhappy Germany.

A two-year-old steer, ready for market, contains only about 280 pounds of

total fat, while a fair dairy cow will produce in her 6,000 pounds of milk 300 pounds of fat yearly for seven years, or a total of 2,100 pounds of fat during her lifetime, as against a steer's 280 pounds of fat in his life.

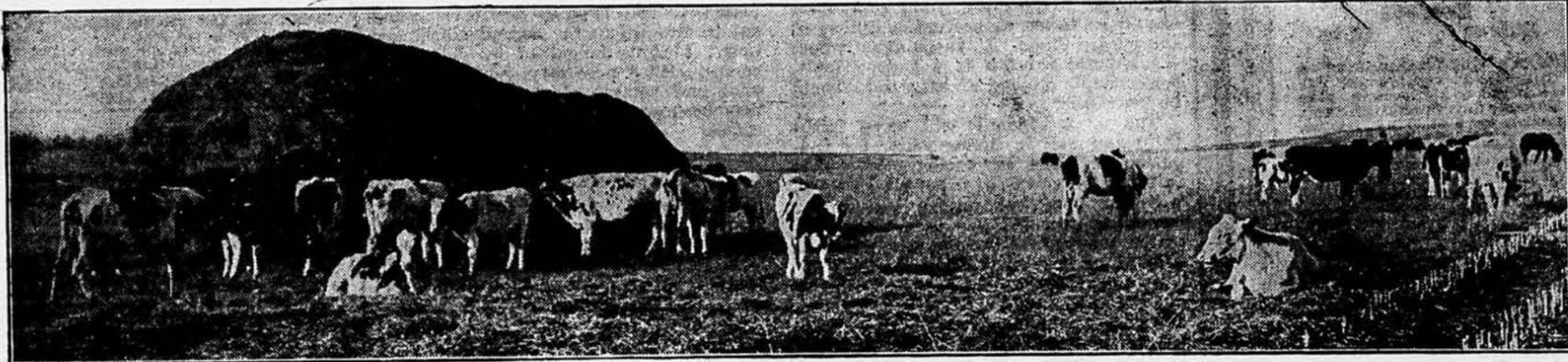
Unless our people accept, as to the food value of milk, the facts presented by the Department of Agriculture, the tendency of our farmers will be to quit dairying and to send their cows to the butcher rather than perform the irksome services and face the possibility of loss because people fail to appreciate the true value of milk as food. Our stock of dairy cattle is lower today per thousand population than it has been for forty years.

As a nation, we may well be alarmed over the certainty of further depletion, when further rises in the cost of feed and aggravated shortage of farm labor make the production of milk more expensive at the time when milk, butter fat, and the products derived therefrom, should be the country's greatest safeguard and reliance.

Moreover, retrogression in dairying means a shortage in animal manure, lowered soil fertility, a lower yield per acre of cereal products, an excessive rise in the price of all foodstuffs coming from the soil, and a serious derangement of our economic life. It spells Distress in its keenest form.

In view of these facts it would seem that our government should use every means in its power to stabilize dairying and to stimulate an increase rather than a decrease in our dairy stock. To that end an intensive educational campaign should be conducted to keep before the consumer the high food value and relative economy of milk. If it becomes necessary to take governmental action to safeguard our food supplies, the first decree to be issued might well be a peremptory prohibition of the slaughter of productive dairy cows, and our next concern should be an upward revision of the prices of milk based upon the cost of production and a fair profit to both producer and distributor.

Assured a rich supply of milk, plenty of butter and cheese, nations can laugh at starvation blockades.



DRY COWS AND HEIFERS ON A DAIRY FARM IN BUTLER COUNTY.—THERE ARE PROBABLY A MILLION DAIRY COWS IN KANSAS AT THE PRESENT TIME.—QUALITY IS AS IMPORTANT AS NUMBERS IN BUILDING UP THE DAIRY BUSINESS.—DAIRYMEN CANNOT AFFORD TO NEGLECT THIS POINT IN DEVELOPING THEIR HERDS

FARM POWER

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

OUT of 1,150 replies received by the Kansas Defense Council relative to the use of tractors, 930 report that there are no tractors not busy now or not used to full capacity, while 123 say there are "a few" not fully employed, seventy say "several," five that 25 per cent of the tractors are not busy, and ten that 50 per cent of the machines are idle.

Out of 1,281 replies, 921 say that no tractors can be released for use in other sections now or in the near future, while 263 say tractors are available for use elsewhere, and 97 answer "doubtful."

Carl Vrooman, Assistant Secretary of Agriculture, is urging that every man owning a tractor do all the custom or exchange work he can do without neglecting his own work. Every hour that his tractor would otherwise be idle it ought to be at work helping a neighbor who is behindhand with his plowing or harrowing.

"Make your outfit work from dawn to dark," says Mr. Vrooman. "Make it work all night if you have enough operators to fill the shifts. The acreage to be harvested this fall hangs on the plow. Don't let an acre that might otherwise be planted go untilled because your tractor is in the shed. Help your neighbors and thus do your part in strengthening the allied lines on the battle fronts of Europe."

Road-Building with Dynamite

The scarcity of labor at any price made roadbuilding in 1916 an expensive proposition. Machinery was used to a greater extent than ever before, not only for work for which it has been known to be adapted but also for work that previously was considered best done by pick and shovel. Road builders turned to dynamite in many cases as a substitute for day labor. Blasting has been done for years in grading through very hard material, but lately it has also been done where the excavation is easier, in digging the side ditches of roads and the trenches in which underdrains are laid. The explosive loosens hardpan and other dense material so that the road-grading machine can shape a ditch about as easily as where the work is in loam, and thus the amount of pick-and-shovel work, very expensive where labor is scarce, is greatly reduced. Even in soft clay and muck, dynamite is now being used by the road builder, who follows the practice of drainage engineers and blasts trenches ahead of the grading, not only to assist in the latter work but also to drain the land before the machines arrive to shape the road.

Pumping Water for Garden

It is pointed out by H. B. Walker, irrigation engineer at the agricultural college, that the farm windmill should play an important part this year in the great food production campaign.

"The farm windmill should be no 'slacker' this year," said Professor Walker. "It should be ready day and night to absorb the energy of the wind to lift water for thirsty gardens. Lack of timely rainfall is often the doom of an otherwise carefully handled and tended vegetable garden.

"This year the farm garden will be an important factor in reducing the cost of living. Accordingly, every precaution should be taken to prevent a failure of the garden crops. In those areas where the natural rainfall is not dependable, some simple method of irrigation should be provided."

The farm windmill will serve faithfully and well in lifting water for irrigation if given an opportunity. This faithful source of farm power, however, will not save the garden unless the owner co-operates in conserving the water pumped. The average windmill lifts water intermittently and at a slow rate. Consequently, if the water pumped is allowed to flow directly into the warm dry soil, a small area only can be satisfactorily covered. A small trickling flow does not spread laterally over the surface of the soil, but it percolates deeply into the soil beyond the reach of the shallow-rooted vegetables.

If the water lifted, on the other hand, is stored in tanks, barrels, or reservoirs,

a volume sufficiently large can be secured in a surprisingly short time to effectively irrigate a much larger area. A barrel of water containing 31½ gallons will cover a garden bed six feet wide by eight feet long, one inch deep. A quantity of water even as small as this, if properly applied, will greatly help the lettuce bed or the shallow-rooted radishes. It is advisable, therefore, to use even an ordinary barrel for storage if nothing larger is available, in preference to direct pumping.

A reservoir sufficiently large to hold all of the water the average windmill can pump in three or four days is much more desirable. The ordinary stock tank made of wood, steel, or concrete would serve well.

Old Oil Dangerous

Old oil will damage the gas engine far more than will hard work, according to W. H. Sanders, instructor in farm motors in the Kansas Agricultural College. Oil that has become surcharged with the fine steel particles from the bearings should be drained off and fresh oil should be placed in the oiling system at regular intervals.

"Oil becomes black and gritty in time and before this stage is reached it should be replaced by fresh oil," said Mr. Sanders. "The dirty oil may be filtered and used again, but the best method is to use fresh oil. New oil costs something but is cheaper than new bearings."

In cleaning an engine before replacing the supply of oil, it should be run until thoroughly warm, advises Mr. Sanders. All the old oil should then be drained from the crank case. The same amount of clean kerosene should be placed in the oil reservoir and the engine run carefully for a short time until all of the crankshaft bearings are thoroughly cleaned. This should be regulated by the judgment of the operator.

The danger in this operation is in running the engine too long while the kerosene is acting as lubricating oil. Kerosene has little lubricating quality and the bearings will burn out in a short time.

When the engine is stopped it should stand for two or three minutes before the kerosene is drained off in order to allow all the dirty kerosene to drain from the bearings and walls of the cylinders. The kerosene is drained from the crank case in the same manner as the old oil, and the fresh oil should be placed in the crank case.

"In starting the engine after the new oil has been placed in the lubricating system," said Mr. Sanders, "care should be used. The engine should not be placed under a full load until the fresh oil has had time to circulate thoroughly into the bearings."

Order Silage Cutters Now

There is certain to be delays in the delivery of farm machinery the coming season. With the increase in silos a good many more silo-filling outfits will be needed. It is not safe to delay ordering silage cutters and other equipment needed in filling silos. When such machinery is needed it means serious loss unless it is at once available for harvesting and storing the crop. The safe plan is to take time by the forelock and get in the orders for needed machinery now. Nothing is gained by delay. If co-operation is necessary, get together at once and perfect plans for filling the neighborhood silos when the proper time comes.

Save the Waste

Every year enormous quantities of feed go to waste in Kansas. We plow, plant and cultivate Indian corn and leave in the field over 40 per cent of its feeding value. We should stop such reckless waste. Build a silo.

The silo is the cheapest farm building we can erect. A silo will house 100 tons of silage at a lower cost per ton than will the barn mow protect from the weather 100 tons of any other roughage. We all aspire to have a roomy barn and mow. Why not get the silo first? It will build the barn and mow.

Saves 2 Horses

On the Binder

Weights Only 167 Lbs.



Cushman Binder Engine

For All Farm Work

The 4 H. P. Cushman is the original and successful Binder Engine. Thousands are in use every harvest—saving horseflesh and saving grain.

It saves a team, because engine operates sickle and all machinery of binder, leaving horses nothing to do but pull binder out of gear; also takes away side draft. Therefore, two horses easily handle 8-foot binder in heavy grain.

It saves the grain, because it runs at uniform, steady speed, putting grain on platform evenly, allowing platform and elevator canvas to deliver it to packers straight, and thus it is tied without loss, saving a large per cent of the natural waste of binder.

It saves the crop in a wet season, because slipping of bull wheel or slowing up of team does not stop the sickle, and it never clogs. You can cut wet grain same as dry.

It saves time because you can move right along all the time in heavy grain without killing the horses, and with no choking of sickle, elevators or packers.

It saves the binder, because it operates at same regular speed all the time—no jerking of machinery by quick stopping and starting of team or when bull wheel drops into a rut. That's what tears a binder to pieces. With a Cushman Engine your binder will last twice as long. Write for book with complete description.

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Silverize Your Silage

for Better Fat Stock and Dairy Profits

CORN cut by Silver's "Ohio" Silo Filler makes better silage according to the records of "Ohio" users.

There's a difference in silage just as there is a difference in the machines that cut it. Some silage goes into the silo with long shreds and leaves which form air pockets and spoil the silage. Other silage is cut in uneven lengths—the sugar does not get out to properly act in the fermenting process. Silverized silage is cut in short, even lengths. The sugar juices around the joints of the cornstalks are released—the silage packs down air-tight in a homogeneous mass. Makes the right kind of food to bring maximum milk yield from dairy cows—or to put weight on fat stock.

Silver's "Ohio"

The Logical Silo Filler

"Ohio" cut silage is cut finer and more uniform than ordinary silage. Shorter lengths. Not just in spots but all the way from bottom to the top of the silo. The reason is, the knives hold their position. For example, if you set them at half inch, they cut half inch right along. Pressure of the material cannot spring them out of place. They are of the sturdy cylinder type, with bearings at both ends. Have accurate, patented adjustments for a quick, short, clean, shearing cut. The material is cut to a mold-proof semi-pulp—fine and free from "air pockets" and uncut leaves.

And this is but one of the many big features on Silver's "Ohio." Write and let us tell you about the others. About the new beater self-feed that saves a man's work at the feed table; the direct drive—drive pulley, knife cylinder and blower fan all on one shaft, reducing friction and saving power; the low-speed, explosion-proof blower fan; single lever control; bulldog grip feed rollers, friction reverse and others.

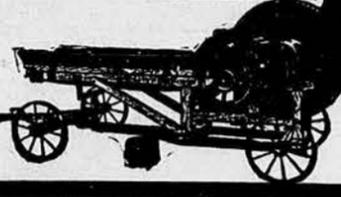
Books Free

One is our catalog—tells about Silver construction and why Silver's "Ohio"—the pioneer—is the logical silo filler for the custom man or the man who does only his own work. The other is a booklet that shows in dollars and cents why it pays to "Silverize your silage." Write today.

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Silver's "Ohio" is made in seven sizes—fit any farm or purse. For 4 h. p. gas to big tractors. 40 to 300 tons a day. Special light draft models for 4 to 10 h. p. engine.

"Modern Silage Methods" 264 pages—sent for 25c—coin or stamps



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KANSAS FARMER

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DAIRY ASSOCIATION TO TOPEKA

The spring meeting of the Kansas State Dairy Association will be held in Topeka Saturday, May 19. The supplemental meetings held in Abilene and Mulvane last year were well attended, and were most instructive to those present. The idea of holding meetings in different sections of the state appeals to dairymen because their business is rather confining and it is not always possible to get to the annual meeting at Manhattan. The holding of these special meetings means taking the advantages of the association to many who would otherwise be unable to attend its meetings.

There should be a large attendance of dairymen from the eastern and north-eastern sections of the state at the Topeka meeting. We cannot give the program in detail in this issue, but we can assure the dairymen of this section that it will be well worth their while to be present at this meeting. The topics discussed will be such as have a practical bearing on the business of dairying.

WICHITA LIVE STOCK MEETING

Stockmen to the number of 150 or more gathered at the Wichita stock yards Thursday of last week to study the results of the cattle and hog feeding demonstrations which closed on that day. The weather was disagreeable and it was not very pleasant getting about the yards, but the men present did not let this condition dampen their enthusiasm. They took the keenest interest in the results of the demonstrations and in the discussions which took place. These were led by Prof. W. A. Cochel, of the animal husbandry department of the agricultural college. The results of the demonstrations emphasize the need for using better-bred stock and better feeding methods.

The territory tributary to Wichita is destined to become a great live stock producing section. The stock yards company is performing a real service in making it possible to demonstrate the improved methods of breeding and feeding that have been worked out by careful tests at the experiment stations at Manhattan and Hays.

J. C. Holmes, a practical stock man, who is also a graduate of the agricultural college, is in charge of this demonstration work being conducted at the Wichita stock yards. It is planned to start some new demonstrations at once. We cannot go into the details of the demonstration just closed in this issue.

NO GRAIN FOR LIQUOR

In the Kansas Industrialist of April 11, in the report of an address by Dr. H. J. Waters, an error was made in the statement of the amount of grain used annually by the breweries and distilleries of the United States. The figures should have been 118,000,000 bushels a year instead of 618,000,000 bushels. KANSAS FARMER quoted from this address and made the same mistake.

Even though the amount of grain used by breweries and distilleries is much less than previously stated, farmers are almost unanimous in demanding of the Government that none of the grain they produce be worse than wasted by using it to manufacture intoxicating liquors. Organized bodies of farmers all over the country are making these demands in the form of resolutions addressed to the Federal Government. Authorities differ in their estimates of the exact amount used by brewers and distillers, the estimate ranging from 90,000,000 to 125,000,000 bushels.

Perhaps one-sixth of the amount of grain now being used will be necessary for the production of denatured alcohol. The rest can and should be saved for food purposes.

WIDE ROW PLANTING ADVISED

Wheat farmers with greatly reduced acreages of wheat to harvest, due to winter-killing, can make most profitable

use of the wide row method of planting inter-tilled crops. They can do this without cutting down the acreage available for wheat next fall. In a recent issue we urged wheat farmers to consider this method of growing grain in wide rows on land they planned to put into wheat next fall. The report of the agricultural committee of the Kansas Defense Council issued last week advises against summer fallowing large acreages of land for wheat in any county of the state this season. Grain will be too urgently needed to let this land stand idle. Corn, kafir or some other grain sorghum can be planted on all this land in wide rows. The rows should be wide enough apart to permit the ground to be worked with disks, two-row corn cultivators or other large types of machinery with which it can be worked rapidly and economically. Crops can be grown in this way with the same labor that summer-fallowed ground can be handled. The ground will be left in excellent condition for wheat and the crop grown will greatly increase the total output of grain for the state.

TREAT SEED FOR SMUT

Smut is a source of much loss in growing grain sorghums. It is found on practically every farm where the seed is not being treated each year to destroy the spores. The loss comes from the actual destruction of the kernels and from a decrease in the value of the whole crop. Smut is carried from one year to the next by the dust-like spores that cling to the seed.

The losses due to smut can easily be prevented by treating all seed grain with formalin. Mix a pint of commercial for-

malin with forty or fifty gallons of water. Spread the seed to be treated on a canvas or clean barn floor and sprinkle thoroughly with the mixture. Shovel the seed over to be sure it is all wet and after putting it in a heap, cover for two hours with blankets or canvas to retain the fumes of the formalin. The seed can then be spread out and dried, being careful not to reinfest it by putting it in untreated sacks or bins.

COMBATING ANIMAL DISEASES

Dr. George M. Potter, of the Bureau of Animal Industry, United States Department of Agriculture, has recently been appointed specialist in veterinary medicine in the division of extension of the agricultural college. We heartily endorse this feature of the extension work. Animal diseases of various kinds cause enormous losses. It has been estimated that we lost 200,000 hogs in Kansas last year—three million dollars' worth of pork. Great losses also occur from blackleg, contagious abortion and tuberculosis. Doctor Potter, who took up his work May 1, will work in the field endeavoring in every way possible to aid in reducing the losses from these various animal diseases.

Doctor Potter is well fitted for this work. He was reared on a farm in Ohio and received his veterinary training in the Ohio State University. While with the United States Department of Agriculture he had wide experience throughout the country in meat inspection, the manufacture of blackleg vaccine, tubercular testing and study of contagious abortion. He is author of a number of bulletins, one of the most recent of which is on contagious abortion.

WE NEED YOUR HELP

WE FEEL confident that there are thousands of KANSAS FARMER readers who will gladly respond to our appeal for help in the emergency now facing us. You do not want us to cut your name from our list, but by neglecting from day to day to send in your renewal you are seriously embarrassing us and causing us much unnecessary expense.

We are now confronted with a new order from the Post Office Department compelling us to stop sending KANSAS FARMER to a large number of our subscribers who are in arrears. We have in the past been allowed to give you several months in which to renew. The Post Office Department now says it will not carry at the second-class rate papers to those who are not paid up, and its word goes. We have no other recourse but to meet these requirements.

It has ever been the policy of KANSAS FARMER to keep close to the grass roots and under no circumstances to permit other than genuinely helpful material to appear in its columns. We, who are responsible for it editorially, have had real farm experience and keep in such intimate touch with farm conditions that we are able to give you the practical farm viewpoint of whatever appears.

In making this personal appeal to you we feel sure we can count on your loyalty to the cause which KANSAS FARMER represents. You can help us so easily and, what is more, we are going to make it financially worth your while to renew at once and send us in addition the renewals of your friends and neighbors.

You will find the date to which your subscription is paid on the label of the paper you are now reading. Turn to it now while it is fresh in your mind and register a vow to respond to this appeal for your help and co-operation. On page eleven you will find our special renewal and club offer. It is worth a careful reading, as it will save you money.

Do not fail us in this emergency. We need your help.

T. A. BORMAN, President and Editor.
G. C. WHEELER, Associate Editor.
W. J. CODY, Secretary-Treasurer.
C. C. YOUNGGREEN, General Manager.

CONSCRIPTION OF WEALTH

At a recent meeting of the Phillips County Farmers Union, attended by 600 people, one of the resolutions passed called attention to the fact that 95 per cent of the wealth of the country is in the hands of 5 per cent of the people, and urged that this wealth be made to bear its just portion of the tax of war. This is one of the live questions before our people at the present time.

Before this issue is in the hands of our readers the raising of an army by the selective draft system will probably be in operation. This is undoubtedly the most efficient as well as the most just means of raising an army, since it places the rich and the poor on the same level and plans for the using of men wherever they can be of the greatest service. But in addition to this tax of blood which is to be met by the conscription of suitable men, there will be an enormous money tax.

"Money is no more sacred than blood," says Maurice McAuliffe, president of the Farmers Union of Kansas, in commenting on the cost of war. "Now that conscription of men is to become a fixed policy of our country, let conscription of property to pay the fiddler go with it. Compel the wealth of the country to pay the expense of the war as it proceeds. Don't create a national debt for the unborn generation that had nothing to say about its creation to pay. Let the nation pay as it goes."

Big business may interpose some obstacles to this plan of paying the money cost of war, although many great corporations and business concerns are showing a fine spirit in offering their plants to the government to be operated during the war without profit. At such a time as this when almost every activity of life must be directed and ordered by military necessity, wealth cannot hope to escape from its share of the burden.

"If the conscription of men is to be resorted to," says Theodore H. Price in the Outlook, "the conscription of wealth is at least plausible, and those who think it is inequitable will be wise to delay their opposition until the public is willing to give them a dispassionate hearing. The present feeling is that as between dying for one's country and paying its bills, the former is by far the greater sacrifice."

If you believe in the principle of conscripting incomes as well as lives, write to the American Commission on War Finance, 60 Broadway, New York, for its free literature on this subject. This is a patriotic organization whose slogan is:

"The war must be paid for as it proceeds, in dollars as well as in lives. There must be no crushing legacy of bonded debt to be paid in taxes by the men who have done the fighting and their children. Let us make this a cash war, a pay-as-you-enter war. The burden of fighting must be carried by those who are physically strong and fit to fight. The burden of finance must be borne by those who are financially strong and able to give."

It is advocating that there shall be levied on all net incomes in excess of \$2,000 for unmarried persons and in excess of \$3,000 for married persons, an annual war tax, beginning at 2 per cent and increasing on a sliding scale to a point which will permit of no individual retaining an annual net income in excess of \$100,000, such a tax to continue until all bonds, treasury notes and other obligations issued for war purposes are paid.

Congress must decide how the money tax is to be raised. Senators and representatives are servants of the people. Write to your representative and your senators and express to them your views on the method to be employed in raising the money necessary to pay our war expenses.

SILAGE FOR BEEF AND MILK

Silage Cheapens Ration and Releases Grain For Human Food

CHEAPER feed is the most pressing demand of the dairymen as well as the producer of beef. The prices of concentrates are out of sight and there is little prospect that they will be cheaper in the near future. Milk and beef are food products in demand the world over, but they must be made more largely from roughage—materials that are not in such demand for human food as are the grains and concentrates.

The extravagance of using large quantities of grain in feeding live stock is being pressed home in these days of high prices for foodstuffs of all kinds. Grain is necessary in feeding live stock, but as a result of the days when grains of all kinds were cheap, we formed a habit of feeding a great deal more than is absolutely necessary. The ruminant animals are adapted by nature to utilize bulky feeds—such material as cannot go directly to human consumption. In the interests of economic production we should capitalize on this capacity of ruminant animals for converting into human food our hay, fodder and other coarse feed. There is a world-wide demand for grains of all kinds for human food, and in view of this condition we cannot afford to use more grain than is absolutely necessary in growing meat animals and finishing them for market.

In the days of cheap grain it was nothing unusual in finishing steers for market to use from 900 to 1,000 pounds of corn to every hundred pounds of increase. No one would think of arguing that a pound of beef is worth nine or ten times as much as a pound of corn for human food, and it must be remembered further that a considerable portion of the increase on the steer is fat which is a source of waste when the beef is brought to the table.

An insistent demand for greater supplies of human food is coming from all over the world. A conservation of all that is produced by the soil requires that the full value of the forage part of the crop be converted into such form as will make it available for human food. Storing this material in silos will accomplish this result more completely and effectively than any other method of harvesting and preserving forage crops. By putting up silos and preserving the corn, kafir, and cane as silage, the maximum value of the crop will be saved. In feeding this silage to our live stock, large quantities of grain can be released for direct human consumption. The use of these crops in this form will greatly increase the possibilities for meat and milk production on every Kansas farm.

The silo must be regarded as one of our great conservation agencies and its more universal use will not only increase the amount of human food produced but increase the farmer's profit as well because it will turn into dollars much that has hitherto been entirely wasted. In the present crisis of conservation and full utilization of that which is produced is of even greater importance than increased production.

During the next twelve months dairy products will largely come from the feeding of roughages instead of concentrates, as has formerly been the case. Dairy cows of quality receiving nothing but roughages can produce 200 to 250 pounds of butter fat annually, provided the roughage is fed in abundance and is composed of a combination of silage and a leguminous hay. Of course poor cows will not do so well on this ration.

SILAGE USED FIRST BY DAIRYMEN

Farmers milking cows were the first to realize the value of silage, for nowhere is the silo so much a necessity as upon the dairy farm. And no dairy farm is complete in its equipment that does not have at least one silo for winter feeding and one with a smaller diameter for summer feeding.

The characteristics of silage make it pre-eminently a feed for dairy cattle. It is palatable, succulent, bulky, beneficial to the digestive tract and economical. These are among the leading characteristics of the ration which is essential to the largest and most economical flow of milk. In fact, most dairy farmers in the corn belt realize that to secure the largest possible profits from a herd of cows they must feed silage. In regions where corn cannot be grown successfully for silage, experience has shown

that kafir and cane can be used with fully as good results.

Experiments carried on at the different experiment stations show conclusively that silage is far superior to shock corn or hay in milk production. Silage-fed cows produced from 11 to 13 per cent more milk than cows fed fodder from the same acreage.

SILAGE AND MILK QUALITY

Contrary to the opinion formerly held the milk from silage-fed cows is not inferior in flavor or odor to the milk from cows fed dry feed. The condensed milk companies which formerly did not favor milk from silage-fed cows, are now advising their patrons to put up silos.

Great care should be taken, however, to prevent the odor of silage from contaminating the freshly-drawn milk which takes up odors very quickly. It is best to feed the silage after milking and just what will be eaten up clean at that feed. The silos should be shut off from the barn proper. The idea still held by some, that corn silage will destroy the

teeth and digestive tract of the cow and induce such diseases as tuberculosis, is erroneous. A Jersey cow thirteen years old was shown on the Santa-Fe Dairy and Poultry Special which covered Kansas recently, and the statement was made that she had eaten silage almost daily all her life. Her teeth were in perfect condition. She was still producing milk profitably.

we must supply additional feed. There are many soiling crops which will supply the necessary feed in acceptable form, but most of them require more labor in getting them to the animals than the average farmer can spare at this busy season of the year. Therefore, a silo small in diameter filled for summer use is the most satisfactory and economical solution of this problem on the average farm. The value of silage at this season does not lie solely in the temporary increase in milk flow, but we know that if a cow once declines in her milk flow it is practically impossible to bring her back to normal for the remainder of her lactation period.

FEEDING YOUNG DAIRY ANIMALS

Silage also plays a very important role in the most economical and efficient ration for young, growing dairy animals. It has a very beneficial effect upon the system in keeping the digestive organs in the best of condition and as an aid in developing large digestive capacity. In attaining this last effect it is not nec-

essary to fill the wagon box to the same level each day. Or in case the silage is carried to the bunks from the silo, the baskets can be counted. A bushel and a half basket of well packed silage weighs about forty pounds. The cottonseed meal scattered over the silage in the wagon or bunks sticks to the moist feed, so there is no waste.

SILAGE FOR FATTENING STEERS

In a steer-feeding test recently closed at the Iowa Experiment Station it was clearly shown that silage is the feed that will knock the high cost of feeding out of the cattle business. Steers that were fed all the silage they would eat with a limited amount of corn made more money than steers on full feed of corn and silage. Both lots also received equal amounts of oil meal and alfalfa hay.

Buyers have been in the habit of discounting cattle with a silage finish, but with the present demand for beef they do not draw such fine lines of discrimination. The silage-fed steers made beef at a great saving in corn as compared with steers fattened by the old method. The figures show that the lot of steers, which did so exceptionally well in this test, ate an average of 50.7 pounds of silage per day for the feeding period which lasted 120 days ending March 21. In addition to the silage, they ate an average of 3.3 pounds of corn daily, 2.5 pounds of oil meal, and 1.3 pounds of alfalfa hay. They made a gain of 2.81 pounds per day for the period.

For every hundred pounds of gain made on these steers, it required only 119 pounds of corn, 89 pounds of oil meal, and 16 pounds of alfalfa hay, 1,806 pounds of silage, and a pound of rock salt.

The cost of 100 pounds gain was \$10.25, excluding the value of gains made by the hogs which followed. These steers were valued by market experts at \$11.48 per hundredweight and the profit per steer, excluding hogs, was \$44.40.

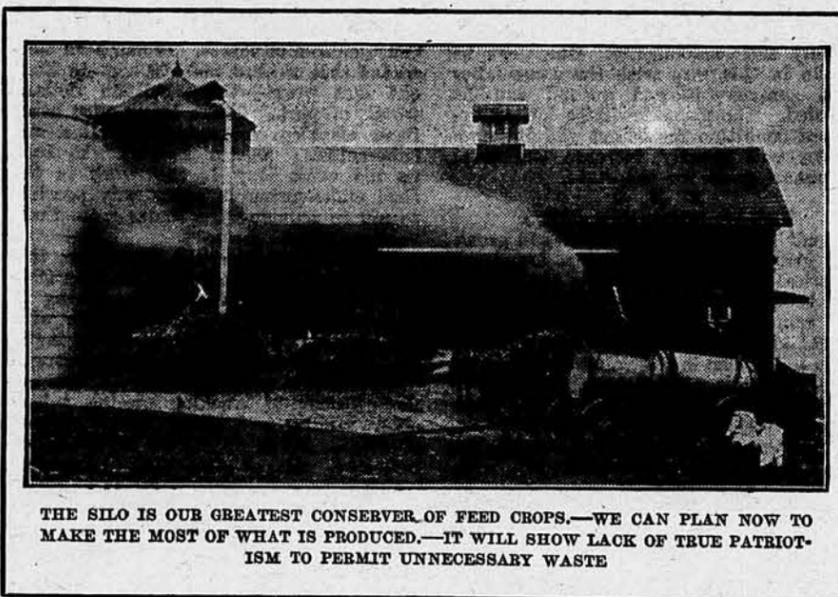
The lot fed in the old-fashioned way had the same amount of oil meal as the other lots, an average of 18.1 pounds of corn per day, and 10.4 pounds of alfalfa hay. For 100 pounds gain in this lot it required 523 pounds of corn—nearly five times as much as the up-to-date ration—also 72 pounds of oil meal and 301 pounds of alfalfa hay. The large amount of corn consumed by this group was certain to make the cost of gains high. At market prices it cost \$12.77 to make 100 pounds of gain in this lot, the highest of any of the lots. These steers were valued at \$11.63 per hundredweight and the profit, excluding hogs, was \$36.49 per steer.

The corn was charged against the steers at 90 cents a bushel, oil meal at \$46 per ton, silage at \$6.50 per ton, and alfalfa hay at \$18 per ton. Rock salt was charged the steers at the rate of \$1 per hundred pounds.

The large profits obtained in this test are partly due to the wide spread between the buying and the selling price of the steers. It was stated that they would have had to have only \$8.30 per hundredweight to break even.

MISSOURI FEEDER REPORTS

Silage has solved the high feed cost problem for Scott Cunningham, of Palmyra, Missouri. He has found a more profitable cattle-feeding plan after three years of careful study and accounting. His first two trials with cattle were less profitable than he had expected, although they were conducted in the usual manner. His first car of cattle, averaging 598 pounds a head, were bought in March, 1913, at \$7.15 per hundred. From March 29 to May 23 they consumed thirty-five tons of silage and five tons of wheat straw. Then they were pastured until September 20. The pasture was valued at 90 cents per head per month. From September 20 to November 1 they received grain on pasture. These cattle consumed 890 bushels of corn, eight tons of clover hay and one and one-half tons of cottonseed meal up to January 12, when they weighed 1,051 pounds and were sold for \$8.10 a hundred, or a total of \$2,085. The cost of the cattle, including feed, was \$2,055.92, or only \$29.08 below the selling price. This plus \$185 worth of pork produced



THE SILO IS OUR GREATEST CONSERVER OF FEED CROPS.—WE CAN PLAN NOW TO MAKE THE MOST OF WHAT IS PRODUCED.—IT WILL SHOW LACK OF TRUE PATRIOTISM TO PERMIT UNNECESSARY WASTE

teeth and digestive tract of the cow and induce such diseases as tuberculosis, is erroneous. A Jersey cow thirteen years old was shown on the Santa-Fe Dairy and Poultry Special which covered Kansas recently, and the statement was made that she had eaten silage almost daily all her life. Her teeth were in perfect condition. She was still producing milk profitably.

SILAGE IS GRASS IN WINTER

The principal reason why a dairy cow increases her milk flow when she is turned out to pasture in the spring is that she is receiving a succulent feed. Thus if we wish to secure a large and persistent flow of milk during the winter months, we must feed some succulent feed that will take the place of the pasture grass of summer. Silage is the grass of the winter season, and some enthusiastic dairymen assert that it is grass minus the flies.

One of the chief reasons why so many of our cows are unprofitable is that they lack persistency or do not keep up their flow of milk for a long period. While this is largely due to inherited characteristics, yet if all cows were properly fed on silage and other desirable feeds, much less trouble would be experienced in trying to keep cows up to their normal flow. Silage and alfalfa or clover hay should form the basis of our rations for dairy cows in winter. A good ration under ordinary conditions would be twenty-five to forty-five pounds of good silage, all the alfalfa or clover hay the cows will eat, or ten to fifteen pounds, and seven pounds of grain for each pound of butter fat, or one pound of grain for each two and one-half pounds to four pounds of milk produced, depending upon the amount and richness of the milk.

SILAGE FOR SUMMER FEEDING

During the latter part of July and the month of August, the pastures are usually very short, due to hot weather and lack of rainfall. If we are to keep up the flow of milk at this critical time

essary to feed very much grain to the animals after the end of the first year.

A good winter ration for yearling dairy heifers is corn silage, fifteen to twenty pounds, alfalfa or clover hay, eight to ten pounds, grain mixture consisting of equal parts corn, oats and bran, two pounds.

BEEF BY SILAGE ROUTE

"Silage is a word to chase away gloomy thoughts of high-priced feed and live stock 'eating their heads off,'" said Prof. E. F. Ferrin of the Iowa State College, in the Iowa Agriculturalist. "If more than 8 per cent of our corn crop were ensiled we would be farther away than we now are from the high cost of beef-making. Taking the place, to a large extent, of both grain and roughage, silage keeps down the price and increases the amount of gains."

Silage costs from \$3 to \$4 per ton at the Iowa Experiment Station. This includes not only the cost of production of the crop and the labor in filling the silo, but also the yearly interest and depreciation upon silo and silage machinery. Fifty-bushel corn should yield ten tons of silage at an approximate cost of \$3.25 per ton. These ten tons of silage contain about sixty pounds more digestible protein, 975 pounds more of digestible carbohydrates and twenty pounds more of digestible fat than the fifty bushels of grain if fed in the ear. The silage is succulent and very palatable, furnishing a great deal of roughage besides the five bushels of grain per ton. Silage is a fine feed for beef cattle. It will carry them through the winter in good condition at a reasonable feed cost. It is suitable for all ages from the breeding cow to the finished steer.

In wintering cows at the Iowa Experiment Station, straw and silage with a pound of cottonseed meal daily to each cow is used. In feeding this ration the racks are kept filled with straw, letting the cows eat what they want. By weighing the silage once, the daily feed can be estimated. Afterwards it is custom-

May 12, 1917

behind the cattle constituted the \$214 profit on the twenty-five head.

A similar lot of cattle was purchased in the winter of 1915 and handled in much the same manner with the exception that the cattle were fed 200 shocks of corn and five tons of mixed hay, instead of silage and straw, before they were turned to grass. From May 1 to October 1 they were pastured. During the four months following October 1 the cattle were fed 800 bushels of corn, ten tons of mixed hay and three tons of cottonseed meal. On February 5, 1916, they averaged 1,149 pounds a head and were valued at \$8 a hundred. The sale price was \$221.16 less than the cost of the cattle and the value of the feed they consumed. However, \$307.50 worth of pork was made behind these cattle, and consequently they returned a profit of \$86.54.

Mr. Cunningham's profits thus far had not been encouraging. However, the grazing operations as a whole proved profitable. Realizing that he must continue in the cattle business to find a market for his roughage and grass, he began to seek a means of finishing his cattle at less cost. The next lot of cattle was bought in February, 1916, at \$7.25 a hundred, and averaged 638 pounds at home. From February 6 to May 1 they were fed twenty-five tons of silage, four tons of clover hay and one ton of cottonseed meal, after which they were grazed until October 1. The feed from October 1 to December 19 included no corn except that in the silage. During this period the cattle consumed seven tons of clover hay, three and one-half tons of cottonseed meal, and thirty-six tons of silage. They were valued at \$8.50 a hundred December 19, when they were sold for \$2,108.95. This, minus \$1,587.15—the original cost including feed—left a profit of \$521.80. No hogs followed the cattle. The feeding plan in 1916 not only proved more profitable on high-priced feed than in 1915 but made a larger gain on less feed.

According to S. T. Simpson, of the Missouri College of Agriculture, Mr. Cunningham's 1916 feeding plan is similar to that of many other feeders. The use of silage and the reduction of the corn ration is the latest departure in beef making. While Mr. Cunningham's experience in itself is not conclusive, yet feeders and experiment stations are finding similar plans equally profitable and it is safe to assume that the principle is sound.

At the Kansas Experiment Station Prof. W. A. Cochel has shown most conclusively the value of silage in the maintenance ration for cows and heifers. In the tests of the past season breeding cows were fed on silage and alfalfa and gained at the rate of over a pound a day, the feed costing less than 7 cents a day per cow.

A silo will pay for itself in one or two years, depending on conditions, and it will last from fifteen to one hundred or more years, depending upon the material used in its construction. An acre of corn worth—at 50 cents a bushel—\$25 when harvested in the old way, is worth fully \$40 when cut and put into the silo, and it costs no more to put it into the silo and feed it out than it does to harvest it in the old way and feed it. Thus a silo adds \$15 net profit per acre, once it is paid for.

We have never seen a man, or heard from one, who, after having tested the silo as a food preserver, did not become an enthusiastic silo advocate. Don't waste valuable fodder any longer; it is next to criminal to do so from a public point of view. Furthermore, no farmer operating high-priced land can afford to waste any longer. Remember that the American farmer can no longer hide be-

hind the tariff wall; it has been torn down so that corn, beef, and mutton from Argentine and other South American countries can come in to compete with our home-grown products. This competition will have to be met. We have not yet had a taste of world competition, but it is coming.

The silo is one of the things that will cheapen the production of live stock products and the time to take advantage of it is now. Build a silo this year. Do it even if you must postpone buying luxuries till some future time. Build that silo this year.

Hays Cattlemen's Round-up

For four years the farmers of Western Kansas have been invited to attend a spring meeting at the Hays Experiment Station farm to study the results of the cattle feeding work. These are not full feeding experiments. The problems of the Western Kansas farmer have to do with wintering breeding cows and developing the heifers into good breeding animals. The cattle experiments that have been planned and carried on at Hays for the past few years are pointing the way to the best utilization of the waste feeds and feeds having little or no market value. The failure to secure adequate returns from the straw and the feed crops adapted to Western Kansas conditions has constituted one of the serious wastes of farming, and especially has this been so in the West because forage crops are the surest crops that can be grown. But without stock there is no way whereby they can be made to yield a money return.

At this meeting held April 5, which was presided over by W. M. Jardine, director of the experiment stations of Kansas, Professor Cochel stated that the cows in the experimental lots had consumed an average of nine pounds of wheat straw daily. This is nominally a waste product in the Kansas wheat belt and is frequently burned instead of saved and used as feed. He also referred to the fact that hay which has been damaged to such an extent as to bring \$5 or \$6 a ton below the market price for good hay, can be used to a large extent in the winter feeding of breeding cattle.

The demand for beef breeding females was never so great in Kansas as it is today. Kansas cattlemen and the farmers of the West can develop a profitable business in growing and feeding stock cattle.

Former Governor W. R. Stubbs was also present and spoke on the cattle outlook. Charles R. Weeks, the superintendent of the Hays Station, explained to the visitors the various lines of work being conducted at the station.

Some of the most constructive live stock experimental work being done is that planned by and now being carried out under the direction of Prof. W. A. Cochel. The cattlemen are being shown how the best possible use can be made of much that has hitherto been wasted. The value of this work will be more and more appreciated as the results begin to appear. Cattlemen of the state should by all means give the fullest encouragement to these experiments.

In the northwestern section of Kansas, including ten or twelve counties, dwarf milo and feterita are the grain sorghums to plant, while all kinds of kafir and the amber sorghum are useful for forage. In this region or along the western edge of the next region to the east, if dwarf milo, feterita, or an early variety of kafir is not obtainable, early adapted varieties of corn are preferable as a grain crop to blackhull kafir or other late maturing grain sorghums.



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You can't get the best out of your farm unless you *take time to plan*. And you can't think clearly when you're just dog tired. But there's a way to "get shet" of all this deadly drudgery that keeps you down.

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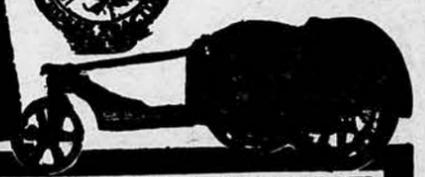
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How To Serve Your Country

ORDINARILY you plan your course of action on the basis of advantage to yourself. Now you must plan it on the basis of service to your country. Not more than five per cent of our people will be called to arms. But we are all in this war. Each must do his part, and it must be that part which he can best do. Some must fight. Some must produce. Some must prevent waste. Some must conserve health. Some must get ready to reconstruct the world when the war is over. One service is just as patriotic and important as the other. The greatest calamity that can befall our country would be for our high schools and colleges to cease preparing men and women to bear the country's largest responsibilities. For every student called to the front, another should come forward to take his place. Keep cool! Think it all through. Find what service you can best render to your country. Then act!—H. J. WATERS, President Kansas State Agricultural College.

La Crosse Happy Farmer Tractors



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Write for Catalog La Crosse Happy Farmer Tractors are now doing great work in farmers' fields. Model "A" pulls 2 or 3 plows—1500 lbs. guaranteed drawbar pull—16 h. p. on all belt work—extremely light and simple. Use gasoline or kerosene. Model "B"—12-24 h. p. guaranteed—weighs only 2700 lbs. Many exclusive features. Burns kerosene perfectly—Hyatt Roller Bearings throughout. We have a distributor in your territory for prompt service. Write for catalog. Also get literature on the La Crosse Happy Farmer line of tractor-drawn implements.

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Fuel Supply—Stewart vacuum system. Ignition—Delco automatic spark advance with manual control.
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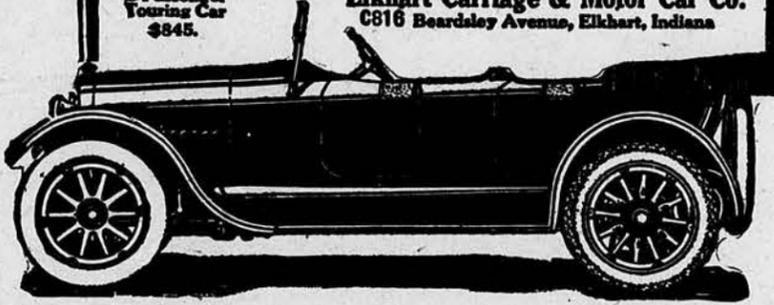
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I consider it equal to a prominent machine sold for \$140. One neighbor who has used both says he would rather have the Galloway.
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It is as good a spreader as money can buy. I kept \$35.45 in my own pocket. A team that weighs 1,250 lbs. pulls it easily.
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MENTION KANSAS FARMER WHEN YOU WRITE.

Kansas Farmer Dairy Club

Dairy Herd From One Cow

A SINGLE good cow can easily become the foundation of a profitable dairy herd. Some of our Dairy Club members are already learning the truth of this statement. Of course, it is important that this foundation cow be carefully selected and bred to sires with production records back of them.

The only sure way to tell whether a cow is profitable or not is to keep records of the milk she gives and the feed consumed. This is what Dairy Club members are doing and they are learning the great value of this work. After a year of keeping accurate records, such as have been kept by the boys and girls in the Kansas Farmer Dairy Club, there is no danger that any member will ever be satisfied to conduct a dairy business on any other than a business basis. The dairy farmers who are forging ahead and making the milking of cows more profitable are the ones looking carefully after the business side of their work. Men who work in the dark, as do those who keep no records, are the ones that become dissatisfied with milking cows. They are usually milking and feeding a lot of cows that are not paying and while the herd as a whole may be returning a little profit, it is because the few good cows are producing enough to carry along the boarders.

In almost every day's mail we now get letters from members of the dairy club, showing how quickly a good cow can pay for herself. Some of the members have been especially fortunate in getting heifer calves. Ralph Edwards, of Leavenworth County, who was the first member to start last spring and whose year's record closed in April, has his cow paid for and in addition two heifer calves. The oldest one will soon be a cow. Dora Brader, of Labette County, who borrowed \$85 of J. W. Markley, of Oswego, to buy a cow, starting her record about a year ago, now finds herself the owner of a herd. Here is what she writes:

"My cow was fresh April 24. She had a fine heifer calf. My papa offered me \$125 for my cow and calf last night, but I do not want to sell. I now have two heifer calves. Papa told me he would give me \$50 for the two. I have a fine cow and two fine heifers for only \$85. I have not paid my note yet, but could any time by selling my heifers. Would you advise me to sell the calves to pay the note, or should I keep them and get the banker to take a new note when this one comes due? I think he will do it and it will only be for a few dollars.

"My oldest heifer will be fresh in October, 1917, and then I will have two cows to milk.

"I am going to sell butter for 40 cents a pound. I am glad I joined the dairy club and I am always anxious to get KANSAS FARMER to see how the other club members are getting along with their cows."

Dora has good reason to be proud of the result of her year's work in the club. On this page appears a picture of herself and her cow, "Creamy." We hope we may later have a picture showing the cow and the two heifers. We have written Dora that it is our advice that she keep these two calves and give the banker a new note for whatever amount remains due on her other note. Since it

will be for a small amount only, she will have it paid off in a short time from the sale of her butter.

Lela Mae Haynes, of Rawlins County, writes as follows:

"My cow freshened April 17, 1917. She had a fine dark red heifer calf weighing about 100 pounds.

"My cow sure is a dandy. She paid for herself with 10 per cent interest on note in nine months and left me a profit of \$10."

Lela sold her cow's first calf for \$30.

Well Pleased with Investment

I received your letter today and was glad to find that my sample of milk which was sent in to be judged for quality scored so high.

In the last issue of KANSAS FARMER you ask us to write and tell what interest we are paying. I pay 6 per cent on my note. It amounts in all to \$107.70 and I have paid \$60.01 in ten months. I see from the letters in the Dairy Club column that some of the members have their cows paid for. Mine is a little over half paid for, but I am not at all sorry that I joined the dairy club. An investment that pays 72 per cent interest on a hundred dollars is usually considered pretty good. I will try to get my April records finished and in by the tenth of May.—HARRY LENHERT, Dickinson County.

Banker Will Loan Money

We have just received a letter from Ike W. Crumley, of Rexford, Kansas, assuring us that if anybody wants money from his bank to buy a cow or a dozen cows, he can get it. Mr. Crumley has always been a strong booster for dairying for that part of the state, and has always been glad to finance any worthy applicant who wishes to get a start in dairying. We hope some of the boys and girls in that territory will take advantage of his generous offer to loan money for buying dairy cows, and join the Kansas Farmer Dairy Club.

Dairy Club Prizes

The following prizes are offered for work in the Kansas Farmer Dairy Club: Beatrice Creamery Company, hinge-door silo.

R. J. Linscott, Holton, Kansas, pure-bred Jersey bull calf.

Empire Cream Separator Company, cream separator.

Beatrice Creamery Company, cream separator.

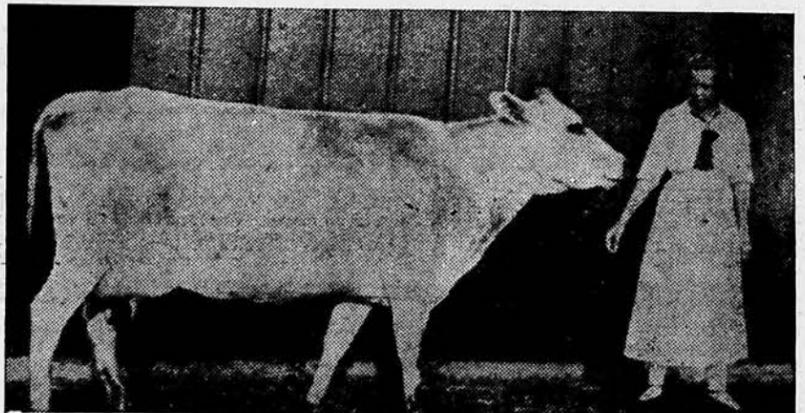
Hinman Milking Machine Company, two-unit milking machine.

Hunt-Helm-Ferris Company, complete cow stall.

N. A. Kennady Supply Company, twelve-bottle Babcock milk tester.

In our May 20, 1916, issue, KANSAS FARMER offered the following special prizes:

To the member who wrote us oftenest telling of the interesting things that happen in connection with the club work and things learned from it, and who sent us the best pictures, we offered \$3 and one year's subscription to KANSAS FARMER. To the one ranking second, \$2 and a year's subscription to the paper; third, \$1 and a year's subscription; fourth and fifth, one year's subscription each.



DORA BRADER, OF OSWEGO, AND HER COW, "CREAMY."—SHE NOW HAS TWO HEIFER CALVES, ONE A YEARLING, THE OTHER TWO WEEKS OLD

Cow Gets Pasture Only

I just got the report of the score on my sample of milk I sent to Manhattan. I am glad it scored above 80, so I can have the full twenty points for quality.

I pay 6 per cent interest on my loan from the bank. I have only paid \$41.42 on my note, but still have my calf. My father wants to buy it and I thought I would sell it to him, so I could pay my note before the first of September.

I am not feeding my cow any grain now except when it is rainy or cold. She runs on good pasture.

Do you want the members of the advanced class to begin the second year's work the first of October?—ERNEST S. ASBURY, Leavenworth County.

Finds Oats-Cheap Pasture

My cow, Thilda, is fresh now and is giving over sixty pounds of milk a day. She has a male calf. He weighed 164 pounds when two weeks old.

The rate of interest which I pay on my note is 6 per cent.

I am getting 44 cents for butter fat and 60 cents for skim milk.

I am letting Thilda run on oats which father sowed for pasture. I have noticed that it is much cheaper. It costs almost twice as much feed when I do not pasture her.—ELISE REGIER, Butler County.

Club Popular in Lyon County

The new Dairy Club is receiving new enrollments rapidly. We just received the following letter from H. L. Popenoe, agricultural agent for Lyon County:

"Mr. Boyle and I have been talking up the Dairy Club among a number of our club boys, and have already enrolled five. Two of them have bought their cows, and the other three will go out with us this afternoon to select theirs. It is a very interesting club and the boys are very enthusiastic over it."

Developing Dairy Heifers

THE high producing cow is the result of good methods. This involves judicious breeding and proper feeding and care during the development period. No high producing cow has ever come from haphazard methods. We have observed the truth of these statements in every really good dairy herd that has come under our observation. It is especially noticeable in the herd which has been developed by Prof. O. E. Reed and his able assistants at the agricultural college.

The problem here has been made more difficult because of the necessity for maintaining herds of several dairy breeds. The foundation animals of the different breeds have been selected with much care, but one cannot help being impressed with the attention given to the handling of the calves and young stock. It has been recognized that the best time to start feeding the heifer, to produce a good milk cow, is when it is young. The calf should receive its mother's milk during the first month of its life. Beginning at the end of three weeks, skim milk should gradually be substituted for the whole milk. The skim milk should be supplemented by grain and hay.

It is our belief that many farmers do not realize the feeding value of skim milk. They think that because the fat has been removed, a much larger quantity of milk should be fed. As a result, the calves are often overfed. Shelled corn has been found a good grain supplement to replace the fat content of the skim milk. The calf should be fed skim milk until at least six months of age and as much longer as the milk is available.

Timothy, Sudan grass, or prairie hay is good roughage for the young calf. The leguminous hays—alfalfa, clover or cowpea—tend to produce digestive disorders.

Plenty of water should be supplied for the calf from its birth, but water should never be mixed with the milk. Exercise is essential for the best development of the calf as well as all other live stock.

When the calf is several months old it may eat leguminous hays with no danger of digestive troubles. Alfalfa has proved its worth in building up both muscle tissue and the bone content of the body. The heifer should be bred to calve at from two to two and one-half years of age. The pregnant heifer should receive a liberal ration containing a high per cent of protein and ash, as

"William Wayman, of the Emporia State Bank, has taken the notes of the two who have bought their cows, and is charging only 4 per cent interest. The boys who have bought their cows have chosen Holsteins that are giving about six gallons of milk per day, and I believe they are going to make some good records. The best part of the work is in the business training that it gives the boys. They each have their own bank account and this is checked up once a month when they come back to make deposits from the sale of milk. They are also going to make reports to the bankers, of the work they are doing and the amount of money they are taking in, so I feel that it will give them an early start in this training. We have two banks in town that are offering help—the State Bank and the Citizens National Bank—and I expect before the summer is over to have a great many more boys and girls enrolled in this work than we have now."

"If there ever was a time when Lyon County needed more cows, it is the present, and this Dairy Club is working right in conjunction with the campaign we are putting on for increasing the number of milk cows in this country. I feel that we will get very good results from it."

Club Member Moves

We have just moved from Thayer to Eureka. My father is pastor of the Methodist Church here. In moving I have mislaid some of my letters from KANSAS FARMER. I have rather lost out while we were moving and am sorry for the delays with my records.

I hope to be able to give my cow more attention now. I have enough money in the bank at Thayer to make the last payment on my note.—W. W. CLAWSON, Jr., Greenwood County.

these are necessary for the development of the fetus. If these elements are not present in sufficient amounts, however, the body of the heifer will suffer rather than the fetus.

Comfort for Milk Cow

Unless the dairy cow is comfortable she cannot be expected to do her best. Cows should be provided with the most comfortable stalls possible. This should be done not only out of a humane regard for the cow but because of future financial returns. Expense incurred in providing a good barn and good stalls will be more than met by the increased financial returns later.

In discussing this question recently, L. H. Fairchild, of the dairy department of our agricultural college, advised that cement be used for the floors of dairy barns because it is the easiest to keep clean and the most durable. The cement should be covered with a removable wooden mat or with two-inch planks. If cows lie on the cold floor, udder trouble may result.

The best kind of stall is one that insures cleanliness and comfort. Home-made stalls can be built at little expense that will fill the requirements. There are also many types of well designed stalls on the market. The partitions between the stalls, the hay racks, and the mangers may be made of wood or metal piping. The wood is preferable because of the expense of the piping.

The partitions should slope from the front to the back of the stall and should be high enough at the back to prevent a cow that is standing from stepping on one that is lying down. The stalls should be wide enough to give ample room for the milker.

The manger should be built about thirty inches above the floor. Its bottom should be round. Corners should be avoided as they tend to hold dirt and leaves that shatter from the hay. On the floor across the back of the stall a four by four may be placed, and held firm by a bolt running through it and into a slot in the cement, so that it can be moved backward and forward. The cow will soon learn to lie in front of this four by four and not on it. This will tend toward cleanliness.

The cost of a stall of this type will range from \$5 to \$8, according to the quality of materials used. The cost of a comfortable stall will be saved annually by the additional milk supply from the contented and comfortable cows.

PATRIOTISM DEMANDS

That All Butter-Fat Waste Be Stopped

President Wilson's powerful appeal for the conservation of the nation's resources is still ringing in our ears. "The supreme need," he says, "of our own nation, and of the nations with which we are co-operating, is an abundance of supplies, and especially of food stuffs;" and again, "Upon the farmers of this country, therefore, in large measure rests the fate of the war and the fate of the nation."

Wasteful methods must be abolished. Every device that makes for the saving of time and labor on the farm must be utilized. Every plan that makes for the conservation of our food products must have the farmer's hearty co-operation.

And nowhere is there greater opportunity than in the production of dairy products, particularly butter-fat.

"Fats, fats, fats, more fats," that is the demand of the warring nations in Europe. The men who toil and the men in the trenches must have fats. They are the fuel that the human machine must have.

And no fat is so palatable or so easily assimilated as butter.

When it was simply a question of the farmer's own loss of profit, the tremendous waste of butter-fat on American farms was bad enough, but under present conditions such waste is nothing short of criminal.

And it is wholly unnecessary.

It is conservatively estimated that about a million cow owners in the United States are still skimming by some wasteful "gravity" method.

At an average of four cows to the farm, and an average waste of thirty-five to fifty pounds of butter-fat per cow, all of which could be saved by the use of a De Laval Cream Separator, this alone represents an annual waste of at least 140,000,000 pounds of butter-fat.

Then there are, perhaps, a million inferior or half-worn-out separators in use whose owners could save fifteen to twenty pounds of butter-fat per cow per year by replacing such machines with New De Laval's; and this represents another waste of at least 60,000,000 pounds of butter-fat annually.

Also there is the loss of time and labor that a De Laval would save and which could be better devoted to other productive work on the farm. This waste is hard to compute, but it is almost as important as the loss of butter-fat.

These are startling statements, but any dairy or creamery authority will agree that these estimates of waste are really very conservative.

Shall this tremendous waste continue? Will the loyal American farmer permit such waste when he appreciates the duty that is laid upon him to conserve the one article of food that above all others is necessary to the life and health and energy of the men who serve the nation in the field, the factory, the mine—and soon in the trenches?

We have always had an abiding faith in the American farmer, and we believe that if he is made to appreciate the full purport of the President's appeal to him, the appeal will not be in vain; and when he further appreciates what the De Laval can do to save the butter-fat which is now being wasted, and that his patriotic duty demands that such waste be stopped—NOW—our plants will not be big enough to take care of one-half the demand for De Laval Cream Separators.

THE DE LAVAL SEPARATOR CO

165 Broadway, New York

29 E. Madison St., Chicago

Kill Lice

Begin now, in the spring-time-clean up your poultry, keep hens and little chicks free from lice so they will do their best. When hens pick feathers you have a sure sign of lice.



Dr. Hess Instant Louse Killer

means easy and sure lice riddance. Dust into hens' feathers, about roosts and houses. Put it into the dust bath, both hens and chicks will work it all through the feathers, bringing the Louse Killer right home to the lice. You can do your poultry no better service. Don't neglect them.

Also destroys bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes. Sold in sifting-top cans. Price, 1 lb. 25c; 3 lbs. 60c (except in Canada). DR. HESS & CLARK, Ashland, Ohio

REMOVE THAT SPAVIN

—or that Curb, Spunt, Ringbone or other blemish with Kendall's Spavin Treatment. Mr. Martens of Shawano, Wis., writes this about Kendall's Spavin Treatment: "I have been using your Spavin Treatment for years for Spavin and Ringbone, and would not be without it, because it never fails. Let us send you other letters. Get a bottle of Kendall's at once. You may need it any day. At your drug store \$1 a bottle, 4 for \$3. Ask for 'Kendall's on the Horse'—Free, or write to Dr. E. J. Kendall, Care Kansasburg Falls, Vermont, U.S.A."



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With INCLOSED MOTOR Keeping OUT DUST and RAIN—Keeping IN OIL.



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

DOUBLE GEARS—Each Carrying Half The Load Every feature desirable in a windmill in the AUTO-OILED AERMOTOR Gasoline Engines—Pumps—Tanks Water Supply Goods—Steel Frame Saws

CASH BAGS

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

Comfort Indoor Closet

Odorless, Sanitary, Germ-proof. Can be placed anywhere in home. A guarantee of healthy, sanitary conditions. ABOLISH OUTDOOR CLOSET. Have city conveniences. Germ-life killed instantly by chemicals. Refreshed once a month. Needs no other attention. Board of Health endorse. Write for literature. Agents wanted in every territory. COMFORT CHEMICAL CLOSET CO. 2024 Parkside Bldg. TOLEDO, OHIO



Save Sows For Breeding

A BROOD sow is a good investment. This is true even in these strenuous times of high prices of food concentrates. The quotations on these feeds are controlled to a considerable extent by the price at which meat animals sell. Hence concentrates usually command a high figure when hogs on the hoof at large packing centers sell at more than 16 cents per pound. However, record prices for swine as well as feed concentrates have been a great incentive to farmers to "cash in" all the hogs available. That many sows have been included is evident from the fact that on April 1 the correspondents of the Bureau of Crop Estimates of the Federal Department of Agriculture reported approximately 3 per cent fewer sows on farms in the United States than a year before. Further, this is the first year that the supply has not increased since 1913.

At this time the marketing of a sow that can be or has been bred is fairly comparable to "killing the goose that laid the golden egg." Although the fecundity of swine is well appreciated by farmers, at times sows are sacrificed when a little forethought would cause them to be retained. Breeding sows multiply five or six times as rapidly as other meat animals. They have an average litter of five or six pigs and may be bred twice a year, although three times in two years accords more with current farm practice. The litters increase in size, on the average, until sows are five or six years old. However, a large proportion of the sows are sold after producing one or two litters and before they have reached the period of greatest usefulness. Occasionally sows become unsuitable for breeding because of their clumsiness, "high" condition, inactivity or barrenness, and these, of course, go to market when the proper weight, but the total sows of this class is a mere bagatelle.

In these days when labor is high and also scarce on many farms, the hog may afford "a way out." Hogs utilize refuse and waste grains, damaged grains, and garbage; garnering grain behind cattle or shattered grain in harvest fields; and utilizing slaughterhouse by-products and dairy products. They are also largely self-feeders. The modern farm "cafeteria" gives a pig a chance to make a hog of himself more quickly than he can by the hand-fed route, and it has the added merit of being the cheapest way of producing pork. A sow when she is not developing a litter or nursing pigs, can in summer time be placed in a pasture and given very little grain. In winter, possibly the cheapest maintenance ration is a combination of grain and hay, such as corn, wheat, rye, or barley, and alfalfa, clover, cowpeas or soy bean hay. The grain should be limited to one or two pounds per hundred pounds live weight per day. Sows should be given all the alfalfa hay or other legume they will clean up. Sows which show exceptionally run-down condition from suckling their pigs should be separated from the herd and fed grain until they regain breeding condition. Where pastures are very luxuriant, it is possible to carry breeding sows on pasture alone, but the most palatable hay will not keep sows in good breeding condition if fed alone.

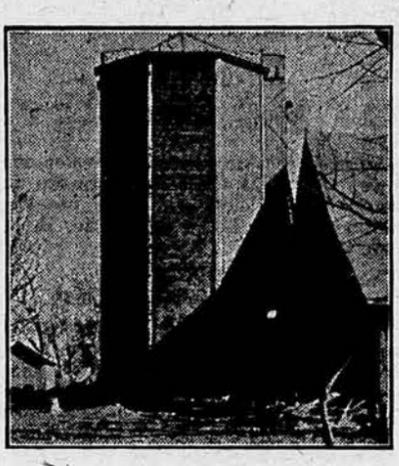
Breeding sows are at a premium and the demand for young stock is unprecedented. The hog buyers state in their reports that they are compelled to take anything that looks like a hog. The fluctuation in the number of hogs in the United States is subject largely to the fluctuations in the financial condition of the country. The high prices paid for hogs are a big inducement to farmers to market their hogs, and as stated before, the high prices of corn caused them to cut loose during the latter part of the year. The high prices paid for hogs and an increasing export trade are the two main factors which make the hog business especially attractive at the present time. Millions of farmers would purchase sows to farrow this coming spring if they could, but this is almost an impossibility. Those farmers who are fortunate enough to have retained their breeding sows will play an important

role in placing spring pigs on the market. The spring gilts from these litters should not be sent to market for meat purposes, but should be retained or sold only for breeding purposes in order to augment the pig crop next year.

Silo Stockman's Friend

My experience may not have been as extended as some, yet it is in general accord with other feeders and is amply sustained by general observation. My conclusions are that there is nearly as much justification for putting up silos in which to store roughage as there is justification for putting up granaries in which to store grain, and the past season has wonderfully emphasized their importance. They not only materially assist in preserving the feed at its highest value, but really improve it by adding to its palatability and digestibility.

All good stockmen know how important it is to increase the quantity and improve the quality of the feed, if possible, that is to be used toward the close of the winter, especially if they wish to secure better gains on grass and be ready for early markets. In the general order of things in the past this principle has been reversed, and the longer the feed—shock corn, kafir, etc.—has been



SILO OF BROWN COUNTY FARM

exposed to the weather, the poorer it has become and great loss and waste has occurred.

Take the kafir and sorghum crops generally, we find that the seed is not only softened in the silo, but it is protected against the ravages of sparrows, crows, blackbirds, mice, etc., that prey upon it by thousands, but the fodder is far more generally relished and put into condition for admixtures with cottonseed meal, bran, etc.

Many farmers have told me that they thought the silage was worth more than double what it would have been if left in the fields during the winter, and there are various conclusions as to the merits of silage as a preliminary feed when cattle are to be put on grass. My observation is based on what I learned last year—that nearly all the silage-fed cattle got fat earlier and were ready for market sooner than those fed in the customary way. They made their owners money while others lost, as the cattle made no gains owing to the dry season. —ALFRED ROGLER, Chase County.

Plant Pumpkins for Hogs

Pumpkins can be grown at a small cost and form a valuable addition to the rations of hogs. They may be grown in the corn fields, especially where there is a poor stand.

A supply of pumpkins will help out in economizing on grain. Their value does not lie entirely in their nutritive composition, but is due largely to the beneficial effects on the digestive tract, as they tend to regulate the bowels and keep the animals in healthy condition. It is also claimed that the seeds are valuable as a vermifuge, or worm remedy.

Silage is the best and cheapest form in which a succulent feed can be provided for winter use.

Farm Power

WHEN an engine is bought for the farm it has nothing to do but work. Too many makers forget this and sell you an engine that would be more at home driving a pleasure car.

Nichols & Shepard don't forget what a farm engine is for—*fast work*. For steam they build from 13-40 to 25-85 h. p., in five sizes and fifteen variations burning wood, coal or straw. For Oil-Gas from 25-50 to 35-70 h. p., full power on kerosene. All in the

Red River Special Line

Either kind will buckle down and work—not snort around and swell the expense account. Use your automobile when you want to burn up power for fun, but buy an engine that has no nonsense about it when it goes to work.

The final test on a farm engine is to hook it to a grain separator. That will require steady and reliable power to do paying work. Send to the Nichols & Shepard branch house that is nearest to you for a little paper that shows your own neighbors' letters on the farm power question. Any one of them will give you a money-saving tip. The handsome general catalog of the Red River Special Line will come with the paper if you ask for it.

Nichols & Shepard Co. In Continuous Business Since 1848 Builders Exclusively of Red River Special Tractors, Wind Blowers, Pumps, Steam Traction Engines and Oil-Gas Tractors Battle Creek Michigan

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Only six weeks required to train you in this great school. Most complete instruction. Instructors all experts. Enroll now and receive \$50 Course in Tractor and Lighting Engineering Free. Write today for our big Free Book and \$50 Free Scholarship Certificate. BANE'S AUTOMOBILE TRAINING SCHOOL, Largest Auto Training School in the World. 11006 Laurel St., Kansas City, Mo.

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at a small cost by using our Attachable outfit. FITS ANY BICYCLE. Easily attached. No special tools required. Write today for our FREE BOOK describing the SHAW Bicycle Motor Attachment. Motorcycles, all makes, new and second-hand, \$85 and up. SHAW MANUFACTURING CO. Dept 140 Galatzburg, Kansas.

\$16.00 Sweep Feed Grinder | \$21.00 Galvanized Steel Wind Mill.

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

CURRIE WIND MILL CO., 410 E. Seventh St., Topeka, Kansas

Hill's Evergreens Grow

Best for windbreaks and hedges. Protect crops and stock. Keep house and barn warmer—save fuel—save feed. Hill's evergreens are hardy, nursery-grown. Get Hill's free illustrated evergreen book and list of 50 Great Bargain Offers—from \$4.50 up per Thousand. 56 years' experience. World's largest growers. Write D. HILL RUMBERT CO., Inc., Evergreen 2818 Cedar St., Dundee, Ills. Specialists.

LEPAGE'S GLUE

Have you sprayed your orchard? It is a pretty profitable kind of insurance. Clean, well formed fruit will usually sell at a good price. Wormy, poor fruit does not sell readily, if at all.

Enlist Your Cows

IN THE SERVICE OF YOUR COUNTRY

"It is sweet and honorable to die for one's country!"

So sang the Roman poet sounding a theme of patriotism which has inspired generations.

It is equally sweet and honorable to live for and **serve** one's country.

Not all can court the soldier's death at the firing line.

But all can do what in their power lies to help to win the cause.

The allied battling armies need food. Nature seems to have conspired with human passion in this great catastrophe. Her yields are less, in these times of greatest stress, than they have been in years. The dread spectre of famine stalks through the world.

Our own country faces a serious food shortage.

Prices are abnormally high and already beyond the reach of some pocketbooks.

Your duty is plain. You must "do your bit." You must enlist in the service of your country and work that others may live. You must help. And none **can** help quite so well as the Dairy Farmer by conserving the Dairy Cow and her female offspring and safeguarding the supply of the best and most essential food of mankind—Milk and its products.

RESOLVE HERE AND NOW

1. I will not kill, nor permit to be killed, a productive Dairy Cow nor her promising female offspring.

My country needs food and fat. The Dairy Cow furnishes both in great abundance. She is a natural food-making machine, capable of producing human food equivalent to that produced by 17 steers, capable of producing 2,100 pounds of fat as compared to the steer's 280 pounds of fat.

It is a crime to cripple or destroy such a wonderful food-making machine, especially during my country's direst hour of need.

2. I shall bring my heifers to maturity. It is my duty to my country.

And it pays.

A fair Dairy Cow has the earning-capacity of \$1,000 securely invested at 5%. It is folly to sell for \$125 or less a machine which equals the earning capacity of one thousand gold dollars.

3. I will not permit a scrub bull in my herd. I resolve to breed up, not down, to the end that each generation of my herd shall be a vast improvement on the preceding generation.

My country needs better stock, better and more bountiful production, and I shall help her so far as in my power lies to improve and increase my stock and its production.

It is my duty as a citizen, and it pays—in pride and pocket—to permit only worthy sires in my herd.

4. I believe in intelligent feeding. I know that it will increase my production. I promise faithfully to follow the most practical instructions available on this subject.

I owe it to my country, to myself, and to my cows, to make the most of my opportunities, to give time and thought freely to the important subject of feeding. I shall be proud to set an example in intelligent feeding and thereby inspire my neighbors to do likewise.

5. I will not waste my skim milk. It is fine food for human consumption, and I shall support vigorously the movement to spread the truth about the food value of skim milk, to procure the repeal of the ignorant and vicious legislation and remove the superstition which

makes my nation banish from the table and the kitchens 30,000 millions of pounds of this cheap, nutritious and digestible food yearly.

6. I shall plant intelligently to grow my own feed, and thereby lower the cost of production and increase my profit. I demand efficiency and low cost from the man who furnishes me my food, my clothing, my houses, my household furniture, my barns, equipment and machinery—and all my needs.

He has a right to demand in return and I promise to give equal efficiency, equal low-cost production on what I furnish to him.

7. I believe in soil conservation and shall do all in my power to maintain the fertility of the soil in my care and so shall I hold my lands in trust for this and coming generations.

My country depends upon me to safeguard the continuous fertility of my soil and I shall not fail her, surely not now, in her hour of need.

This, Mr. Dairy Farmer, is your oath of enlistment. Will you subscribe to it as a fair token of gratitude to the men who render their lives on the firing-line that you may be free and remain in full enjoyment of the blessings of democracy?

You can do no less! You can do more by living the creed and spreading it.

Acquaint yourself with the work of the National Dairy Council, and support it with all your might. It is bending every effort to improve and increase production, and through nation-wide advertising it is increasing the consumption of your products, teaching the public that Milk, Butter, Cheese and Ice Cream are the best, most wholesome and cheapest of foods. It is spending vast sums to inform 100 million Americans that Milk is cheap at 15 to 20 cents per quart, and that there is no substitute for Butter because there is no substitute for Butterfat; that Cheese is the staff of life of many nations and should be a staple food for the armies in the field. The Council urges you to increase production, and while it is so urging you it is finding a market for you. See to it that this market is supplied and raise the quality.

A new era is dawning in Dairymod. Dairying is gaining in understanding, in dignity, in profit. Stick! Stick and improve!

AND—COME

Come to the National Dairy Show at Columbus, Ohio, October 18 to 27, 1917. Let nothing interfere.

The Show will be the center for mobilizing the Dairy Industry for service to our country in its need now and ever after. It will be the greatest and most profitable Short Course ever offered.

The whole grandeur of Dairying will be enrolled before your very eyes. Over a thousand admired aristocrats of Cattelodom will inspire you to breed upward. The country's greatest scientists, government and state officials, noted professors of Agriculture, will discuss with you and for you important, practical questions for the betterment of your business and the increase of your profits. It is the greatest opportunity ever offered you to learn and become inspired by the whole majesty, dignity and profitableness of Dairying. Proof will be furnished you that you cannot afford to neglect or treat indifferently this wonderful part of your work, and we urge you especially to bring with you your growing sons and teach them new and lasting attachment to Dairying—the world's greatest and best service.

You will serve your country and yourself—SO COME.

NATIONAL DAIRY SHOW ASSOCIATION

130 NORTH FIFTH AVE.

CHICAGO, ILL.





The Eyes of America Turned on Her Farmers

At last the American farmer occupies his rightful place in the esteem of the world. Manufacturers, merchants, bankers and city dwellers of all kinds heretofore have taken their food for granted and have overlooked the man behind the plow—the man who feeds them.

Conditions today are such that the producer of foodstuffs is recognized as the mightiest force—not only in the welfare and prosperity of the nations of the world but in the very existence of nations and their peoples.

A noticeable feature of the situation, which has shown the American farmer to be on a high moral plane as well as holding an important industrial place is the fact that he has not taken advantage of conditions to extort unreasonable prices from his fellow Americans. He has patriotically increased his production in order to prevent famine prices instead of keeping production down to force prices up.

He has shamed the food speculator—though unfortunately his example has not been followed by all manufacturers—particularly among the makers of so-called luxuries; though

many big manufacturers in this country have followed the farmer's lead.

One of the most noticeable cases among those who have kept faith is that of the makers of Coca-Cola. In spite of the enormously high price of cane sugar—the principal ingredient of Coca-Cola—and in spite of the higher cost of its other ingredients the Coca-Cola Company have not raised the price to consumers nor lowered the quality of that delicious and refreshing beverage one iota. Like the farmers they have kept faith with the people to their own cost.

Perhaps the lessons of fair-dealing and helpfulness that the heads of that institution learned as boys on the farm (for they are products of the soil) have strengthened them to stand firm in this crisis. So let us remember that the beverage Coca-Cola, known as the National Beverage because of its great popularity, has proved itself indeed national by doing its bit to keep down the cost of living.



Sodium Fluorid For Lice

ONE application of sodium fluorid will kill all lice of chickens, entomologists of the Department of Agriculture have discovered. This inexpensive white powder, they find, will rid a flock of all the seven common species of chicken lice in a few days. One pound, costing only 40 or 50 cents at the time of this writing, is enough to treat a hundred fowls, if dusted on. If dissolved in water and used as a dip, the same amount will go three times as far. It is easily applied, economical, gives immediate results, and does not injure the fowls or the poultryman.

The complete effectiveness of the sodium fluorid remedy and methods of using it are discussed in Farmers' Bulletin No. 801 of the U. S. Department of Agriculture, "Mites and Lice on Poultry," by F. C. Bishopp and H. P. Wood. The bulletin deals also with mites, the night pests of chickens, which requires a different treatment. Lice are the biting insects that work by day and are a serious foe in neglected small flocks of general farms and back yards.

Sodium fluorid—say it plainly to the druggist or you may get sodium chlorid, common salt, which it not only resembles in name but in appearance—may be obtained at most large drug stores. Until its recent use against cockroaches, and still more recently against poultry, this substance had not been employed as an insecticide. The demand for it, therefore, has been quite limited, and it is not ordinarily found in the stock of the small drug store. Druggists, however, can obtain it readily from manufacturing chemists, and with demand, it likely will be carried by local dealers. The finely powdered commercial form is cheaper and more easily applied by the dusting method than the fine, crystallized sodium fluorid.

To apply the material in dust form, place it in an open vessel on a table and with one hand hold down the fowl by the legs or wings. With the other hand place small pinches of the chemical among the feathers next to the skin, according to what is known as the "pinch" method, which proceeds as follows: One pinch on the head, one below the vent, one on the tail, one on either thigh, and one scattered on the under side of each wing when spread. Each pinch can be distributed by pushing the thumb and fingers among the feathers as the material is released. If the chicken is held over the vessel, the material which falls from the fowl during the operation is recovered.

The material may also be applied by means of a shaker, but this method has some disadvantages as compared with the "pinch" method. When this method is used the amount of sodium fluorid may be reduced by adding four parts of some finely powdered material, such as road dust or flour, to each part of the fluorid. The dust, while not poisonous, is somewhat irritating to the nose and throat. If allowed to remain on the skin in any quantity for any great length of time, it may cause slight local irritation. For these reasons, those dusting a large number of chickens would do well to cover nose and mouth with a dust guard or damp cloth and to wash their hands occasionally.

The dipping method is more economical but among many poultry raisers there is a general sentiment against the practice of dipping fowls, largely because most of the dips contain materials which discolor the feathers. The sodium fluorid dip, however, is harmless and as compared with dusting is more easily done. As it is necessary that the fowls dry quickly, dipping is most applicable in the Southern States and to summer treatment in the North. For lice on young chickens, young turkeys, and in fact all newly-hatched or sick fowls, the application of sodium fluorid in the dust form is recommended.

This is the way the dip is prepared: In a tub of tepid water dissolve the poison at the rate of three-fourths to one ounce of the commercial powder, or two-thirds of an ounce of the chemically pure material, to each gallon of water. The fowls should be held by the wings over the back with the left hand and

quickly submerged in the solution, keeping the head out, while the feathers are ruffled with the other hand to allow the dip to penetrate to the skin. The head then should be dipped once or twice and the bird lifted and allowed to drain a few seconds. A fowl may be treated in thirty to forty-five seconds. The sodium fluorid solution should not be allowed to remain long in galvanized vessels as its action on this metal is injurious. The solution does not injure the hands unless it comes in contact with sores, when it may cause slight irritation.

In experiments conducted by the department's specialists, more than 800 fowls have been dipped at one time, using on the average 5.2 ounces of sodium fluorid to 100 birds, at a cost of 13 cents. Labor is also reduced by dipping, the cost being about 58 cents for 100 fowls.

Produce Infertile Eggs

The farmers of the United States lose each year large sums because of improper methods of producing and handling eggs. One-third at least of this loss is easily preventable. It is due to the partial hatching of fertile eggs.

The eggs laid by a hen may be either fertile or infertile, depending on whether or not the male bird has been allowed to run with the female. A fertile egg is one in which the germ has been fertilized by the male bird. Except for this process of fertilization, the male bird has no influence upon the eggs which the hens lay. Egg production is equally great in flocks from which roosters are excluded.

A fertile egg does not keep as well as an infertile one because the fertilized germ responds more readily to high temperatures than the unfertilized one. It is impossible to hatch an infertile egg or to cause a blood ring to form in one. Such eggs are much more likely to reach the table in good condition and there is much less spoilage in shipments composed entirely of them than in mixed shipments of fertile and infertile eggs.

After the hatching season, therefore, the male birds should be eaten, sold or confined. In approximately fourteen days after this all the eggs laid by the hens will be infertile. These can be marketed much more successfully under the adverse conditions that frequently prevail in the hot summer months.

Heat is the great enemy of eggs, both fertile and infertile. By following these simple rules, which cost nothing but time and thought, dollars can be added to the poultry yard returns:

- Keep the nests clean.
- Provide one nest for every four hens.
- Gather the eggs twice daily.
- Keep the eggs in a cool, dry room or cellar.
- Market the eggs at least twice a week.
- Sell, kill, or confine all male birds as soon as the hatching season is over.

Rotten-Egg Law

While talking with a man who is making a business of furnishing eggs and vegetables to special customers, he told me that he had built up his trade by furnishing only perfectly good products. He never sold rotten potatoes or wilted vegetables—even when it was possible to do so by hiding the rotten ones under the good ones.

He is now shifting to make a specialty of good eggs. He has been reading the pure food laws and has learned that the sale of rotten eggs comes under the head of impure food, "not fit for human consumption." He says that he is careful to sell no rotten eggs, so he separates the roosters from the hens about the middle of May, and closely inspects all eggs which he sells throughout the year.—J. E. PAYNE, Oklahoma.

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.]

**160 ACRES
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WESTERN
CANADA
FREE**



Canadian Farmers Profit From Wheat

The war's devastation of European crops has caused an unusual demand for grain from the American Continent. The people of the world must be fed and wheat over 32 bushels offers great profit to the farmer. Canada's invitation is therefore especially attractive. She wants settlers to make money and happy, prosperous homes for themselves by helping her raise immense wheat crops.

You can get a Homestead of 160 acres FREE and other lands at remarkably low prices. During many years Canadian wheat fields have averaged 20 bushels to the acre—many yields as high as 45 bushels to acre. Wonderful crops also of Oats, Barley and Flax. Mixed farming as profitable an industry as grain raising. The excellent grasses full of nutrition are the only food required for beef or dairy purposes. Good schools, churches, markets convenient, climate excellent.

There is now an extra demand for farm laborers to replace the many young men who have volunteered for service in war. The government is urging farmers to put extra acreage into grain. Write for literature and particulars as to reduced railway rates to Supt. of Immigration, Ottawa, Canada, or

GEO. A. COOK

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2 Plows



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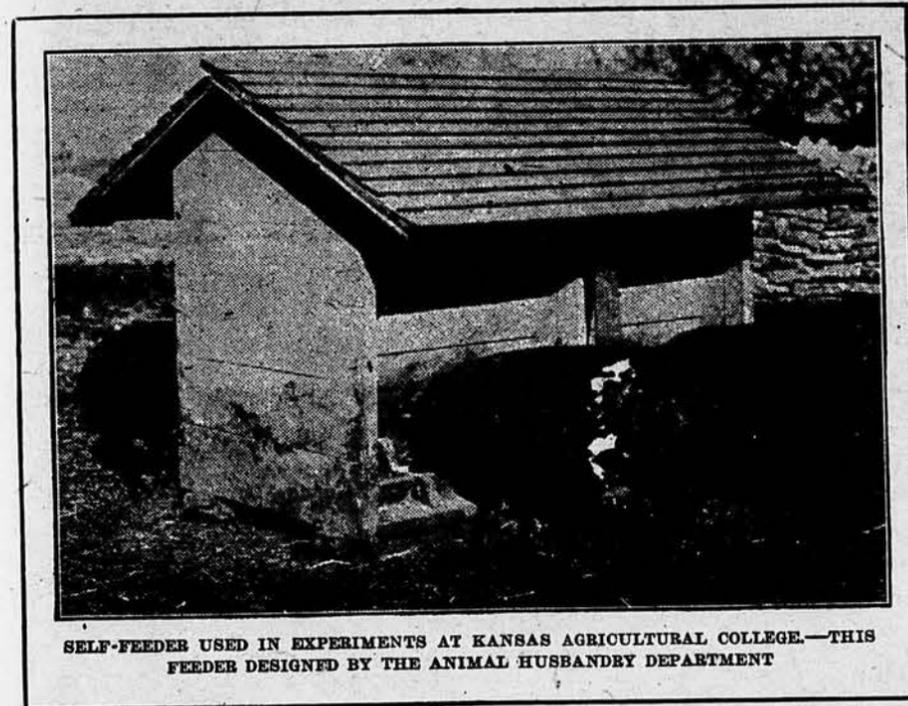
Good Profits From Pasture

ALFAFA or rape pasture returns good profits when grazed by pigs fed grain in self-feeders. Tests made at the Kansas Experiment Station last summer gave excellent results from this method of feeding.

Thirty head of fifty-pound Duroc-Jersey pigs were put on full feed July 28 and continued for sufficient periods of time to allow an average gain of 150 pounds per pig. These pigs were divided into five lots of six pigs each. Two

Each lot thus grazed one-third of an acre. This shows a return of \$12.15 per acre for the alfalfa pasture in three months' time. Two cuttings of hay had been removed before the feeding period began. Figured on the basis of a five-months' pasturing season there results a return of \$20.25 per acre and in addition the saving of the manure right on the ground where it is needed.

The rape pigs were pastured at the rate of twenty-four per acre, but with a



SELF-FEEDER USED IN EXPERIMENTS AT KANSAS AGRICULTURAL COLLEGE.—THIS FEEDER DESIGNED BY THE ANIMAL HUSBANDRY DEPARTMENT

lots were fed in dry pens, two on alfalfa pasture, and one on rape pasture. A study of the results shows that the pasture pigs made slightly greater gains which allowed them to make an average of 150 pounds, only one and one-half days earlier. However, they showed a

slight shortage of rape during the latter part of the feeding period. Using the prices named above, an acre of rape would give a return of \$16.20 for the three months' feeding period. Figuring on the basis of a four months' pasturing season there results a return of \$21.60,

Dry Lot Versus Pasture Self-Feeding

SIX PIGS IN EACH LOT, ALL FED IN SELF-FEEDERS	LOT 1	LOT 2	LOT 3	LOT 4	LOT 5
	Mixed	Free Choice	Free Choice	Mixed	Mixed
Average initial weight	48.6	49.1	48	48	47.1
Days to gain 150 pounds per pig	99	91	98	89	96
Average daily gain per pig	1.51	1.64	1.53	1.68	1.56
Concentrates consumed daily per pig	5.64	6.11	5.36	5.75	5.37
Concentrates consumed per 100 lbs. gain	373	369	350	342	343
Cost of concentrates per 100 lbs. gain	\$6.04	\$5.92	\$5.56	\$5.51	\$5.53

Prices of Feeds: Corn meal \$1.60, shorts \$1.45, tankage \$2.55 per cwt.

saving of 8 per cent in the use of concentrates amounting to 45 cents for each hundred pounds of gain. This figures a saving of 67½ cents per pig, or \$4.05 per lot, through the period of ninety-four days, or approximately three months. These pigs were pastured at the rate of eighteen per acre with forage to spare.

though conditions were not the most favorable for rape production.

The table shows detailed figures. The lots fed by the free-choice method had the different feeds always available and made their own selections from the different compartments of the self-feeder.—C. M. VESTAL, K. S. A. C.

No Danger of Over-Production

WHILE the farmer is being urged to greater and greater production, he naturally considers the possibility of overproduction. Many farmers are raising this question. Overproduction is exceedingly improbable this year. It has been agreed that this country's part in the war will be largely to supply food. Our food resources have been depleted by shipments to Europe and by several poor crop years, and now with unrestricted exports to the Allies, the small reserve which we have will be further decreased. Any surplus which the American farmers can produce will be quickly absorbed at war-time prices. Millions of people in England, France and other countries at war with the German powers are in need of food. They must have food not only for their civil population but for their armies. They are too busy fighting to provide that food themselves. It then behooves the United States to supply food.

But it is not alone for the Allies that we must produce maximum crops. If we have a poor crop year throughout the country, our own people may actually suffer.

If Germany is able to continue the ruthless submarine warfare unhindered, some food will be lost on its way to Europe. Consequently the losses will

tend toward a further shortage and to absorb any surplus even if there were danger of overproduction.

What would happen if peace should come within the next few weeks? Would not the markets be glutted? It is doubtful if there will be a great decrease in the demand for food immediately following the war. With commerce restored, every nation which is now at war will become a market place for American farm produce. Those countries have no food reserves left and they will turn to the United States to furnish food during reconstruction and until they can feed themselves.

In 1915 the United States produced ten bushels of wheat per capita; in 1916 we produced six bushels per capita, but used six and one-third bushels for seed and ordinary consumption and exported two and one-half bushels per capita. The present condition of wheat in the United States is 63 per cent of a normal crop. This is 23 per cent below the average for the last ten years. The condition in Missouri is even worse—59 as compared with the fifteen-year average of 85 per cent. The latest reports are that the world crop of wheat is far below average. Other foods are correspondingly scarce.—F. B. MUMFORD, Columbia, Missouri.

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The Postmaster General has made a ruling which makes it necessary that certain classes of subscriptions may not be carried after expiration. It has always been customary and permissible for the publisher to carry, at his option, subscriptions for a short time after they expire, in order that the subscriber might have an opportunity to renew his subscription and thus prevent his missing any copies of the publication.

The new rule, however, requires that this practice must be stopped.

We feel that you want KANSAS FARMER, because it is strictly a Kansas paper and is striving to help you in your work, and you certainly do not want to miss the good things that this old paper carries each week for the betterment of farm conditions. We do not want to discontinue your paper. We are very anxious to retain every one of our subscribers. In order to do so, we must urge that you send us your renewal subscription at once.

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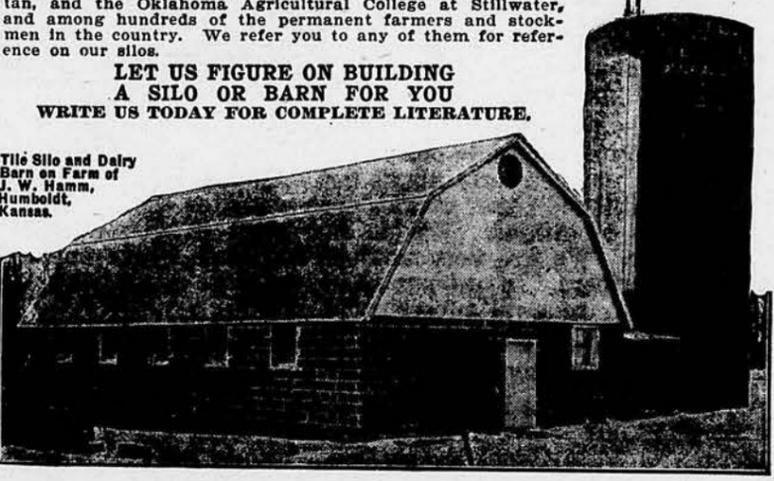
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Municipal and Community Canneries

Saves the Food Ordinarily Wasted by Canning the Surplus

SMALL co-operative canneries will provide a practical means for the saving of surplus fruit and vegetable products in many Kansas towns, villages and rural communities. This proposition has been carefully investigated by the State Council of Defense committee on gardening and canning, of which Otis E. Hall, state club leader in the extension division of the agricultural college, is secretary.

Such plants will probably prove to be most successful in the smaller towns and communities where fruit and vegetables are grown in abundance and where the market for the fresh products is limited.

days out of each week during the canning season.

The duties of the manager are to locate the materials for canning, see that they are brought in to the plant at the proper maturity and in sufficient quantities, to direct the work of properly preparing the fruits and vegetables for the jars and cans, and to see that sterilization and sealing is properly done. If there is a failure in any of these particulars, both time and products are worse than wasted. A poor product will create a prejudice against canned foods of this kind.

COLLECTION OF PRODUCTS

In most cases the Boy Scouts or the garden club boys could collect the products from the different gardens or orchards and see that they are all delivered to the cannery at the proper time. Either autos or horse-drawn vehicles could be used. Each boy should be assigned a certain route which he should make each day during the time the cannery is running. It often happens that on many farms large quantities of fruit and vegetables can be had for one-half their real worth, as the heavy canning season generally comes when farmers are the busiest and do not have time to look after the delivery of the few products maturing from day to day, and prompt delivery of these products is a matter which must be attended to regularly if first class canned foods are to be put out. Often one or two days' time makes such vegetables as corn, tomatoes, peas, and several of the fruits unfit for first class canned products.

PREPARATION OF PRODUCTS

As the boys should look after the collection of the products, so should the girls look after the work of preparing them for the jars and cans. The only reason that commercial canning factories are able to produce a finished product cheaper than can the average farmer is because practically all of their work is done by machinery. The corn, for example, is husked, cut off the cob and put into the jars by machinery. The peas are hulled by machinery and all the labeling as well as the sealing of the cans is done by machinery. A small plant cannot afford to invest very much in equipment, so it should try to make use of inexpensive or volunteer help. When properly supervised, most of the work for a small cannery could be done by boys and girls. Young people like to work together and the average girl can snap as many beans, hull as many peas, husk and silk as much corn, core as many apples, and stem as many cherries as can the average housewife.

The following fruits and vegetables might be handled successfully in such canneries:

Of the fruits, blackberries, apples, cherries, peaches, apricots, pears, plums, and strawberries.

Of the vegetables, asparagus, lima beans, snap beans, corn, beet top and other greens, pumpkins, rhubarb, squash, sweet potatoes, and tomatoes.

CANS OR JARS

Unless the canned products are to be handled considerably, jars and not cans should be used. With cans at the present price, they are too expensive. Jars can be used for several years, and such products as rhubarb, pumpkin, and some of the sourer berries should not be preserved in cans unless the enameled or lacquered lined cans are used. Whether the products are to be canned for market or home use in the community, standard sized cans and jars should be used. In cans these sizes are Nos. 2, 3 and 10, and in jars, half-pints, pints, quarts and two-quarts. However, any jars that may be on hand, regardless of size, may be used if it is not possible to procure those of standard size. As a rule vegetables and meats should be preserved in small containers. Fruits keep better than vegetables after the containers are once opened, and for this reason can be handled more successfully in quart or two-quart jars than can the vegetables or meats.

LABELS FOR PRODUCTS

When the canned products are to be used for market purposes, labels should be had. Special labels with printed matter as desired by the managers of the plant and such as is required by the Pure Food law, may be had very reasonably. Before having labels printed, submit a sample copy to the Bureau of Chemistry, Washington, D. C., to make

The cost of installing a medium-sized plant is not excessive. A first class hot water outfit with a daily capacity of something like 200 to 1,000 quarts can be installed for from \$50 to \$100, and a steam pressure outfit with the same capacity can be installed for \$100 to \$500. This of course does not include buildings, but special buildings are not necessary. It is quite likely that in most cases the work could be done in school buildings or homes. Empty store rooms or farm buildings, for that matter, might be used, provided of course that water is accessible and they can be made sanitary and convenient. Some of the factories that make equipment for these small canneries suggest that the plant can frequently be placed out of doors and all the work be done under the shade of trees.

Before a co-operative canning plant is installed, a definite plan for financing it should be adopted. The first cost of equipment must be met and unless the plant is wholly co-operative, the salary of a superintendent and the expense of labor and materials used must be provided for.

There can be no community or municipal cannery in the true sense of the word unless it is owned and controlled by several individuals representing the community or municipality. A fund of \$200 for the installation of an average-sized plant could be satisfactorily raised by selling forty shares of stock at \$5.00 a share and generally speaking forty homes would include the entire community.

The operating expense of the plant will be more than covered by the receipts from the canned products if a capable manager is hired, and the boys and girls of the community assist in the work, either volunteering for the service one or more days a week or working for a small wage.

The expense will include the salary of a manager unless such manager is already receiving a salary from the school board or other source, the wages of boys and girls, the sugar, sirups and brines used in the process, and the containers. It is suggested that where the products are canned for home use a fixed charge be made against each can to cover the expense of its preparation. Local merchants can do much to help the enterprise by agreeing to buy the surplus product at a reasonable price, if satisfactory, instead of shipping in canned goods from other states. The wages of each boy and girl should be determined by setting a fixed rate for each can of vegetables brought in or prepared for the container. In case the superintendent is employed especially for the canning work and not paid by the community as a whole, his salary could be prorated and charged against the products also.

SUPERVISION AND MANAGEMENT

Efficient supervision and management is more important than expensive equipment. It would be poor business judgment to even consider a plant without first having in mind an efficient manager for it. The success of even a small cannery depends in a large measure on this factor.

The manager should not only be scientifically trained but should also be acquainted with the fruit and garden conditions in the community. As a rule, the proper person for this responsibility is the successful agricultural teacher, who is paid by the school board for the full twelve months of the year, and looks after the cannery as part of his vacation work, the rest of his time being devoted to gardening and general agricultural work. Perhaps the busiest plants would only be kept running a few



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sure they meet the law requirements. This is only necessary, of course, when the canned products are marketed. These plants are not being recommended as commercial propositions or as big dividend-paying organizations, although a small cannery, when managed properly, could be made somewhat profitable. They are recommended, however, as an economic means of utilizing a large supply of valuable food which would otherwise be wasted. Further information on this and related subjects will be furnished gladly by the Extension Division of the Kansas Agricultural College.

Are You Worth Your Salt?

"Not worth his salt" is an expression originating in the Roman army when the legionaries were given a portion of salt as part of their pay. As you know, "sal" is the Latin word for salt, and when in the course of time salt gave place to money, the amount was called "salarium," or salt money. This is the origin of our word "salary," and the expression, "Not worth his salt."—The American Boy.

In seating a schoolroom three things should be considered: the quality of the seats, their size with reference to the size of the pupils who are to occupy

them from day to day, and their arrangement and spacing. In some schools only the largest sizes are found and smaller children sit with their feet swinging above the floor. In others they have only the smaller sizes, and then parents wonder why their big boys and girls are growing stoop-shouldered. In still others are found seats of proper size, but so arranged and spaced that seats and desks do not fit each other and none of the pupils are comfortably seated. A school house need be no less valuable as a community center from the fact that it is properly seated and equipped for school purposes.

Knitting is being taught to the domestic art girls at the Kansas Agricultural College. When they have completed their work they will know how to turn the heel and toe of a sock. Those in charge of this department at the college have written the Red Cross Association to find out the immediate needs in order that they may contribute to these needs.

Insist on yourself; never imitate. There is at this moment for you an utterance brave and grand as that of the colossal chisel of Phidias, or the pen of Moses or Dante, but different from these. If you can hear what these patriarchs say, surely you can reply to them in the same pitch of voice.—EMERSON.

FASHION DEPARTMENT—ALL PATTERNS TEN CENTS

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

7419



No. 8114—Children's Dress: Cut in sizes 2, 4 and 6 years. The correct way to make a day dress for a girl under six years of age is suggested by this design. It shows the front of the frock made with a yoke that is finished for lacing, as the dress slips on over the head. The upper edges of the dress fronts are neatly gathered and joined to yoke. No. 8110—Ladies' Shirts: Cut in sizes 36 to 42 inches bust measure. Delightfully smart and simple in its design, this waist might depend for its success on the collar alone, but a wide box plait in each front and in each half of the back cannot be overlooked. The button decoration is very neat and appropriate, and contrasting goods for the roll cuffs on long sleeves and to edge of collar gives softness to the plain lines. No. 7419—Children's Night Drawers: Cut in sizes 1, 3, 5, 7 and 9 years. These night drawers are made with a square yoke in front and with the front and the drawers below the yoke in one piece. In the back there is a division across the waistline and the closing down the center. The material is gathered into bands at the ankle. No. 8135—Misses' Dress: Cut in sizes 14 to 20 years. The universal note of the season is easily recognized in this frock, which is cut in one piece and made with inserted plaited sections at the sides. There is no fitted effect, but a wide belt proves its popularity at normal waistline. No. 7111—Ladies' Skirt: Cut in sizes 24 to 30 inches waist measure. One style of the full models. The skirt is cut in two gores and is mounted on a raised waistline and has yokes to which the front and back gores are gathered. A trimming tab is a decorative feature of the back yoke and nothing could be more novel than the placing of a pocket at the lower edge of each yoke. No. 8099—Misses' Dress: Cut in sizes 14 to 20 years. A design that answers every demand of fashion, from its one-piece cut to the button decoration at front where the closing is made. At the shoulder seams the fronts are gathered and at the waistline the fullness of the skirt section is neatly drawn in with a belt arranged across the back and its ends tacked to the front sides, as pictured.

Classified Advertising

Advertising "bargain counter." Thousands of people have surplus items of stock for sale—limited in amount or numbers hardly enough to justify extensive display advertising. Thousands of other people want to buy these same things. These intending buyers read the classified "ads"—looking for bargains. Your advertisement here reaches over 60,000 farmers for 5 cents a word per week. No "ad" taken for less than 60 cents. All "ads" set in uniform style, no display. Initials and numbers count as words. Address counted. Terms, always cash with order. SITUATIONS WANTED ads, up to 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-22, Rochester, New York.

REAL ESTATE.

320 IN JUDITH BASIN—A SNAP AT \$4,000. Box 440, Roy, Montana.

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

FOR SALE—RANCH 1,280 ACRES, 800 cows, 2,900 acres leased land will go with place. Buy of owner. S. C. Reveley, 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. Harb'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.

NEW FARM OPPORTUNITY IN ONE OF the greatest states in the Union. A new line of the Santa Fe is tapping a rich and fertile prairie section of Northwest Texas, where already many farmers have made good in a big way with wheat, hogs and live stock. Here, if you act now, you can get first choice—get in on the ground floor of a great opportunity. You can get in ahead of the railway—ahead of the people whom the railway will bring—ahead of those who act more slowly than you do. This is the chance of a lifetime for a man of moderate means. A certain number of thrifty, far-seeing farmers can acquire good land at an astonishingly low figure and on long, easy terms. If you have confidence that a great railroad, like the Santa Fe, would only recommend what it considers a good thing, and because it wants to see new territory developed and wants newcomers to prosper and produce—then write me today for particulars about this district. Mild climate, social advantages, schools, churches, telephones, good roads. Everything there but enough men with their families. Will you be one of the fortunate first comers to reap the advantages of a section that has been minutely inspected by a Santa Fe agricultural agent and pronounced right? Write me now and let me send you a copy of the special illustrated circular we are getting out. C. L. Seagraves, Industrial Commissioner, A. T. & S. F. Ry., 921 Railway Exchange, Chicago.

HORSES AND MULES.

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

MISCELLANEOUS.

BLACKSMITH SHOP AND GARAGE with good tools, up to date, for sale right. R. C. Watson, Altoona, 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 \$2,500. Write now and I'll send it six months free. H. L. Barber, 431 1/2 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 28, 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 Sautanta, Haskell County, Kansas. A. R. Henage, County Clerk.

DOGS.

COLLIE PUPS—MALES, \$5; FEMALES, \$2.50. A. R. Ihde, Hope, Kansas.

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. R. Watson, Box 128, Oakland, Iowa.

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 5, 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, \$18 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 8,654.1 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.

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.

TREES, SEEDS AND PLANTS.

FOR SALE—CHOICE BLACKHULL kafir corn for sale at \$2 per bushel, f. o. b. here. V. D. Eberwein, Ralston, Oklahoma.

BLACK-HULLED WHITE KAFIR and Black Amber cane seed. Choice seed, \$2.25 per bushel. H. W. Chestnut, Kincaid, Kan.

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

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

SUDAN SEED, RECLEANED, FREE from Johnson. Delivered. Above fifty pounds, 30 cents; under, 35 cents. J. H. Burke, Idalow, Texas.

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, prepaid. Cabbage plants: Sure-head, Charleston, Jersey, Winningstadt, Copenhagen, Flatdutch, Allseasons, 100, 40c; 200, 65c; 500, \$1; 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; 150 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 867 - - 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.

Too many children gain the impression that it is necessary to use the tooth brush only on special occasions. Much suffering because of tooth trouble could be traced to this early neglect in the care of the teeth. Physicians tell us that much indigestion, heart disease, brain trouble, rheumatism and kidney trouble is also traceable to the neglect of the teeth. These are enough reasons why the teeth should be cared for from early childhood, to say nothing of the unattractiveness of dirty, neglected teeth.

Farm Items

Garden Beans

Much food can be produced by growing beans in the gardens. Prof. M. F. Ahearn of the agricultural college is urging that a special effort be put forth this year to produce food by planting beans liberally in our gardens.

Professor Ahearn points out that beans are a warm weather crop and may be planted any time after the ground becomes fairly warm and when there is no danger of frost after the plants are through the ground. The growing season extends from May 10 to September 15.

There are three distinct kinds of beans—string, green shell, and field. The pods of the first type are used while young and tender. When they are older the beans are taken out and cooked alone. Any average soil is good for the cultivation of this first variety and a succession of plantings should be made. They are planted about three inches apart in rows covered to a depth of two to three inches. Either the yellow or green pod variety may be used.

The green shell or bunch bean, as it is more commonly called, is planted in hills and a pole is placed by each hill on which the vine may climb. This variety is sometimes planted by hills of corn, thus doing away with the necessity for the poles. These beans are usually taken from the pods just before they are fully matured, though they may be left in the pod until fully matured and then dried.

Red kidney and white pea, or navy bean, are the two varieties classed as field beans, or dry shell beans. These are never taken from the pods until fully matured. These are more often a field crop, the planting, harvesting and threshing being done by machinery. There is much danger of field beans rusting if there is a large amount of rain and heat, and if the weather is dry the pods will not fill, due to imperfect pollination.

Pasturing Alfalfa Early

A Shawnee County farmer told us last week that he was grazing down his alfalfa with horses and thus saving considerable grain. Grain feed of all kinds is so high in price that the early growth of alfalfa is a great help to the live stock farmer. A lot of valuable feed is produced by alfalfa very early in the season before the regular crops are more than planted. The method being practiced by this farmer is a good way to make use of this early growth of alfalfa although of course it is unsafe to pasture it with cattle or sheep. They are especially liable to bloat on this early succulent growth.

By grazing alfalfa early in the season the first cutting of hay will come later and this is an advantage, especially in the eastern part of Kansas, for rains are less frequent later in the season and there is less danger of having the hay spoiled.

Plan to put all your feed—corn, kafir, milo, and cane—into a silo this year, and there will be plenty for the stock to eat this winter. The live stock of Kansas is one of the state's greatest assets. Without live stock no market can be found for the vast amount of rough feed which is grown every year, and in no other way can it be used so profitably as in the form of silage.

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.

- Hereford Cattle.**
May 11—Benton and S. J. Gabbert, Dearborn, Missouri. The Sothams, Lansing, Michigan, managers.
- 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 Follied Durhams.**
June 8—Ed Stogelin, Straight Creek, Kan.

RELIABLE POULTRY BREEDERS

PLYMOUTH ROCKS.

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

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

BARRIED PLYMOUTH ROCKS—FARM-bred beauties. Eggs for hatching, 50 each. Mrs. W. C. Bocker, Solomon, Kan.

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

BARRIED ROCK EGGS, FANCY STOCK, heavy laying strain, \$4.25 per hundred. Earl Summa, Dept. G, Gentry, Missouri.

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

BUFF ROCK EGGS, ONE DOLLAR PER setting; choice stock. Mrs. E. C. Hicks, Columbus, Kansas.

BUFF AND WHITE ROCK EGGS, \$2.50 per fifty, \$5 per hundred. Excellent show record. W. H. Beaver, St. John, Kansas.

WHITE ROCKS—PURE-BRED FARM range choice stock. Eggs, fifteen, 75c; 100, \$4. H. F. Richter, Hillsboro, Kansas.

WHITE ROCKS, FARM RAISED, PRIZE winners. Eggs, \$1.25 setting; \$3, fifty; \$5, hundred. Mrs. Ben Miller, Newton, Kansas.

PURE BARRIED ROCK EGGS—FARM range, \$1 per fifteen, \$5 per hundred. Mrs. H. Buchanan, Abilene, Kansas.

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

BEAUTIFUL IMPERIAL "RINGLETS," \$35 cockerel heading Pen No. 1. Eggs, \$4 per fifteen. Mrs. Iver Christenson, Jamestown, Kansas.

BEAUTIFUL IMPERIAL "RINGLETS." Prices eggs reduced after May 10, No. 1 either mating, \$2, fifteen; \$3.50, thirty; \$10 hundred. Mrs. Iver Christenson, Jamestown, Missouri.

FOR SALE—BARRIED AND WHITE Rocks. Best blood lines in America. Forty premiums 1916-1917. Write for mating list. H. F. Hicks, Cambridge, Kansas.

BARRIED ROCK EGGS FROM PRIZE winners at State Fair, 1917. Pens, \$3 per fifteen; range, \$5 per hundred. S. H. Vincent, Sterling, Kansas.

WARD'S BARRIED ROCKS—FIVE YARDS both matings, from Chicago winners. Eggs, \$2 for fifteen. Send for catalog and list. W. H. Ward, Nickerson, Kansas.

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

BARRIED ROCKS—73 PREMIUMS, Topeka, Manhattan, Clay Center, Denver. Eggs—Fifteen, \$5; thirty, \$9; fifteen, \$3; thirty, \$5. Chicks, 50c and \$1. Italian bees. Mattie A. Gillespie, Clay Center, Kansas.

BARRIED PLYMOUTH ROCK, RINGLET and Bradley strain. Have good show record. Stock for sale. Cockerels, hens and pullets. Eggs, \$2 per setting. Jas. W. Anders, Unionville, Missouri.

WHITE LEGHORNS

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

OUR SINGLE COMB WHITE LEGHORNS are real layers. Bred exclusively 15 years. Eggs, 100, \$4. Ed N. Regnier, Wamego, Kansas.

ROSE COMB WHITE LEGHORN EGGS for hatching from full blooded birds. Satisfaction guaranteed. \$4 per hundred, \$7 per two hundred. Mrs. Joe Streeter, Route 5, Hamilton, Missouri.

MINORCAS.

SINGLE COMB BLACK MINORCA EGGS, 100, \$5. Sarah Peters, Nashville, Kansas.

SINGLE COMB BLACK MINORCA EGGS, \$5 hundred; \$1 setting. Claud Hamilton, Garnett, Kansas.

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

S. C. BLACK MINORCA EGGS FOR hatching. Pen No. 1, \$2; pen No. 2, \$1.50 for fifteen eggs, \$5 per hundred. W. F. Fulton, Waterville, Kansas.

Holsteins.

May 17—Livingston County Holstein Breeders' Sale Company, Howell, Michigan.

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. 5—U. S. Byrne, Saxton, Mo.
Oct. 16—H. B. Walter & Son, Effingham, Kansas.

Feb. 6—H. B. Walter & Son, Effingham, Kansas.

Recently two carloads of hogs from the Imperial Valley in the extreme southern part of California were marketed in Kansas City. There were 185 head of these hogs, averaging 185 pounds. They sold at \$15.15. They were only unloaded once on their 1,700-mile trip and not a hog was lost on the long trip.

O. H. Fitzsimmons, of Wilsley, Kansas, owner of one of the good herds of big-type Poles in Kansas, reports his herd doing well. He has a large number of early spring pigs that are growing out fine. These pigs were sired by Giant Ben by Big Ben and Hadley's Jr., two of the good boars now in service. The litters are unusually large and even.

RHODE ISLAND REDS.

PURE SINGLE COMB RHODE ISLAND Red eggs, 50 apiece. Prepaid. C. A. Madden, Abilene, Kansas.

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

280 EGG LAYERS, PURE-BRED, BLOOD red, big Rose Comb Reds. Eggs, fifteen, \$2; hundred, \$10. E. Stewart, Henderson, Iowa.

ROSE COMB RHODE ISLAND REDS—Eggs, \$3 per setting. Kansas state show winners. Baby chicks. Mating list. L. E. Castle, Wichita, Kansas.

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

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

ROSE COMB REDS—PRIZE WINNERS and special on color at State Fair, 1917. Pens, \$3 per fifteen; range, \$6 per hundred. S. H. Vincent, Sterling, Kansas.

EGGS FOR SALE—S. C. R. I. REDS—Breeder for twelve years. \$1.50 per setting of fifteen; \$5 a hundred. Mrs. Jno. G. Schmidt, Route 1, Box 135, Edgewood, Lexington, Mo.

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

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

LEGHORNS.

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

R. C. W. LEGHORN EGGS, \$4 PER HUNDRED. Mrs. Henry Apking, Bruning, Neb.

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

S. C. B. LEGHORN EGGS—GOOD STOCK. Fifty, \$2.75; 100, \$5. Carriage prepaid. Cornelius Phillips, Route 9, Emporia, Kan.

PURE-BRED BUFF LEGHORN EGGS, \$1 per setting, \$5 per hundred. P. A. Wempe, Seneca, Kansas.

R. C. B. LEGHORNS, WINTER LAYERS, vigorous stock. Eggs, \$5 per hundred. The Blue Grass Stock Farm, Oneida, Kansas.

PURE SINGLE COMB BROWN Leghorn eggs, \$4 hundred. Baby chicks, 10c each. Mrs. Will Brooks, Beattie, Kansas.

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

ROSE COMB BROWN LEGHORNS WON five prizes, two state. Eggs, fifty, \$1.90; hundred, \$3.75. Rufus Standifer, Reading, Kansas.

PURE-BRED ROSE COMB WHITE Leghorns. Eggs for hatching; forty-five, \$2; one hundred, \$4. Prepaid in Kansas. G. Schmidt, Route 1, Goessel, Kansas.

S. C. BROWN LEGHORNS—HAVE BEEN raising them 21 years, the 222 to 266 egg record kind. Under hens the fertility runs 95%. Eggs—Fifteen, \$1.25; 100, \$5. Safe arrival guaranteed. Gorsuch, Stilwell, Kan.

WYANDOTTES.

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

WHITE WYANDOTTE EGGS—STOCK from (Fishes) World's Best Direct \$2.50 for 48, prepaid. S. Feltner, Concordia, Kansas.

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

SHUFF'S "BEAUTILITY" SILVER WYANDottes. Eggs—Fifteen, \$1.50; fifty, \$3.50; hundred, \$6. Mrs. Edwina Shuff, Plevna, Kan.

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

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

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

ROSE COMB BUFF WYANDOTTE EGGS, fifteen, \$1; hundred, \$4. Mrs. Ida Alexander, Hilltop, Kansas.

ROSE COMB WHITE WYANDOTTES—Eggs from pen, setting, \$2; from flock, setting, \$1.50 hundred, \$4.75. Mrs. Eme Acheson, Palco, Kansas.

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

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

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

BLACK SPANISH.

BLACK SPANISH EGGS AND BABY chicks. Eggs, 10c each; chicks, 20c each. H. W. Chestnut, Kincaid, Kansas.

DUCKS AND GEESE.

BUFF DUCKS—WINNERS WITH EGG record. Eggs, \$1.50 per thirteen. Mrs. J. H. Wood, Solomon, Kansas.

FAWN RUNNER DUCKS—WHITE EGGS, prize winners. Eggs, \$1 setting, \$5 hundred. Mrs. Ben Miller, Newton, Kansas.

TOULOUSE GEESE AND EGGS FOR sale or trade for Runner ducks. All breeds. Emma Ahlstedt, Roxbury, Kansas.

BABY CHICKS.

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

ORPINGTONS.

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

FINE GOLDDUST BUFF ORPINGTONS—Eggs, \$1.50 setting; \$8 hundred. Prepaid. Mary E. Price, Route 7, Manhattan, Kansas.

BUFF ORPINGTONS EXCLUSIVELY.—Even buff, large type, prize winners. Eggs, \$3 and \$2 setting. John Shaffer, Alma, Neb.

GEDARDELL POULTRY FARM—S. C. Buff Orpingtons exclusively, bred for size, color and eggs. \$1 per sixteen, \$5 per hundred. Martha Brown, Parkerville, Kansas.

SEVERAL BREEDS.

EGGS FROM EXTRA GOOD BOURBON Reds, \$3 for eleven. Silver Laced Wyandotte eggs, \$1 for fifteen. Julia Haynes, McDonald, Kansas.

BARRIED AND BUFF ROCKS—SINGLE Comb White Leghorns. Fawn and Pencilled Runner Ducks. Eggs—Fifteen, \$1; hundred, \$5, from range flocks. J. T. Rickman, Kiowa, Kansas.

FIVE LARGE FLOCKS UNDER ONE sale management, R. C. Reds, Barred Rocks, Silver Wyandottes, White Wyandottes and White Leghorns, all on separate farms and specially bred by experts. Prize winners in all breeds. Eggs, \$5 per hundred, \$1.50 per setting. Order from ad. Address E. H. Hartenberger, Route 4, Box 1, Newton, Kan.

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

TURKEYS.

PURE-BRED WHITE HOLLAND Turkey eggs. Winnie Litton, Peabody, Kansas.

BOURBON RED TURKEY EGGS—Two-year-old hen, 40-pound tom. \$3 setting. S. Feltner, Concordia, Kansas.

FOR SALE—LARGE PURE-BRED GIANT Bronze turkey hens. One tom. Eggs, 50c each. Vira Bailey, Kinsley, Kansas.

THIRTY-NINE POUND TOM—WHITE Holland eggs, \$3 ten. Mrs. S. F. Crites, Florence, Kansas.

BOURBON RED TURKEY EGGS FROM best selected stock. Mrs. D. A. Rodgers, Concordia, Kansas.

MAMMOTH BRONZE TURKEYS OF high quality. Good copper bronze and whitening. Have show record. Eggs—\$6-\$8 per dozen. Jas. W. Anders, Unionville, Mo.

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

BOURBON RED TURKEYS, WORLD'S best strain. Great big, vigorous, farm-raised, deep-breasted birds. Also white-egg Indian Runner ducks, all from prize winning stock. Eleonora Poultry Ranch, Brighton, Colorado.

LANGSHANS.

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

BLACK LANGSHANS—STOCK FOR sale. Cocks, cockerels, hens and pullets. My birds have great show record. Eggs, \$2 per setting. Jas. W. Anders, Unionville, Mo.

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.

ANCONAS.

S. C. ANCONA EGGS, \$5 HUNDRED. Fine layers. Mrs. Will Torgeson, White City, Kansas.

SINGLE COMB ANCONA AND SILVER Laced Wyandotte eggs, \$1.25 per sixteen by post prepaid. Mrs. Cecile McGuire, Pratt, Kansas.

S. C. ANCONAS—PRIZE WINNING stock, farm range, \$1.50 for fifteen, \$5 hundred. Address Mrs. H. F. Knutzen, Bruning, Nebraska.

SEND FOR MY "ANCONA DOPE" AT once. Tells why I quit all other breeds. It's free and worth reading. Fill orders for eggs promptly. Page's Ancona Farm, Salina, Kansas.

BRAHMAS.

HIGH SCORING LIGHT BRAHMA EGGS \$1.00 per fifteen, parcel post prepaid. Geo. Pratt, Route 2, Topeka, Kansas.

AUCTIONEERS.

Jas. T. McCulloch Live Stock Auctioneer. 1 make sales anywhere. CLAY CENTER, KANSAS Write for date.

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

OHIO IMPROVED CHESTERS

PURE-BRED O. I. C. PIGS, April 3 Farrow. Boars, \$15.00. JOE FOX - GREELEY, KANSAS

HORSES AND MULES.



Imported and Home-Bred PERCHERONS AND BELGIANS

A gilt edge guarantee of 60 per cent, good for two years, given with each horse sold.

W. H. RICHARDS Emporia - Kansas Barns four blocks from A. T. & S. F. depot.



PERCHERONS, BELGIANS, SHIRES. Ten stallions ready for heavy stand; also yearlings and two-year-olds. Young fillies, also mares with colts by side and bred again. All registered. One hundred individuals for first rank for sale.

FRED CHANDLER, R. 7, Chariton, Iowa Just above Kansas City

Barn Full of Percheron Stallions and Mares. Twenty-five mature and aged jacks. Priced to sell. AL. E. SMITH, Lawrence, Kansas.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

FARM AND HERD.

R. J. Bazant, of Narka, Kansas, owner of one of the choice herds of big-boned Spotted Polands, reports his herd doing fine. Mr. Bazant has succeeded in building up a herd of Spotted Polands that are the profitable feeding type. He has a great herd of brood sows weighing from 600 to 700 pounds and at this time has three of the great boars of that breed in service in his herd. This year he saved over 200 March pigs.

D. C. Van Nice, of Richland, Shawnee County, Kansas, is one of the successful breeders of double-standard Polled Durhams in Kansas. He has retained in the herd for breeding purposes only the best Scotch families and has used only the very best Scotch bulls. The herd has been kept up to the very best standard of cattle both for beef and dairy type. Mr. Van Nice finds that the double-standard Polled Durham cattle are growing more popular each year among farmers and dairymen, and the demand has drawn very heavy on his herd for breeding stock. He was compelled to refuse to price any females until he could build his herd up to about 100 head of females. The herd bulls used the past few years are widely known—Belvidere, Acacia Prince, the champion Roan Hero, and Chief by True Sultan, the bull now in service. Roan Hero was used in the herd for a number of years. Mr. Van Nice has a fine lot of young cows by this noted sire left in the herd. They will be mated to Chief, a son of True Sultan, also a grand champion of three state fairs two years in succession.

An eight-year-old Holstein cow owned by Segrist & Stephenson of Holton, Kansas, has broken the state seven-day record by producing 544.6 pounds of milk and 26.6 pounds of butter. This cow took the place of her sister that held the record with 460.1 pounds milk and 26.29 pounds butter and that sold in the recent Searle sale for \$1,000. Charles Seifert, of Leavenworth, Kansas, was the purchaser.

L. W. Terwilliger, of Fernwood Farms, Wauwatosa, Wisconsin, reports his Holsteins making a good record again this year. This farm has long been noted as the home of choice herds of pure-bred and high-grade Holsteins and for the long line of record breeding. Many of the profitable herds now assembled were started with foundation stock from Fernwood Farms.

B. E. Totten, of Cress Lawn Farms, Farmdale, Ohio, and owner of one of the great Holstein herds in that state, announces a sale of Holstein cows and heifers to be held at Hiawatha, Kansas, May 19. He has catalogued sixty head for this sale. The offering will consist of thirty head of registered cows, heifers and bulls, and thirty head of choice high-grade cows, heifers and calves. The offering is backed by a line of records that insures producers.

HOLSTEIN CATTLE.

MAURER'S HOLSTEIN FARM

Is offering a number of choice young pure-bred cows with good A. R. O. records; also yearlings and heifer calves and a select lot of young bull calves with world's record backing. Write for pedigrees and bargain prices. Also grade cows, heifers and heifer calves. EMPORIA, KANSAS T. E. MAURER & CO.



Purebred Registered HOLSTEIN CATTLE

The broad highway to success is persistent and intelligent application to something worth while. A successful 50 year old dairyman said, "I have made the greater part of my money since I was forty-five. Up to that time I was making mistakes. I corrected a host of mistakes and ideas about cows and have made nearly all the money I have since that time." The difficulty is that some dairymen never wake up. Any farmer who will devote a short time to a study of the supremacy of Holstein-Friesian cattle as profitable milk producers and as dual purpose cattle will be able to turn his dairy operations to a profitable basis. Send for free literature. There's big money in the big "Black and White" Holsteins. Send for FREE Illustrated Descriptive Booklets. The Holstein-Friesian Association of America, P. O. Houghton, Sec'y. Box 114, Brattleboro, Vt.

Butter Bred Holsteins

Buy your next bull calf from a herd that won the butter test over all breeds. J. P. MAST - SCOBANTON, KANSAS

CEDAR LAKE HOLSTEIN HERD

We are making very low prices on a few young bull calves. It will pay you to buy them of us while young. Sired by our 22.4-pound grandson of Pontiac Korndyke. T. M. EWING, INDEPENDENCE, KANSAS

NEMAH VALLEY HOLSTEIN FARM

Choice yearling bulls and bull calves. World's record blood lines. Price reasonable. We invite inspection of our herd. H. D. BURGER, Route 2, SENECA, KANSAS

High Grade Holstein Calves 12 heifers 15-16 pure bred, 4 to 6 weeks old, beautifully marked, \$18 each. Safe delivery and satisfaction guaranteed. FERNWOOD FARMS, WAUWATOSA, WISCONSIN

Description, pictures and records of TREDICO BULLS Six months old and younger. Write for them. Geo. C. Tredick, R. 2, Kingman, Kan.

Holstein and Guernsey Calves—Both sexes, 5 weeks old, nicely marked, fawn and white and black and white, mostly 15-16 lbs pure. \$20 each, crated for shipment anywhere. Satisfaction guaranteed. Edgewood Farms - Whitewater, Wisconsin

GOLDEN BELT HOLSTEIN HERD Herd headed by Sir Korndyke Bess Hello No. 16589, the long distance sire. His dam, grand dam and dam's two sisters average better than 1,200 pounds butter in one year. Young bulls of serviceable age for sale. W. E. BENTLEY, MANHATTAN, KANSAS

HOLSTEIN CALVES Very high grade heifer calves, five weeks old, nicely marked, \$23 each delivered to your station. We can supply you with registered or high grade Holsteins, any age or number, at reasonable prices. Clover Valley Holstein Farm, Whitewater, Wis.

CEDAR LAKE FARMS C. A. Schroeder & Sons, Props. Forty years of registered Holstein breeding, not dealing. Birthplace of 40-pound cow, Johanna DeKol Van Beers. State wants and get delivered prices on young bulls. W. C. SCHROEDER - WEST BEND, WIS.

Shady Brook Holsteins A few choice young springers, also some high class young bulls. If you want record breeding, we will be pleased to have you inspect our offering. M. E. MOORE & CO. - CAMERON, MO.

HIGH GRADE HOLSTEIN CALVES Five to six weeks old, nearly pure, well marked, \$20, express paid. COLD SPRINGS FARM, Whitewater, Wis.

Braeburn Holsteins A. R. O. BULL CALVES With De Kol-Netherland-Korndyke main blood lines, and Johanna, Walker, King Segis out-crosses. H. B. Cowles, Topeka, Kan.

HOLSTEIN CATTLE.

MAURER'S HOLSTEIN FARM

Is offering a number of choice young pure-bred cows with good A. R. O. records; also yearlings and heifer calves and a select lot of young bull calves with world's record backing. Write for pedigrees and bargain prices. Also grade cows, heifers and heifer calves. EMPORIA, KANSAS T. E. MAURER & CO.

JERSEY CATTLE.

LONG ON JERSEY BULLS. Will sell them at your price. Ages, 2 to 10 months. Carrying as much Golden Fern's Lad blood as any bulls in the state. Out of high testing dams. Come and see them. Can also fill your needs in English Berkshire hogs. Several fine young males. Best of breeding. Can furnish pigs from different matings. H. F. ERDLEY & SON, HOLTON, KANSAS

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

FOR SALE—Two Pure-Bred Jersey Bulls, 9 months old, from high testing dams. Description guaranteed. D. A. KRAMER - Washington, Kansas

Breeders' Directory

ANGUS CATTLE. D. J. White, Clements, Kan. RED POLLED CATTLE. Mahlon Groenmiller, Pomona, Kan. JERSEY CATTLE. J. B. Porter & Son, Mayetta, Kan. DORSET HORN SHEEP. H. C. LaTourette, Route 2, Oberlin, Kan.

CHESTER WHITE HOGS

CHESTER WHITE Cholera Immune Glits, bred to farrow in June, July and August. The good kind. For price, breeding, etc., write Emil Youngberg, Route 3, Essex, Iowa

FOR SALE Spring Pigs in Pairs and Trios Not related, from my undefeated show herd 1916. Ship at weaning. Send for prices and show record. COLEMAN & CRUM, Danville, Kansas.

BERKSHIRE HOGS.

NIELSON'S BERKSHIRES Fall born, from prize winning ancestry, weighing 200 to 240 pounds April 1. Sired by Rob Robinhood 2d. His sire first prize senior yearling at American Royal and weighing 720 pounds at 18 months. Will give you good value for your money, and accurate description on application. J. M. NIELSON, MARYSVILLE, KANSAS.

POLLED DURHAM CATTLE.

SEELEY'S POLLED DURHAMS—Nineteen years a breeder, best Scotch tribes. Preparedness. Offering a lot of thick square-ended bulls, all roans and for immediate service. Herd bulls Victoria Clipper and Jovial Sultan. C. R. I. & P. R. R. W. W. SEELEY - STUART, IOWA

FOR SALE—Two red and white bull calves, 10 months old, sired by Chief, a son of True Sultan. Priced to sell. D. C. VAN NICE - RICHLAND, KANSAS (On Mo. Pac. Ry., 17 miles S. E. of Topeka)

POLLED DURHAM BULLS Big enough for service. Sired by Baron Easton. Better get busy if you need a bull this spring. E. T. Vandeventer & Son, Mankato, Kansas

RED POLLED CATTLE.

Red Polled Cattle

A few 1916 fall bull calves for sale. Also a few cows and heifers. AULD BROS. - FRANKFORT, KANSAS

ANGUS CATTLE

EDGEWOOD FARM ABERDEEN-ANGUS CATTLE Twenty-five young bulls, also some good cows and heifers for sale. All registered. D. J. WHITE, CLEMENTS, KANSAS Main line of A. T. & S. F. Ry., 145 Miles West of Kansas City.

GALLOWAY CATTLE.

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

DUROC JERSEYS.

DUROC BOARS, OCTOBER FARROW Also gilts unrelated to males, mostly \$25. Gilts to farrow in July, \$35. Trio spring pigs, \$35 at weaning time. Choice July male, \$50. Write your wants. J. E. WELLER - FAUCETT, MISSOURI

LONE TREE DUROC FARM Herd Boar Graduate Prince by Graduate Col. Sows, Ohio Chief, Tatarax, Model Top and Good Enough Again King blood lines. Spring pigs, two for \$35.00, three for \$45.00; not related. GEO. J. BURKE, LITTLE RIVER, KANSAS

POLAND CHINAS

BAZANT'S Famous Spotted Poland Chinas Two hundred March pigs for sale on approval. All to be recorded free in the S. P. C. Record Association. Average in litter, nine. Can sell boar and four gilts not related. All sired by three of the best boars in the West. Pigs out of 600 and 700-pound mature dams. I can start you in the business. Address R. J. Bazant, Narka, Kansas (Republic County.) Ship over the Rock Island and Burlington Railroads.

OLD ORIGINAL SPOTTED POLANDS Have only a few of last fall's litters left. Write your wants to THE CEDAR BOW STOCK FARM A. S. Alexander, Prop. R. 2, Burlington, Kan.

PROFITABLE TYPE POLANDS Big-type Poland Chinas, as good as grows. You prove it at my expense. Breeding stock for sale at all times. L. C. WALBRIDGE - RUSSELL, KANSAS

POLAND CHINA HOGS 150 HEAD IN HERD Breeding stock for sale. Immune. Satisfaction guaranteed. Come and see me. V. O. JOHNSON - AULNE, KANSAS

TOWNVIEW HERD BOARS Ten big stretchy fellows farrowed in June. Every one a good one. Two choice fall yearlings. I ship my boars and gilts any place on approval. They make good. Prices are right. CHAS. E. GREENE, Peabody, Kan.

DOWNIE'S BIG POLANDS Have a couple of choice boars priced for quick sale. Home of Gerstale Czar. FRANK DOWNIE, Rte. 4, Hutchinson, Kan.

POLAND CHINA BOARS Twelve September boars, large husky fellows ready for service. Sired by Big Bob King. Write at once. DR. J. H. LOMAX Station D St. Joseph, Missouri

BIG-TYPE POLANDS AND DUROCS Booking orders for weaning time. Pigs, \$25 each; trios, \$50. Will make 700 to 1,000-pound hogs. Two hundred to select from. Top breeding. O. W. LONG, Route 3, Matland, Missouri.

FOR SALE Good Stretchy Poland China Fall Boars. Ed Beavers, Junction City, Kansas.

Langford's Spotted Polands. Gilts bred for fall farrow. Future herd boars. Satisfaction guaranteed. T. T. LANGFORD & SONS, Jamesport, Missouri

JERSEY CATTLE.

120 Jersey Cows and Heifers Pure-bred and high grade. Forty bred yearlings, superior individuals, all from profitable dams, now for sale. J. W. BERRY & SON, Jewell City, Kansas

LINSCOTT JERSEYS

Dispursal Sale, May 31 R. J. LINSCOTT - HOLTON, KAN.

REDHURST JERSEYS

Grandsons of Golden Jolly and Noble of Oaklands for sale. Also a few fancy cows and heifers of same breeding. Write. REDMAN & SON - TIPTON, MISSOURI

SHORTHORN CATTLE.

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

SPRING CREEK SHORTHORNS Headed by the great sire, Orange Goods. Best families represented in herd, good individuals. Choice young stock for sale. THOS. MURPHY & SONS, Corbin, Kansas.

TWO SHORTHORN BULLS. One herd boar. Fall gilts, bred or open. February and March pigs, pair or trio, no relation. E. C. White Leghorn eggs. E. C. WATSON - ALTOONA, KANSAS

Sunflower Herd of Shorthorns A few good cows and heifers for sale, also choice bull calves. Come and see my herd. A. L. HARRIS - OSAGE CITY, KANSAS

ALYSDALE HERD OF SCOTCH SHORTHORNS Prince Valentine 4th and Clipper Brawith in service. Orange Blossoms, Butterfly, Queen of Beautys and Violets. Choice young stock for sale. H. H. HOLMES, Route 28, Topeka, Kansas

AYRSHIRE CATTLE.

RIVERSIDE AYRSHIRES Most profitable dairy cow. Herd headed by a son of August Lassie, the 4-year-old champion. Young animals, both sexes, for sale. J. F. Converse & Co., Woodville, N. Y.

HAMPSHIRE HOGS

THIS COMBINATION IS MAKING GOOD. Alfalfa, the Halcyon Herd of Hampshire Hogs, and Satisfied Customers. Herd boar, yearling boar and September boars. Registered, immuned, and priced sensible. GEO. W. ELA, VALLEY FALLS, KANSAS

SECOND PUBLIC AUCTION OF HOLSTEINS

At Hiawatha, Brown County, Kansas, on Saturday, May 19 Beginning at 1 p. m., at the C. W. Biddle Barn SIXTY HEAD



Consisting of thirty head registered Cows, Heifers and Calves, and several Bulls of serviceable age. Most of these heifers and calves are from my \$2,500 son of King of the Fontacs, who leads all others in respect to number of A. R. O. daughters, in respect to number of 30-pound daughters, 20-pound two-year-old daughters, and semi-officially tested daughters. These are all of good dairy type and are in nice condition. Will have catalogs showing pedigrees at time of sale. Balance of thirty head will be high grade Holstein Cows, Heifers and Heifer Calves, of good dairy type and in good order. All stock over six months of age tuberculin tested.

W. E. GUILD, CLERK Auctioneers Col. C. M. Scott and Col. N. T. Moore, - HIAWATHA, KANSAS

REG. U. S. PAT. OFF. B. E. TOTTEN

Let Me Treat All Your Hogs For 60 Days FREE

And—if I don't make your hogs make you more money, and prove it to your own satisfaction, I don't want your money! My proposition is to produce more pounds of pork for you from the same amount of feed. I am giving you the same opportunity to prove this to your complete satisfaction that I gave to Mr. Perry Stratton, the famous Berkshire breeder at Momence, Ill., whose letter is printed above.

It is the same opportunity that I gave to Mr. H. O. Michael, R. No. 2, Markle, Ind. He writes—"My first bottle of Hog-Tone made me one hundred dollars (\$100.00) as it saved more than that many dollars' worth of hogs for me. I will not be without Hog-Tone, as I think it is wonderful what this remedy will do for hogs."

Hog Raisers Face Their Biggest Opportunity in Years

Worms are killing off the hogs literally by the million. "Nearly every hog is infested with worms," declares the U. S. Dept. of Agriculture. And "More hogs may be lost from worms this year than from hog cholera, and many cases of apparent cholera are only worms," says Bulletin No. 470, of the South Dakota State College. The malignant Thorn Head Worms—Stomach Worms—Liver Worms—Lung and Bron-

W. O. GANDY
President
Avalon Farms
Company



chial Worms—weaken the hogs—affect every sow's litter—make millions 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. Read the letters at the right—study this whole ad—and then—grasp this opportunity to try

PERRY STRATTON
BREEDER OF
BERKSHIRES

MOMENCE, ILL. DEC. 14/16

Avalon Farms Co.
Chicago, Ill.

Dear Sir.

I thought I would drop you a line and thank you for the bottle of Hog-Tone that I received from you through the influence of the Froot Pub. Co. I didn't have much faith in it when it first arrived as I have tried so many different kinds of stock foods and so called worm powders with no results that I supposed they were all alike; but yours being in a liquid form I thought "Well now here's something different."

I took a couple of snouts that did not seem to be doing well from a larger bunch of hogs and began by reeding them some of your Hog-Tone and in about five weeks time you would not have believed they were the same hogs. They grew so rapidly and made such fast gains that now I have them back with the other hogs and when reeding time comes they are the biggest scrappers in the bunch. Thanks to you for your bottle of Hog-Tone.

Yours truly,

Perry Stratton

Read These Letters

"I had a bunch of seven hogs. They took sick and two died. Three of them would not eat at all. After the first dose of Hog-Tone they commenced to improve and continued to do so. I thought these hogs had the cholera, as they acted like it and the neighbors had it all around me and their hogs died. My hogs never missed a feed after feeding Hog-Tone, and they made good hogs. I'll not be without Hog-Tone from this on as I cannot afford to take chances for what Hog-Tone costs."

GUY HOOPINGARNER
Rural No. 1 Uniondale, Ind.

"I bought two hogs the 20th of October; they weighed 270 lbs. I put them up and started feeding Hog-Tone. They made a remarkable gain. I am sure that they have gained 100 lbs. in 30 days and they are eating good and look thrifty."

I am well pleased, as I am satisfied Hog-Tone is a wonderful treatment."
ALBERT COLES, Warren, Ind.

"I have been feeding Hog-Tone and found it to be the best medicine for freeing hogs of the worms. I fed fourteen and at the age of six months they averaged two hundred pounds. I cannot recommend the Hog-Tone too highly and I never will be without it."

SILAS STAYER,
Arcola, Indiana

"Hog-Tone has surely benefited me in fattening my hogs. I experimented on one sow. At the time I weaned her pigs she weighed 150 lbs. live and in just 42 days I killed her and she dressed 275 pounds."

THEO. FORNWALT,
Baldwin, Indiana

AVALON FARMS HOG-TONE

—The Liquid Worm Killer and Hog Conditioner

for 60 days—on all your hogs—at no initial expense—at my special 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 12½ cents per hog for all the treatment and that treatment is guaranteed by me to free your hogs of all worms—to enable them to put on more weight from the same feed—to fill them with strength and vitality—to resist disease attacks.

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 Foods or Condition Powders of any kind. 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 given only every third day for the first six weeks and after that only once a week. 100% strong.

Really does clean out all and 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, Enteritis, Indigestion and a score of other diseases. Also will prove a simply wonderful tonic and conditioner—gives the hogs voracious appetites, aids their digestion, helps them thrive, grow and put on fast increases of flesh. Splendid for pregnant sows—helping to assure fine, strong litters.

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

Grasp This Opportunity—Mail Me the Coupon Today

W. O. GANDY, Pres., Avalon Farms Company
623 Rand McNally Bldg. Chicago, Illinois

Just Mail Me This FREE COUPON

W. O. Gandy, Pres.

Avalon Farms Co.
623 Rand McNally Bldg., Chicago, Ill.

I have hogs. Ship me immediately enough AVALON FARMS HOG-TONE to treat them 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 it has done all you claim. If it does not, I will return the labels, you agree to cancel the charge.

Name _____

P. O. _____

R. R. No. _____ State _____

Ship to _____

Name and address of my druggist _____



SEND NO MONEY—TAKE NO RISK