

KANSAS FARMER

For the improvement of the Farm and Home

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How to Keep Milk and Cream Sweet

Cool Product Quickly and Hold at a Low Temperature

SUMMER is a trying time for the dairyman, for the hot weather adds to the difficulty of keeping milk and cream as well as influencing the production. Every can of sour or bad flavored milk delivered to a distributor means a loss to the producer. Milk sours through the action of bacteria. They are always present and increase with great rapidity in the warm weather. The bacteria causing milk to sour and spoil get into it with the dirt, particles of manure and hair from the cow which drop in during the process of milking, or from the dust in the air of the barn. Improperly washed and sterilized utensils also serve to harbor bacteria. These organisms find most congenial conditions at temperatures above 50 degrees Fahrenheit. To produce good quality milk and cream during warm weather requires the greatest care in the matter of cleanliness, sterilization of utensils and keeping the product at a low temperature. H. E. Dodge, dairy specialist in the division of college extension, suggests the following line of procedure in a leaflet recently issued.

To exclude external dirt and reduce bacteria:

1. See that your barn is kept clean and admits plenty of sunlight.
 2. Do not feed hay or fodder just before or while milking.
 3. Keep your cows well bedded at night to prevent them becoming coated with manure. Clean them every morning.
 4. Clip the long hair on the udder and flanks.
 5. Wipe off udder and flank with a damp cloth before milking.
 6. Use a small top milk pail.
 7. Milk with dry hands and be personally clean in handling milk.
- These precautions will prevent entrance of dirt and bacteria into the milk and if it is properly cooled you will have no trouble with sour milk.

Straining the Milk

1. The ordinary wire strainer is not satisfactory. It removes only large pieces of visible dirt and straw. It permits large quantities of minute dirt particles to enter the milk.
2. One thickness of cheesecloth is nearly twice as efficient as a wire strainer.
3. Two thicknesses of cheesecloth are three times as efficient as a wire strainer.
4. Two thicknesses of cheesecloth with filter of cotton between are five times as efficient as the wire strainer. Test your own milk for dirt. Set aside a bottle of it for a few hours and then examine the bottom. Unless you are a careful producer you will find a large amount of visible dirt collected there and more careful methods should be instituted. Keep the strainer covered so

as to protect it from flies and dirt while milking.

Cooling the Milk

The milk should be cooled down to below 50 degrees F. as soon as possible after milking. Run the milk over a surface cooler through which cold water is passing. Then set the can in a tank of ice water and stir often until down to 50 degrees. If a surface cooler and ice are not available and the practice is to fill a can with milk before cooling, the best way is to have a cooling tank through which the water for the stock is run. Put the can of milk in the tank as soon as possible and stir every few minutes until it reaches the temperature of the water. Keep the can covered with a piece of clean cheesecloth. Do not leave the lid on the can. A cement or wooden cooling tank is better than an iron one because these materials are poor conductors of heat. If the tank is protected from the direct sunshine by a shed or roof, a lower temperature can be maintained. Milk placed in a cooling tank and not stirred will retain the animal heat for many hours. Be sure to stir until cool. It takes but a few minutes. Milk kept at 80 degrees

all night will be sour in the morning. Milk kept at 50 to 60 degrees will be in good condition. Lactic acid bacteria multiply rapidly at 80 degrees; but very slowly at 50 degrees.

Insulated cans, or cans covered with a felt jacket should be used if long hauls or shipments are to be made in hot weather. Protect the cans from the hot sun's rays with a canvas or blanket when hauling.

Cleaning Utensils

All milk utensils and strainer cloths should be thoroughly washed with warm water and washing powder and then rinsed out with scalding water or treated with steam. When washed, expose to direct sunlight and they will always be sweet and clean.

Flavors from Feeds

Cows running on pasture in which there are garlic, wild onions or certain varieties of weeds will often give milk that is decidedly off flavor. Rye, alfalfa and many other plants will affect the flavor of the milk if the cows are allowed to remain on the pasture right up to the milking time. This can be overcome by taking the cows from the

pasture two or three hours before milking.

A dirty barnyard means an abundant supply of flies. Flies breed in manure piles. Keep the barnyard clean and there will be fewer flies and better milk.

Flies can easily be killed in the barn. If the barn can be tightly closed you can use a fly powder obtainable at almost any drug store which when thrown in the air practically exterminates the flies. The flies can also be poisoned by using the following mixture: One gallon of water, one-half pint of whole or skim milk, one-half pound of sugar and seven ounces of formaldehyde. Place about the barn in small dishes.

Sterilizing Milk Utensils

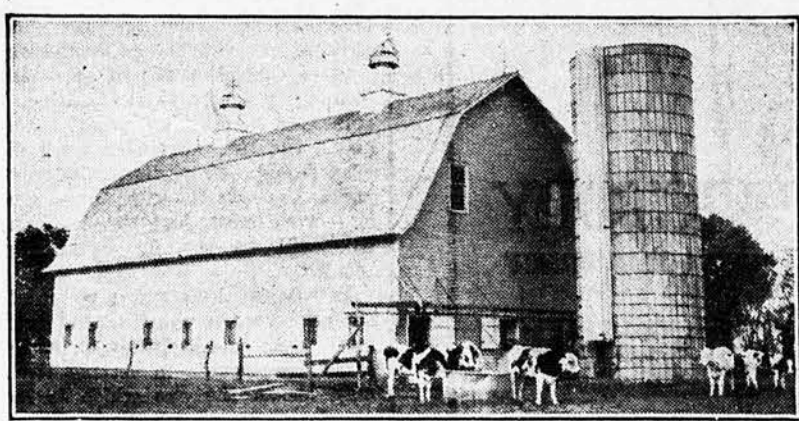
One of the most important factors in reducing the bacterial count in milk, and thus lengthen its keeping qualities, is the sterilization of utensils. Pails, strainers, separators, surface coolers, and shipping cans must be cleaned and sterilized, preferably by steam. Every farmer who can afford it should possess a steam boiler and sterilizer. If he feels that this is too great an expense, there are other sterilizers on the market, cheap but efficient, which will render milk utensils sterile. A satisfactory home-made sterilizer has been developed by the United States Department of Agriculture, and can be made at a cost of about \$10. Complete directions for making it may be obtained by addressing the department at Washington, D. C.

Such important factors as clean udder, milking with clean hands, keeping the stables clean, and the use of small-top pails, will lower the bacterial count, and should be carefully observed by all milk producers.

In cooling milk, facilities already existing can be used to advantage, such as cold water in wells and springs. When milk is drawn from a cow it has a temperature of about 95 degrees F. In the North, well and spring water generally varies in temperature from 50 to 60 degrees F. By the use of surface coolers and a tank of cold running water, milk can quickly be cooled and held within two to four degrees of the temperature of the water.

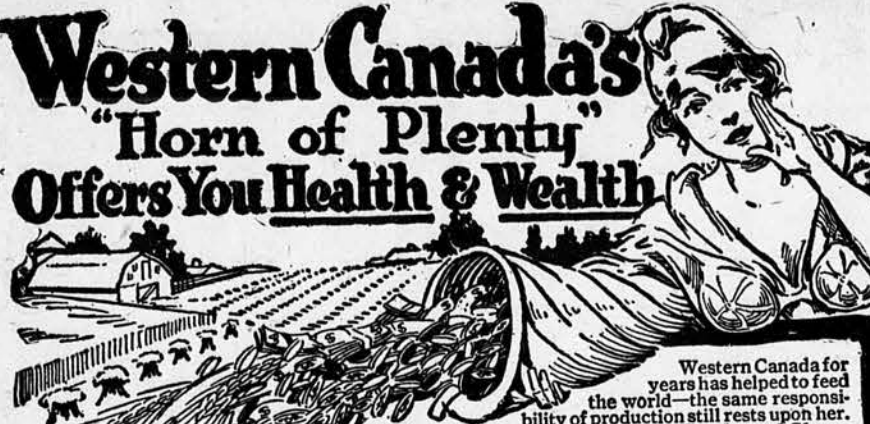
No Beer, More Milk

One leading city of the Southwest formerly had extensive brewing interests, it being a distributing center for the principal stock-raising sections of Texas. With the coming of prohibition the beer plants were paralyzed temporarily, until an ingenious brewer converted his malt factory into a milk depository and distributing agency. Now other brewers are also operating as emergency dairies, with the result that many people who used to drink beer are finding the wholesomeness in an abundance of milk.



THIS modern dairy barn on the farm of H. H. Dowd, of Sedgwick County, is eighty feet long and thirty-six feet wide. It has stalls for eight head of horses partitioned off from the cow stable. Both horses and cows face a feed alley with a passageway from the feed alley to the stalls. In the cow stable there are thirty steel stalls three and a half feet wide with cork brick floors. The cows are comfortable all the time on this kind of a floor. The mangers and walks are concrete. The feed alley is six feet wide and the walk behind the cows five feet and eleven inches wide. The gutters behind the cows are eight inches high on the sides next to the stalls and four inches next to the walk. This makes it easy for the cows to back out and yet is high enough on the stall side to keep them clean. The barn is equipped with a King ventilating system and litter carrier to carry manure outside. There is a drive to the second floor, where 150 tons of loose hay can be stored. There are also feed bins on this floor to which grain and feed can be hauled and spouted down to the feedway below. The cement stave silo stands at the south end of the barn close to the feedway floor, making it easy to truck the silage to the mangers.

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MENTION KANSAS FARMER WHEN YOU WRITE.

MECHANICS ON THE FARM

Items of Interest About Automobiles, Engines, Tractors and Motorcycles

Some Spark Plug Hints

PROBABLY the one part about an internal combustion engine which is more often the seat of trouble than any other is the spark plug. These troubles, however, are usually not the fault of the plug itself, but are due to either poor combustion of the mixture, too much lubricating oil or a poor grade, or carelessness on the part of the operator in adjusting the points of the plug itself.

It is highly important that the points of the plug be the proper distance apart. Just what this distance should be depends upon the ignition system being used. Most tractors today are equipped with high tension magnetos and with these the spark gap should generally be somewhat closer than where other types of ignition are used, such as those employing a vibrator coil, for while the spark from a magneto is usually hotter than from other systems it has different characteristics which cause it to perform best with a comparatively narrow spark gap.

If the spark gap is too wide it will not only make it very difficult to start the engine, but is apt to cause sluggish operation and a lack of power. If much too far apart it may cause the engine to miss occasionally and this will soon result in oil collecting on the insulator of the spark plug during the missing strokes, part of which will remain and form a carbon coating during the strokes when the cylinders fire. In a short time such a deposit of carbon will be formed that the electric current will be short-circuited and no spark will occur. Then, of course, the cylinder will miss altogether until the plug has been taken out and cleaned.

Generally speaking it is safer to have the points a little too close than too far apart, for if all the other parts of the engine are in good working order the charge will be ignited by a short, fat spark just as well as by a longer one which is not so thick.

In setting the points, if a gauge has been furnished with the tractor this should always be used in order to have the setting uniform. If no gauge has been furnished, the operator should do a little experimenting, if necessary, to find out which width of gap will work best with his particular engine. As a rule the spark plug points should be about the thickness of a worn dime or even closed. Many times the spark plug points are set the width of a new dime and with most high tension magnetos this will be too far apart for best results.

In setting the spark plug points care should be taken not to bend them any more than is absolutely necessary. A little carelessness in setting the points may loosen the one which is mounted on the spark plug socket. It is often possible to get just the distance desired by loosening the porcelain or insulating material in its socket, by unscrewing the nut which holds it, and turning the central electrode, after which the nut should be tightened so as to hold the electrode firmly in place. This nut, however, should not be made too tight or it is apt to cause the porcelain to crack when the spark plug becomes heated during operation.

It may be well to call attention to the fact that after setting the plugs and replacing them in the engine, care must be exercised not to turn the central electrode when tightening the small nut which holds the wire in place, in case the wires are fastened in this manner. Many times the engine operator has adjusted the plugs in an engine and removed them a short time later because the engine was not running satis-

factorily, only to find that the plugs were either too close together or too far apart, and was at a loss to understand what had caused it. Usually in such cases it is due to turning the entire electrode when tightening the binding nut holding the wire.—Tractor Farming.

Care of Threshing Machine

The average threshing machine lasts only about five years because of the indifferent care they are given, says W. H. Sanders, instructor in farm motors at our agricultural college. Mr. Sanders maintains that with reasonable repairs a threshing machine should last from ten to twenty years.

"The main thing a man should know is how to recognize when his machine is in as good condition as when it was new, and if it is not in this condition, to be able to put it back to that place.

"The engine and the separator are built well and made to function, but the biggest factor in the operation of a machine is the human element. It is always necessary to put brains into the job, in order not to throw away plenty of good grain. The consumer pays more for a sack of flour just because the thresherman will not keep up his machine. Poor roads and other elements also enter into the high price of flour.

"It is not safe to wait until the wheat is ready to cut to look after the necessary repairing. Neither is the blue sky a good machine shed. If the farmer's implements are in a dry, sheltered place, he can use some of the winter days for overhauling his machinery. It is then that he has time, not only to replace the broken parts, but also to repair the places that are worn.

"Often a man is forced to let his machine stand idle during some of the best days for threshing, while he sends to Pennsylvania or Ohio for a piece of wood that fits in some particular place in the separator. With a little work that same piece of wood could have been secured at home in the winter, thus eliminating the waste of time and loss of money in the busy season.

"There is only about one man out of twenty-five who run threshing machines who can show a reasonable profit from his work at the end of the year. This is chiefly because he is not systematic enough to keep books.

"Poor work done by machines is not always due to a lack of repairs. Much depends upon the regularity with which the separator is fed. Again, the human element enters in. This is just the reason that a motor boat lasts longer than any other piece of machinery—it can not be overloaded.

"A threshing machine should turn out 1,000 to 4,000 bushels of wheat in ten hours, depending upon the size of the machine, but no machine can do its full share when workmen are indifferent as to its care and operation."

The owner of a new automobile too often likes to demonstrate to his friends how nicely his car will go up a steep grade in high gear at a low speed. This is not good for the engine. The maker of the car went to considerable expense to equip it with an intermediate gear to be used on grades. If you can't get a run for a steep grade, go into the second speed and be on the safe side. Of course if you have a high power six or eight-cylinder car, hill climbing on high gear at slow speed is not so injurious to the engine.

The failure to employ modern methods of lightening labor in the house is a great hardship in many farm as well as city homes.

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SHORTHORN BREEDERS MEET

Shorthorn breeders of Kansas are definitely planning to promote the breeding of more good cattle in the state and to advance the cause of their chosen breed to the fullest extent possible in filling the demand for stock of better breeding. The gathering of Shorthorn breeders of the state at Manhattan on commencement day at the agricultural college this year was a new feature of the week's events. The primary purpose of the meeting was to add to the strength of the Kansas Shorthorn Association, and it was a happy idea to hold this meeting at the agricultural college at this time, for it brought some of the best breeders of the state in direct touch with this institution where they were able to learn of what Dr. C. W. McCampbell and his associates in the animal husbandry department are doing for the improvement of beef cattle in the state. Much good is certain to come from the co-operation which can take place between the institution and the men actively engaged in breeding and developing pure-bred live stock of any kind. Thirty-eight new members were added to the Shorthorn Association of Kansas during the Manhattan meeting. Plans were made to hold a state association sale at Manhattan next year under the direction of the animal husbandry department of the college. This was a good move on the part of the breeders of the state.

The Shorthorn breed has always had great influence in cattle improvement. W. A. Cochel, field agent in the Southwest for the American Shorthorn Breeders' Association, who was the principal speaker at the Manhattan meeting, stated that Kansas breeders through lack of organization were not getting their share of the business of supplying herd bulls and foundation stock to buyers within the state. Too many herd bulls are being brought in from outside, and too few are going to herds outside the state. A most commendable piece of work is now under way by the Kansas association in the compiling of "The Shorthorn in Kansas," in charge of Secretary G. A. Laude, who reported that good progress was being made.

The men who met at Manhattan decided to hold the next meeting of the association at the Topeka Free Fair. This fair always brings together the best cattle men of the state of all breeds and the Shorthorn men can look forward to an exceptionally well attended meeting. A banquet will be a feature of this meeting. A. M. Paterson of the agricultural college is again to be superintendent of cattle at the Topeka fair and he told the breeders present something of the plans for the coming fair.

JERSEYS IN KANSAS

When the Kansas Jersey Breeders' Association was organized a few years ago the claim was made that it had a larger charter membership than any other pure-bred cattle association in the state. While that may have been a legitimate claim, it would appear that there has been a lack of activity on the part of this organization. Jersey cattle have not been given the recognition due them in Kansas. At a recent sale of Jersey cattle which was attended by a number of the best breeders of the state, including several of the directors and members of the state association, it was agreed that a meeting should be held in the near future for the purpose of electing officers and reorganizing and developing a progressive state Jersey association which will be more than a name. It

SOMETHING TO THINK ABOUT

THE boys are on their way back. In the last two years you have done your part in supporting them. You have bought bonds, subscribed to the Red Cross, Y. M. C. A., and all the relief funds. You have eaten war bread, and made a war garden. You even tried to knit for them. Of course you will give them a rousing reception. Bands, banners, banquets. But as they slip back into private life are you going to remember? They will not be quite normal for a time. Sitting tight under a hail of shells is not a nerve tonic, nor is "going over the top" a sedative. These boys have been on a tour through hell, remember.

If you give them a job, are you going to be patient? If they are not as eager in the pursuit of the dollar as the exempted, are you going to deem them lazy and worthless?

Their attitude is going to try you at times. Your estimate of values and theirs will differ widely. Those things which seem essential to you may seem largely bagatelle to them. In the days that are to come, when the boys are back, when the uniforms are off, when the glamor has faded, and the excitement has died away, are you going to be patriot enough to remember that the eccentricities, the weaknesses, the abnormalities of these boys were contracted in defending your homes?

You are sane and practical, eminently so. In Heaven's name, why should not you be? What have you had to endure? But don't let that sanity and practical wisdom of yours blind you to the fact that the man of Chateau-Thierry and the St. Mihiel salient has done more for humanity than you ever have or ever will. He may have been a bum on a park bench in those days, but when danger threatened you and yours, he threw his young life, his hopes, his dreams, his ambition into the deadly breach, and hurled the Hun beast back, preserving you, so that not even the smell of fire passed upon your garments.

Use your sanity and your practical wisdom in the problem of reconstruction, and never forget that the proper attitude of the man who stayed home, toward the man who went over, no matter what their respective social positions, is one of sympathy, kindness, and gratitude.—JAS. F. B. BELFORD in May issue of Life.

was decided to hold the next meeting at Leona, Kansas, on the evening of June 23, the day preceding the J. H. Lomax sale. Prof. J. B. Fitch, head of the dairy department of the agricultural college, was asked to send out the call to the Jersey breeders of the state. Professor Fitch believes that Kansas Jersey breeders owe the Jersey cow the publicity that a live association can give a breed of cattle. All the Jersey breeders in attendance at the sale mentioned above pledged themselves to come to the meeting at Leona, and all of them are anxious to have a large attendance of Jersey boosters. Jersey breeders of the state cannot afford to fall down on this matter of keeping up an active association for the promotion of their chosen breed of dairy cattle.

THE DAYLIGHT-SAVING LAW

The effort to repeal the so-called daylight-saving law is being vigorously opposed by urban interests. There is no questioning the unanimity of rural feeling against the new time, although it is perhaps not so well presented because agricultural interests are not so well organized as city interests. Farming is an occupation which must be conducted in harmony with nature's laws, and these do not change as the result of such a trivial cause as the turning of the hands of the clock ahead. It is charged that the farmers' demand for the repeal of this law is creating and intensifying class feeling between the people of the farms and the people of the towns and cities. It should not be forgotten that this thing was started by urban interests as a war measure, and farmers submitted to the inconvenience last year for that reason. This reason no longer exists. Daylight saving for the city worker, as brought about by turning the clock ahead, means an hour less work in the country. The repeal measure was not permitted to go through as a rider to the appropriation bill. The Interstate Commerce Committee of the House

voted for its repeal, but not to take effect until October 1. This is not satisfactory to the farmers, who want to go back to the old time at once. The probabilities are, however, that we cannot hope for such action, but it will be some satisfaction to know in advance that the nuisance will not be with us next year.

LOWER BEEF PRICES

At last comes the report that the packers have cut the wholesale price of beef carcasses to butchers. This will be of interest to cattle feeders, who have been taking losses for some weeks on their finished cattle because of the slump in prices on foot. The sellers of meat insist that prices are made by supply and demand. That may be true, but feeders find it hard to forget how from every quarter last year they were told that it was up to them to feed cattle extensively in order that there be enough to meet the demand. It apparently is not always wise to listen too attentively to such advice. The feeders and growers of cattle must of necessity learn to keep more thoroughly posted themselves as to conditions and make their plans accordingly. The announced cuts in wholesale beef should immediately be passed on to the consumer, thereby increasing consumption.

PAY FOR HOLDING WHEAT

The plan of allowing a premium, or bonus, to the farmer who holds his wheat is to be adopted by the United States Grain Corporation, according to recent news dispatches. This information follows the New York conference with Mr. Barnes attended by the grain men and millers of the country. The purpose of the storage allowance is of course to hold back the volume of wheat which will begin to move as soon as threshing begins. It is the simplest plan that could be adopted for avoiding serious congestion at this time. While the plan has not been announced in de-

tail, it is stated in the news dispatches that the premium, or allowance, will be one-half cent a bushel for each ten days the wheat is held after a certain date to be announced later. This date is optional with the director of the Grain Corporation and will be dependent upon conditions as they develop.

We do not like the term "bonus" which is being used in connection with this allowance. It costs money to store wheat, on the farm as elsewhere, and the allowance to be made has only been sufficient to cover this expense so that the man who holds back wheat can be assured against loss as a result of his action in going to the necessary expense of storing. The basic guaranteed price on wheat will be \$2.26 a bushel for No. 1 northern in Chicago. Prices at other terminal markets and for other grades will be in relation to this basic price. Mr. Barnes stated last Saturday, June 14, that the allowance would not be made until after July 1 and that thirty days' notice would be given.

AMERICAN ROYAL AGAIN

It looked for a time as though the American Royal Stock Show was to be assured a suitable home in Kansas City, which is the most logical location for this great show of breeding and feeding cattle. Through some hitch, which probably hinges around the demand of business interests of Kansas City that any exposition building constructed for properly housing this show should be somewhere up town, the plans seem to be up in the air again. A plan had been under way for an exposition building for adequately housing the Royal and so located as to permit the handling of car lot exhibits. The car lot section of the show has for several years been omitted and it has been a distinct loss to the exposition.

The different breed associations are becoming impatient and have taken the initiative in looking elsewhere for a suitable home for the Royal. Kansas City is the leading center of the United States for the distribution of pure-bred cattle, but exhibitors at the Royal have been clamoring for better accommodations and unless Kansas City meets the demand it may lose this great cattle exposition which has meant so much in its development as a cattle center.

The farm press of the country is overwhelmingly in favor of a League of Nations and the ratification of the proposed covenant as offering the best plan that can be expected. This information has been gathered and given out by the League to Enforce Peace. Out of sixty-six farm papers included in the investigation, sixty-two were for the covenant, two wanted certain modifications, one was noncommittal, and one was opposed to ratification. Forty-three states are represented in the constituency of the papers reporting. These farm papers are without doubt voicing the sentiment of a great majority of their readers. Agriculture as an industry is for the League of Nations. We believe this is an assertion based on facts. It would be a world calamity if this effort to guard against wars in the future should be defeated as a result of our party bickerings.

At the first indication of army worm damage in alfalfa or other crops, get busy with the poison bran mash mixture. This has proved very effective when used promptly. See the article on another page of this issue on army worm control.

THE WORTH OF A BULL

Increased Value of Offspring Measure of Bull's Worth

By FRANK D. TOMSON

THE value of a bull is usually considered in a general way rather than from the standpoint of the actual results in dollars and cents, strange as this may seem.

Recently W. A. Cochel, formerly head of the animal husbandry department at the Kansas Agricultural College, analyzed the subject in a way that simplifies it and leaves little argument for the defense of the use of any bull that is not a prepotent sire.

Mr. Cochel suggests as a basis that the average bull will sire one hundred calves in the course of his life. Many would sire two, three or four times that number, but for the sake of being sufficiently conservative he uses the one hundred as a basis for calculation. He draws attention to the increased value in the calves sired by the registered Shorthorn bull for instance over those from the same dams sired by a grade or scrub bull. If the increased value represented in the calves by the registered bull was \$5 the actual value of this bull to the owner would be \$500. If the increase was \$10 the bull would be worth \$1,000. If there existed an excess value of \$20, the bull's worth would be \$2,000. The interest on the original investment being the only increase in the cost over the poorer bull.

There are so many instances where the actual value of the get of a good bull exceeds the value of those of a poor bull by \$50 per head, even from grade cows, that it suggests that we have really failed to comprehend what a good bull is really worth. This is not written to urge farmers to go out and invest one, two, three or four thousand dollars for their bulls, but to draw attention to the actual safety of the investment if they actually did do it. The price paid doesn't determine the real merit of value of a sire, but it is rather an impressive fact that worthy bulls as a rule do command fairly liberal prices. Even when they are sold as calves there is usually some buyer who foresees their outcome and prospective value and is agreeable to paying the price. This doesn't always apply by any means, for many a valuable bull has slipped through a sale at a fraction of his worth because the bidders were not then looking for bulls. Many a man has sat in a

sale and allowed good bulls, the sort he needed, to sell for a song because he had a bull at home. He failed to consider that his bull should go to the butcher or at least be kept away from the breeding herd. He just knew that he had a bull and what would be the use of two bulls in his small herd? Of course if this bull was dead or past usefulness, then he would need another, but while he lived and was able to do service, regardless of his lack of merit, the owner wouldn't think of buying another, however valuable the bull and however low the price.

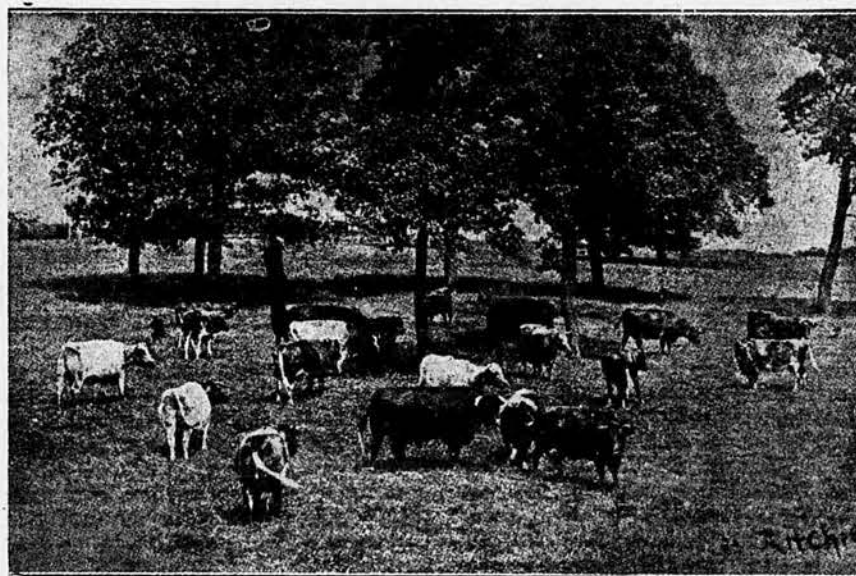
This happens day after day and nearly everywhere. It doesn't seem to matter that the poor bull could be sold to the butcher for as much, or nearly so, as the good bull would cost. Here is an expression that one hears in public sales times without number: "Oh, I've already got a bull, an' what's the use of havin' two bulls?" Merit isn't considered. Value is overlooked. The fact that the bull in question might add

from \$5 to \$50 to the value of every calf he sired is ignored. Maybe it is the feeling of comradeship that has grown up between the owner and his bull which makes him so reluctant to part with him. Perhaps that is the reason, yet I have a notion that it is the owner's lack of business alertness that holds him back and keeps the old bull on duty. Whatever it is, it seems to be always with us.

On the markets every day steers of the same fatness will show a difference in selling value of from \$5 up to \$150 per head. Why? Principally because of the kind of bulls that sired them. Nor does this spread in the price take care of the gains and the feed consumption. Here again the kind of sire is the determining factor. In the business of producing beef there is a lot of credit that rightfully goes to the good sire and there is a lot of grief and lack of profit that has had to be charged against "Old Colonel" or "Spotted Dick" or "Baldy" or "Black Jim." It's a long list, these

unworthies. They have outlived their deserts. They were never entitled to the place accorded them. And today, when the feed bills mount high and the range of quotations at the markets is so wide, their owners recognize that they have been expensive.

This is the day of the better types. There is profit in no other for the producer. The pure-bred sire possessing size and quality is the only solution of the farmer's problem. A little increase in value on each calf makes the better bull not only worth while but, under the prevailing conditions, an absolute necessity. We are past the period when we were trying to make a bare living on the farms of this country. We are in business for profit now and the land we till and the types of live stock we employ must be considered in the light of an investment for this purpose. We don't buy bulls to save money, but to make money. And when there is such a wide range of value in the sire shown by the few dollars on each calf, we may well get our attention on the bull that will sire the kind with the added value.



AN INCREASE IN VALUE ON EACH CALF MAKES BETTER BULL NOT ONLY WORTH WHILE BUT AN ABSOLUTE NECESSITY

An interesting feature of the cattle market in the quarantine division of Kansas City recently was the selling of sixty-eight head of Zebu or Brahma bulls. These are the sacred cattle of India. Their presence in this market was due to the fact that some experiments were once made by Texas ranchmen in crossing these cattle upon the native stock. Some years ago quite a number of these India cattle were brought over, and they have been scattered over the Texas territory to some extent since. The only excuse for making this experiment is the fact that these Zebu cattle are immune to the Texas fever cattle ticks. They are decidedly inferior from a beef standpoint. The ones on the market averaged about 1,200 pounds in weight and sold for from \$7.50 to \$8.50 a hundred.

As the type of animal necessary for the production of large yields of milk is entirely different from that of the beef animals, it has been impossible to produce a breed which would combine these functions and be of superior merit for both purposes.

What to Do When Cattle Bloat

WITH the approach of the season at which bloating of cattle frequently occurs, the Bureau of Animal Industry of the United States Department of Agriculture calls attention to the principal causes of the trouble and also the means by which it may be avoided. Many a cow has come to an untimely end because she became dissatisfied with the scanty feed to be gathered from the closely cropped pasture, broke down the fence that surrounded a field containing a more luxuriant growth, and stuffed herself with the luscious stolen greens until she lost all desire for even another mouthful.

Soon her troubles begin. Fermentation develops in the mass of corn or clover or alfalfa, and gas forms that fills the first stomach of the cow to its utmost capacity.

How Fermentation Causes Death

The danger to the animal from acute bloating is not that the distended stomach may rupture, for such an accident is almost unknown. The pressure of the gas-distended stomach, however, exerts a dangerous pressure upon the heart and lungs, with the result that animals dying from acute bloating usually die of

strangulation through inability to breathe with their compressed lung tissue.

The stock owner should guard against the bloating of his cattle by every precaution at his command. Alfalfa, clover, or other green vegetation, if eaten when wet by dew or rain, seem to be especially liable to ferment before leaving the first stomach of the animal that has fed upon them. Eating excessive amounts of middlings or corn meal will also cause bloating. It also occurs in cattle as a result of becoming choked. The principal cause, however, is overeating succulent green forage, such as alfalfa, clover, or green corn.

Change Feed Gradually

To prevent bloating in cattle, the animals should be shifted, by easy stages, from dry or scanty feed to abundant and luxuriantly growing fodder. They may be allowed to feed from the good forage for only three-quarters of an hour on the first day they are given access to such grazing. A full hour may be allowed on the second day, and by continued slow steps and gradually lengthened stay in the tempting feed, the danger of loss from bloating will be largely overcome.

But in case the first evidence of a too

protracted stay in the heavy growth of forage should be that the owner notices one of his animals with sides distended, and perhaps even lifted above the level of the backbone, he must act quickly. Removal of the gas from the paunch will quickly bring relief. If a veterinarian is within reach he should be summoned at once. If no surgeon is available, the owner should immediately attempt to bring relief to his animal.

Trocar and Method of Use

Many cattle owners keep a trocar and canula constantly on hand and thoroughly understand its use. The trocar is a sharp pointed rod provided with a metallic sheath or canula which leaves the point of the trocar exposed. The spot to be selected for inserting the trocar is a point equally distant from the last rib, the hip bone, and the lateral bony projections from the spine in the region of the loins. Here a small cut about three-fourths of an inch long should be made through the skin with a small knife, and then the trocar with canula attached may be pushed through the cut into the paunch. The trocar is then removed, allowing the gas to escape through the canula. The canula should be retained in place so long as

any gas escapes through it. Sometimes several hours are necessary, and the canula should be firmly tied in place. An attendant should remain near the animal, if possible, so long as the canula is in the paunch.

Medicines That Relieve Bloating

If the animal is not distressed by the bloating, and the swelling of the body is not great, or when the alarming conditions have been removed by the use of the trocar, it is best to resort to internal medicine to allay the formation of gas. Two ounces of aromatic spirits of ammonia in two quarts of cold water should be given every half hour, or half an ounce of chloride of lime dissolved in a pint of tepid water may be given every half hour until the pressure of the bloating has been removed. A dose of purgative medicine is usually beneficial after the bloating has disappeared. For this purpose one pound of Glauber's salts will usually prove effective.

Care should be used in the administration of fluid medicines. Take time. Do not hold the cow's head too high. Keeping the animal's head raised so that her nose is slightly higher than the level of her face will allow her to swallow without interference.

HOME CARE OF SICK PERSON

Professional Nurse Demonstrates Best Way of Giving Baths

IF YOU do not know how to do a thing in nursing a sick person, it is usually better not to attempt it at all. Don't do anything until you have taken time to think of the best way to do it. Use common sense always. Don't wear out your patient. Always remember that the patient's life is the main thing.

These general rules for the sick room were given by Miss Pearl W. Martin, specialist in home nursing in the extension division of the Agricultural College of Kansas, in connection with a demonstration before an extension school in home nursing held in Shawnee County recently. These home nursing schools of one week each are given by the state to communities desiring them, the purpose being to teach simple principles of home nursing and first aid in emergencies to interested women. Miss Martin is a registered nurse and has had about eighteen years experience in private, hospital and Red Cross nursing, so she is an authority on nursing subjects. The writer was privileged to attend one of the sessions of this school and found the work given thoroughly practical. The subjects taken up during the week were: Prenatal care, feeding of children, clothing children, personal hygiene, baths, poulticing, bandaging, accidents and emergencies, and convalescent care. The course is varied to meet the needs of different communities.

On this particular day the subject under consideration was bathing the sick. Volunteers from the class were asked to make the bed ready for the "patient," and two young women stepped forward and deftly folded back the covers six or eight inches, as taught in a previous lesson. This was folded over again and again until the foot of the bed was reached, and then when the patient was placed in the bed it was a simple matter to unfold the covers again, beginning at the bottom of the bed and turning over the folds until the covers were in perfect order with no inconvenience to the sick or injured person.

Importance of Bathing

Miss Martin began by speaking of the wonderful importance of the skin, which contains the sebaceous glands, secreting an oil to soften the hair and skin, and also the perspiratory glands. Because of the oxygen which is absorbed through the skin, it is spoken of by many of our greater authors as the third lung. It is also an important organ of excretion. Bathing is essential to health as well as to neatness in order that the pores may be kept open and in order to remove the excretions of the body through the perspiratory glands. "You can often tell by observation of the skin whether people are particular about the daily bath and the diet," said Miss Martin. "In sickness, bathing is especially important. Often a physician wants a patient to have a bath, but will not let the family give it because no one knows how and there is danger of the sick person's becoming exhausted or taking cold."

Have Room Right Temperature

"For old people and little children the room should be quite warm when giving the bath—about 85 or 90 degrees. For an adult it does not need to be so warm. Water, soap, towels, washcloth, clean linen, night gown, and everything needed should be in readiness so that you will not need to be running back and forth to get them. You should not leave your patient. If it is not warm weather, take off the sheets and use blankets next to the patient while bathing her. The skin of many people will not stand soap. If you do not have soft water, use common baking soda to break the water."

Miss Martin spread the wash cloth smoothly over her hand. "Begin with the face, washing around the eyes care-

fully," she said, suiting the action to the word. "Wash the front part of the neck thoroughly. Do not touch the back of the neck at this time. Next wash the chest and abdomen, then the arm. Wring out the cloth thoroughly for the cleansing bath. There is no need of getting the bed clothes wet. I usually oil my hand thoroughly with soap and rub it well over the patient's arm, especially under the arm on account of the large pores and the more excessive perspiration there. Then I take the wash cloth and go over the arm with that. Keep it of the same temperature and move right along with a rotary motion, without lifting the cloth until it is necessary to dip it into the bowl again. Do not give the patient little dabs here and there with a cold cloth. Nothing is more annoying. Then quickly wrap the arm in the towel and dry quickly. Rub until you see a glow and get a good reaction. When thoroughly dry, take a mixture of alcohol and water and quickly go over the part you have bathed. Just put the alcohol on your hand and rub it into the skin. Then bathe the other arm, without moving your patient, and proceed in the same way from hips to feet. Place a towel under the limbs to keep dampness from the bed. When you come to the lower

leg, flex the knee. This will enable you to bathe the under side. Rub downward, because this is less irritating to your patient.

To Turn Patient in Bed

"Now turn the patient toward you. If she is too weak to help herself, do this by placing the hands on each side of the hips and turning them toward you, then turn the shoulders and flex the knees. A small pillow between the knees and one to support the abdomen if she wishes will make her comfortable. Wash the back of neck, shoulders and back. Then spread the bath towel over the patient's back and rub with the hand to give a nice friction. A light dusting of talcum powder may be used after the alcohol. It is not necessary to use a great deal of powder either for a baby or an adult. Too much is really harmful. An ordinary can of talcum should last a long while.

Think of Patient as Child

"There should be no false modesty about bathing a sick person. To me every sick person—whether a man or a woman—is a little child, and that body must be cared for, and that is the way you must think of them. One part of the body is just as sacred as another. If the patient is able, she may be given a pan of clean water and left to finish

the bath herself, but if she is delirious or too weak you must do it for her.

"Don't allow your patient to chill. Give the bath under the covers if necessary, as in pneumonia cases. In the winter time my advice to you would be to always give the bath under the covers. Watch your patient. If her fingernails begin to get blue, stop the bath at once, cover her up warmly and place a hot water bottle at her feet.

Bath to Reduce Fever

"In fever, we may bathe several times a day to reduce the temperature. The cleansing bath is always given the first thing in the morning, and during the rest of the day no soap is used. In giving a bath to reduce fever, use a rubber sheet under the patient. A majority of us now prefer nice, warm water for the reduction bath. Some people like cool water, but I find I get better results with the bath more than tepid. You know from your own experience that if you take a cold bath on a hot day you have a reaction and get warmer than ever in a little while, but if you take a warm bath you sweat and cool off. I like to use a sea sponge for the cooling bath. Bathe especially where the large veins come to the surface under the arms and on the legs, and in typhoid over the abdomen. Then cover the patient with a sheet and allow the water to evaporate. Give this bath without rubbing. If the temperature is not reduced, repeat in about thirty minutes. A fever patient does not usually take cold, but there is no harm in watching even a fever patient.

"I want to give you this message today if you do not get another thing out of this lesson: Have the room the right temperature when giving the bath and be sure your patient is not in a draft. Just the minute your patient's fingernails or lips begin to get blue, stop and get her under the covers and place a hot water bottle at her feet. Test the temperature of the bottle on your cheek. Don't use glass bottles in the bed. They may break and the hot water is liable to burn your patient. If you have no hot water bottle, use a hot brick or iron or stove lid, but be sure it is not too hot.

"With a pneumonia patient you must not shut off all ventilation, even during the bath, but one of the openings may be closed. Of course a sick room is always ventilated by lowering one window from the top and raising one from the bottom to avoid a draft. Fresh air means everything to a pneumonia patient, and if you shut it off even for a little while you are going to get into trouble. Be sure there is no draft, and the bath can be given under the covers without chilling the patient. I have had 110 pneumonia cases, and I never had one take cold.

Changing Night Gown

"To put on a clean night gown, first put the hands through the sleeves, drawing them up well under the arms. Never let your patient put her arms around your neck or your waist when you lift her, but stand straight from the knees down, bending from the hips, and have her place her hands on your shoulders, then lift her by simply straightening up. This relieves you of any strain on your neck or back, and is much easier. Your hands are free to slip the gown over the head, and one quick motion draws it down under the patient. It can then be straightened at the feet if necessary. Of course no underclothing is worn under the gown. To remove a soiled gown, reverse the process. For a very weak patient, slit the gown from foot to top and do not try to slip it over the head.

"The time may come," said Miss Martin in conclusion, "when some of these little simple methods I have given you today will mean everything to some sick person."

Miscellaneous Nursing Hints

QUESTIONS asked of Miss Martin by those attending the extension school in nursing referred to above called forth the following miscellaneous hints on home treatment in various diseases:

"In case of convulsions in a little baby, perhaps only a few days old, which cannot be plunged into hot water, wrap the infant in a hot blanket—not too hot—and change when it gets cool. A cool enema will often give relief.

"Every family ought to have a bath thermometer. The correct temperature for a warm bath is about 100 degrees Fahrenheit and for a hot bath 110 degrees. A hot foot bath for a cold may be 110 to 115 degrees. A hot foot bath is also wonderful to relieve headache. Use a little mustard if you want to. Sometimes in headache a hot pack over the forehead and eyes gives great relief. Sometimes an ice pack serves the purpose better, and in some cases both are used, depending on the patient.

"If a hot pack is used, dry thoroughly under cover and do not expose the patient. Wrap in the blanket without uncovering him.

A hot sitting bath is good to relieve congestion. Let the patient sit in the hot water twenty minutes. Give her a newspaper and let her make herself happy. Of course a bath cabinet is fine if you have one."

During eighteen years of nursing Miss Martin has specialized in pneumonia, typhoid and surgical cases, so many of the questions were naturally along this line. She said: "I do not think that just anybody is capable of taking care of a typhoid patient. You need a trained nurse, not only for the care of the patient, but also for the protection of the family. She will help you to safeguard the family in many little ways you would not think of. After the temperature is gone, then comes the crisis, and it is very important to have someone there who understands the changes.

"It is not usually a good thing to move a pneumonia patient. If you can get a nurse in the home I would have her come to you in either pneumonia or typhoid rather than to send the patient to a hospital. Sometimes with pneumonia it is a great risk to even turn the

patient in bed. It is criminal to keep air from a pneumonia patient. Fresh air is the important thing in the treatment. I consider it a criminal thing for others beside the nurse to stay in the room with a pneumonia patient. The patient must have every breath of air untainted. Don't exhaust your patient. Don't make him talk. Keep him quiet with his head low. There is a crisis coming when every bit of strength will be needed."

In pneumonia or other diseases where the patient coughs, Miss Martin showed how the corners of a newspaper can be pinned back to form a little pocket which is fastened to the side of the bed with safety pins. Paper napkins or old cloths should be used by the patient for handkerchiefs and then dropped into the paper bag. The bag and its contents can be burned. This also gives opportunity for examination of the sputum in cases where this is necessary.

"In obstetrical cases," she said, "two lives are at stake. Tatting or lace on the pillow cases and fine gowns or sheets that must not be soiled are out of place at such a time. You have no time to bother with those things. Have your oldest, softest gowns sterilized and ready. I hope none of you will ever be guilty of helping in a confinement case or coming near the bed with a dirty handkerchief in your hand. You jeopardize the life of the person. Never make a bed with a handkerchief in your hand. To me that is a horrible thing to do. Have your hands clean and everything about the bed clean.

"Visiting the sick belongs to the old dark ages. There is no excuse for exhausting the strength of a weak patient by visiting him and taking your friends and your friends' friends along. When convalescing, friends are helpful, but there are times when no one but the immediate family and the nurse should see the patient. In a regular case of typhoid or pneumonia when the sick person's life is at stake you cannot help them. Use common sense. If they insist on seeing someone, that person might be admitted for a moment. If you are admitted in such a case do not take the patient by the hand and give a pump-handle shake which wears him out."

GENERAL FARM AND STOCK ITEMS

Something of Interest for All—Overflow from Other Departments

THE strong, vigorous shoots coming from the crowns of raspberries, blackberries or dewberries, will become the fruiting canes for next year's crop of berries. When they get to be about two and one-half to three feet high they should have their terminals pinched back an inch or two to stimulate the formation of lateral or branch shoots. This makes a more compact bush that is less subject to winter injury and that under ordinary circumstances is more productive. The cane fruit plantation should be gone over several times during the early summer, pinching back each time the shoots that have reached a height of two and one-half or three feet since they were gone over before. The laterals should then be allowed to grow as long as they will, not heading back again until the beginning of the following season, when they may be shortened to a length of twelve to eighteen inches.

If for any reason the new shoots of the cane fruits have been allowed to become four to six feet tall without pinching, they should not be headed back during the summer. Such late heading would be liable to force the production of laterals that would not mature well before winter and that consequently would be more subject to winter injury.

As soon as the fruiting season is over the old canes that have borne fruit should be pruned out, carried off the patch or field and burned. Many growers neglect to remove these old canes until the following spring; but it is important that they be removed promptly. If left during the summer and fall months, they harbor insects and diseases that spread to the new growth, decrease the next year's crop and shorten the life of the plantation. As a matter of fact the best and most effective way to deal with the insect and disease problem in the cane fruit plantation is to cut out and burn the old canes immediately after each fruiting season. They have to be removed anyway and it is no more expensive or troublesome to remove them then than later. When this plan is followed, spraying seldom need be resorted to, for the cane fruits.

Commercial plantings of the cane fruits should receive thorough cultivation throughout the growing season. In the case of small home plantings, heavy mulching with straw, leaves, corn stalks, lawn clippings, etc., may take the place of cultivation. This helps keep down weeds, conserves the moisture, keeps the soil cool during the hot summer months and otherwise promotes the health and growth of the plants.

Baby Beef from Holsteins

H. L. N., Colorado, raises the question of making baby beef from dairy-bred cattle. He says: "Some time ago you had a piece in the paper about scrub steers and baby beef. Please explain how to make baby beef out of Holstein calves."

We assume that our correspondent wants to know whether there is any profit in feeding dairy-bred calves for baby beef as well as how best to feed such calves. Paul Imel, in charge of pig and baby beef club work in Kansas, offers the following suggestions:

"A baby beef is a beef animal that has developed a high degree of finish at the age of twelve to sixteen months and weighing in the neighborhood of a thousand pounds. Blocky calves of good beef type and conformation must be selected for good results. The necessary beefy conformation is lacking in dairy-bred cattle and usually the necessary maturity and high finish cannot be obtained at an early age with this type.

"The first requisite of the packer is that a baby beef must be extremely fat, according to the definition given for such

cattle. It is not the nature of the dairy type to store up fat at an early age. They will consume the feed and put it into growth rather than fat and growth. Half fattened calves and yearlings cannot be profitably marketed, for buyers discriminate against them more than any other class of cattle.

"The discrimination against dairy-bred animals in the beef class must be taken into consideration. Whether or not this discrimination is altogether justifiable does not concern this discussion. Suffice it to say the discrimination is there and one or a few men cannot overturn it. Consequently it is up to the producer to grow what the market demands.

"A few years ago an experiment was made at the Kansas station in feeding Holsteins and Shorthorns in order to get a comparison of their relative abilities to feed out at an early age. At that time, when feed was much cheaper than now, it cost \$10.25 a hundred to put the gain on the Holstein calves, while \$8.15 worth of feed was required to put the same gain on the Shorthorns. When marketed the Shorthorns sold for 25 cents a hundred more than the Holsteins. The feeding period extended over 140 days.

"Since dairy type lacks the beef conformation, tends to growth rather than fat while young, and since this type proved to cost more to the hundred pounds gain, it would seem that the logical end for the grade dairy bull calf is veal. He will return his owner more profit when disposed of in this manner than in any other way."

The Weed-Free Garden

A large part of gardening consists in keeping down weeds. If the gardener lacks in enthusiasm the weeds finally triumph, and by fall the garden plot is a jungle of tall weeds.

The first step in the weed fight is to cultivate closely in the early part of the season, when most of the weed seeds germinate. The little weeds are easily killed. But weeds keep on coming up all through the season, and these must be carefully removed also, for a single weed may produce enough seed to infest the whole garden next season. So it is important that no weeds become large enough to produce and ripen seed. If this is done year after year, the number of weeds and grasses will decrease rapidly.

The use of stable manure is a source of fresh infection, as this usually contains many weed seeds. This danger may be avoided by using only well rotted manure on the garden, keeping fresh manure in a compost heap for at least six months. The seeds will be sprouted or killed by the heating of the manure. Some of the plant food is lost in this process, but the better physical condition of the manure makes up for this loss.

Skim a Thick Cream

A cream buyer asks why so many sellers of cream persist in skimming a thin cream. He says that it is a losing proposition for them, considered from almost any angle. They lose valuable feed in the extra skim milk sold, it costs more to haul the product to market, and the cream itself is less valuable to the creamery.

At the present time there are many farmers who figure that skim milk is worth from seventy cents to a dollar a hundred as a supplement to corn or other grain in feeding pigs. By skimming a cream that will test 35 per cent fat instead of 25 per cent, ten pounds to the hundred more skim milk will be kept on the farm. This would add from 7 to 10 cents in profit from the standpoint of feed value only. Then there is the extra hauling expense of this ten pounds and if there is no local creamery freight must be added. This expense must be charged up to the man producing the cream. A man who ships two cans of the 25 per cent cream a week would have to ship one extra can each month of skim milk, worth 50 to 90 cents for feeding, and in addition pay the extra freight cost.

In addition to these losses, more skim milk means less butter fat to sell. The loss of fat in the skimmed milk is on the average one-tenth of 1 per cent. While this is a small loss on a small shipment, it counts up in the long run or when considering all the cream handled in a whole state.

It is also maintained by the cream buyer that in the grading of cream most of the off flavor, or second grade cream, will be that which contains a low per cent of butter fat, or the thin cream. This of course means a lower price where cream is bought on the graded basis. It is possible for the creamery to make better butter from a 30 per cent cream

than from a 20 per cent cream and indirectly this reacts on the cream producer, because the price he receives is dependent in the long run upon the price the creamery is able to get for its butter.

In view of these facts it would seem that producers of cream would find it to their advantage to set the separator so it will skim a cream testing 30 to 35 per cent at least.

Better Care of Sheep Pays

Expensive and elaborate caretaking is not essential to success with sheep, but the farm flock will respond to good care. Seven farm sheep demonstrations were conducted last year in Missouri, flock owners of the state co-operating with sheep specialists of the United States Department of Agriculture and the Missouri Agricultural College. One of the results of these demonstrations was that it pays well to give sheep proper care. In two of the demonstrations, where grade animals were kept, one flock produced 108 per cent of lambs, which means that some of the ewes had twin lambs, while the other flock produced only 59 per cent of lambs, which means that a large number of the ewes did not produce any or that the lambs were too weak at birth to be saved. The wool from the first flock was sold at 66 cents a pound, while the wool from the second flock brought 64 cents a pound. The cost of feed of the first flock amounted to \$7.05 for each animal, while the sheep of the second flock were fed at a cost of \$1.34 each. The total cost, in the first flock, amounted to \$8.36 an animal, as compared to \$2.57 for the second flock. But the net profit a head—the point which is most important to all sheep raisers—was \$5.74 in the first flock as compared to \$2.22 in the second flock, and the net return on the investment amounted to 21.77 per cent in the first flock as compared to 15.23 per cent in the second flock.

Poisoning Army Worms

Many reports are coming in of damage done by army worms. In Shawnee County whole fields of alfalfa have been eaten to the ground by this worm during the past week. These plump greenish-black to pale caterpillars marked with three stripes along each side, the middle one dark and the others light, usually feed on the rank, growing grasses, but occasionally conditions favor their increase to such an extent that hunger forces them to corn fields or alfalfa fields. When this condition exists they move in enormous numbers to these fields, which act gives them their name, and do a large amount of damage in a very short time. They have so many parasitic and predatory enemies that they are seldom present in large numbers in any localities for two years in succession.

When these worms are numerous enough to assume the army worm habit, as they frequently do, artificial means of controlling them must be adopted to prevent serious losses. The worms doing damage now were hatched from eggs laid in May by the mature moth which emerged from the partly grown larvae that had wintered over in the soil. This brood of caterpillars will pupate and come out as the second brood of worms late in June.

In controlling army worms it is of the greatest importance that they be discovered early in their depredations. Frequent examinations should be made of the crops upon which they are likely to be feeding. If the farmer is fortunate enough to find them feeding on their usual food before they have been forced to migrate to the alfalfa field or corn field, it is sometimes possible to destroy them at once by spraying their food with a poison spray made of arsenate of lead or paris green, using one pound

Function of Community Home

THERE is nothing that speaks so clearly or strongly for the permanency and stability of our rural improvement work as the building of Grange halls or community homes. Such homes are not built by the opportunist or the seasonal agitator. May these homes long endure as the social, the fraternal and the supereducational community abode; a lasting testimonial to and memorial of the community interest, the fraternal spirit and the devotion to rural improvement of its builders. May this building be in fact and in spirit a community home extending its benign social, fraternal and educational influence over the whole community, an honor to its builders, a beneficence and an inspiration to all who come within its portals—the surest safeguard and the strongest bulwark against the blighting influence of the red flag.

We are building not only for today and tomorrow, but for the years to come, not only for ourselves but for our posterity in the years ahead. Any policy that takes cognizance of the present only is shallow, short-sighted and unworthy those so fortunate as to be the heirs of the founders of our order.

I am proud that I am permitted to extend congratulations to those who have shown their faith in the stability, their hope in the usefulness, their fidelity to the principles, their charity for the shortcomings, and their trust in the permanency of the things for which the Grange stands, by building this beautiful and substantial community home as an expression of their perseverance in the extension of the principles of our order.—From address of B. NEEDHAM, State Grange Master, in dedicating Shawnee Grange Hall, Shawnee County.

of the paris green to fifty gallons of water, or from three to six pounds of the arsenate of lead. This method of destroying them on growing crops, however, is not generally advised. A safer and much better method of poisoning them is the use of the poison bran mash mixture flavored with fruit juice. This was first used several years ago in killing grasshoppers, but the tests of the Kansas Experiment Station entomologists have shown that it is equally effective in controlling the army worm and this method is being recommended and has already been most effectively used in controlling attacks this season. This formula has been repeatedly given in KANSAS FARMER. The large quantity formula is as follows: One hundred pounds of bran, five pounds paris green, twelve lemons, two gallons of molasses, and enough water to moisten the mixture well. This is enough for fifteen acres. It is to be scattered thinly over the whole area and never in piles. The cost to the acre, including the labor of preparation and spreading, is not more than 50 cents. This makes the cost negligible as compared with the damage army worms can do in a field of alfalfa or corn.

Out in the section of the state about Hays a worm which has been identified by Prof. G. A. Dean of the experiment station as the variegated cutworm has become numerous enough to take on the army worm habit. These worms are migrating into alfalfa fields and doing serious damage. Poison bran mash is recommended for these worms also. The grasshoppers will be killed at the same time. The poison should be spread in the evening, as the worms work at night except in cloudy weather. These worms are not likely to move from the alfalfa into corn or other crops, but if they should begin to go from the alfalfa to fields of other crops a narrow strip of the poison placed in the path of their march or along the edge of the field will get them before they can do serious damage.

Hay Stackers Save Labor

Suitable labor saving equipment is a very essential feature of hay making in these days of high priced labor. Thousands of farmers last year were up against the problem of putting up hay with less than the usual help and found hay stackers of the greatest assistance in overcoming the handicap.

The hay stacker is to stacking what the horse fork is to putting hay in the barn, a saver of man labor. It lifts the hay on the stack by horse power instead of man power. When hay is loaded on the wagon by hand and unloaded by a stacker one-half of the hand labor is eliminated. If push rakes or hay loaders are used in connection with the stacker the laborious task of pitching by hand is entirely avoided.

These points are brought out in Farmers' Bulletin 1009, recently published by the United States Department of Agriculture, which describes the different types of stackers in use, discusses the conditions favorable for each type, and tells how to make them.

In using a hay stacker a boy who can drive a team can take the place of a man in the haying operation. Two men and a boy using a loader and stacker will handle about 75 per cent more hay for each man during a day than a three-man crew loading and unloading by hand.

Hay stackers are classed by the bulletin in two general types, one having teeth on which the hay is gathered and brought to the stack on push racks; the other consisting of stackers that do not receive hay directly from push racks, but handle it by means of horse forks or slings. Both types are comparatively inexpensive and can usually be made at home with material that is available or which can be readily assembled on the farm.

A stacker will last from ten to twelve years under ordinary conditions, and the cost of repair is small. On twenty-seven farms in Central Kansas, which stack an average of 144 tons of hay a year, all

charges against the stackers amounted to less than 7 cents a ton when the yield was one ton an acre.

In building a haystack with a stacker it is scarcely economical to make one containing less than ten tons, according to the bulletin. In locating stacks long or difficult hauls should be avoided whenever possible. It is very common on many farms to see stacks of hay at the end or corner of the field next to the farm buildings, the site being chosen in order to have the hay handy for feeding. The total distance traveled in bringing hay to one side of a square field is approximately 50 per cent greater than in hauling to the center. If the stack is located at one corner of the field, the distance traveled is 100 per cent greater.

To minimize damage by moisture from the ground, care should be taken to keep the hay in the bottom of the stack from coming in contact with the soil. The aim of all good stack builders is to make a stack that will not "take water." This can be accomplished by tramping the middle well and always keeping it higher than the edges during the process of building. To give the stack further protection, many farmers provide a canvas cover or sheets of corrugated galvanized iron roofing which, when properly put on, practically eliminates loss from rain.

Farm Land Values

Farm land value has not advanced in the same degree that the composite price of crops and live stock has from the beginning of the war to 1918. Results of a recent investigation by the Bureau of Crop Estimates, United States Department of Agriculture, revealed that, although farm land value alone gained in 1915 and led in the relative advance in 1916, it lost its lead in 1917 and, moreover, fell far behind the relative gain in the price of crops and live stock in that year and in 1918.

From 1914 to 1915 farm land value, not including that of buildings, increased 11 per cent, while the price of crops and live stock lost 3 per cent. In the following year land value went up 23 per cent above 1914 and the price of crops and live stock also advanced, but only by 12 per cent. A reversal of the relativity of these movements appeared in 1917, when land values gained only 38 per cent on 1914 and crops and live stock gained 74 per cent. The divergence increased in 1918, since the gain above 1914 was 50 per cent for land value and 97 per cent for crops and live stock.

Farm land value is supposed to be related, at any rate largely related, to the net profit of farming, and in fact it is often somewhat affected even by single years of high or scant profit, yet the value of farm land advanced in 1915, although the price of crops and live stock declined, in comparison with 1914, and gained relatively much more than price did in 1916; but, on the other hand, its relative gain in 1917 and 1918 was far from equaling that of price. There has been much disparity, first on one side and then on the other, between the two movements of land value and product price.

Perhaps a scarcity of farm labor weakened the demand for farms in the last two years, and perhaps, also, the net profit of farming, because of extraordinarily high cost of production, was not as great as the high price of products would indicate superficially.

How Testing Helps Creameries

Twelve per cent of the patrons of the co-operative creamery of Dover, Minn., are members of the local cow testing association. Though only 12 per cent of the number, they receive about 36 per cent of the money paid by the creamery to its patrons. This is not because of larger herds, but because of better cows and better dairy practices.

In January the returns to dairymen who belonged to the cow testing association were \$14.10 per cow, while the returns to non-members were \$5.95 per cow. At the same rate, the returns for

a year would be almost \$100 per cow more for the herds belonging to association members. This was brought about by eliminating low producers and feeding the remainder according to known production.

During the year 1914 the creamery produced 243,000 pounds of butter. For 1917 the quantity increased to 330,000 pounds. As the number of cows was approximately the same for the two years, the gain was due to increased

production per cow and not to an increased number of cows. Not only was there a gain in business for the creamery, but the patrons were better satisfied, because they received larger returns.

The proper maintenance of farm machines not only saves money but avoids danger to those who operate them. Keeping the harness and vehicles in repair may prevent a dangerous runaway.



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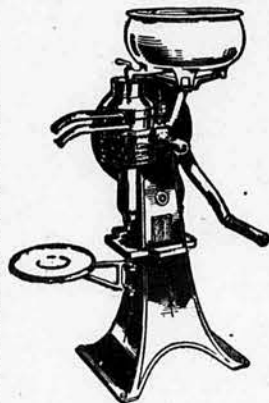
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Ways of Ridding Hogs of Lice

IT REQUIRES vigorous and persistent treatment to keep hogs free from lice. Frequent examinations should be made about the ears, flanks, and inside the legs, to see if lice are present. They may be readily seen traveling among the bristles, particularly in the parts just mentioned. The eggs, or "nits," are small white oval bodies attached to the bristles. Dipping does not as a rule destroy the vitality of these eggs. Swine should be dipped frequently in order to kill the lice that hatch out of the eggs after the previous dipping. These lice are blood sucking parasites, and by biting the hog and sucking the blood they cause a great deal of skin irritation. Furthermore, they act as a drain on the vitality of the hog, through the loss of blood which they abstract. When lousy the hog is usually restless and rubs on posts and other convenient objects. The coat looks rough and harsh. This pest is transmitted from one animal to another by direct contact, or by contact with infected bedding or quarters.

Dipping is one of the methods commonly used to free hogs of lice. Dipping two or more times at intervals of about two weeks is advisable. Several dippings may be required to rid the hogs entirely of these pests. Do not fail at the same time to disinfect thoroughly the sleeping quarters. Cresol compound (U. S. P.) may be used for dipping and disinfecting. For dipping, mix in the proportion of two gallons to 100 gallons of water; for disinfecting, in the proportion of three gallons to 100 gallons of water. Although not always as effective as might be desired, coal-tar products of the kind ordinarily sold as stock dips are commonly used to treat hogs for lice. For use they are diluted with water in accordance with directions supplied by the manufacturers. Cresol compound and coal-tar dips may be purchased at the drug store.

Dipping vats are made of various materials, but the most durable is cement. The vat should be set in the ground at a convenient place where there is good surface drainage away from the vat. A suitable size for a vat in which to dip hogs is ten feet long at the top, eight feet long at the bottom, one foot wide at the bottom and two feet wide at the top. It should be deep enough so that the hogs will not strike the bottom of the vat when they plunge. If possible, the vat should be located so that a two-inch drain pipe may lead from the bottom of the vat to facilitate emptying and cleaning, otherwise it is necessary to pump or dip out the contents of the vat in order to clean it. Do not use old filthy dip, but clean and refill the vat before dipping again if the dip has become very dirty or if it has stood a long time in the vat. The end where the hogs enter should be perpendicular and the entrance should be on a slide. The other end should slope gradually, with cleats to provide footholds for the hogs as they come out. A dipping vat is very useful wherever a large number of hogs are kept.

Some hogmen favor hog wallows; others are strongly opposed to them. Filthy hog wallows are a source of danger. Hogs wallowing in or drinking contaminated water are likely to contract disease. However, there are many advantages to be derived from wallows. A cool bath is very soothing to a hog during the hot weather. It cleans the scurf from the skin and protects the hogs from the flies. Crude oil, sufficient to form a thin layer on top of the water, may be poured into the wallow about every ten days. This will tend to keep the hogs free from lice and other skin parasites. If the skin becomes irritated from the oil, its use should be discontinued. Small quantities of coal-tar dip are sometimes added to the water in hog wallows, but there is an element of danger in this practice, as poisoning may result from the absorption of phenol by

hogs which lie in the wallow more or less continuously.

On some of the large hog farms concrete wallows are becoming popular. The cement hog wallow should be located in a shady place and made so as to contain from eight to ten inches of water. A two-inch drain pipe, as recommended for the dipping vat, should be placed in the bottom of the wallow to permit its being cleaned out.

In many cases it may not be possible to put in dipping vats or concrete wallows. If this be the case, the dip, properly diluted according to directions, can be applied with a spray pump or sprinkling can, or else rubbed on every part of the hog by means of a brush or a swab of cotton waste. Care should be taken not to apply the dip stronger than directed.

Another method of controlling lice is to tie gunny sacks or similar coarse cloths around a post and saturate the sacks frequently with crude oil. The sacks should be tied at a proper height so that the hogs may rub against them.

Hogs can be raised successfully in limited quarters if the quarters are kept clean, but they will do much better and stay in better health if they have plenty of pasture. Divide the pasture into several lots so that the hogs can be shifted from one pasture to another. This not only provides fresh pasture, but affords an opportunity to disinfect the pastures which have been contaminated by the droppings from infected hogs. Frequent change of pasture is also one of the best means of reducing worm infestation to a minimum.

Best Barn in Kansas

In the contest conducted by the State Board of Agriculture for the best picture of the best barn in the state, the first prize of \$5 was won by E. G. Meyer, of Woodston, on a barn owned by W. G. Thomas, of the same place. The second prize of \$3 was won by N. Nelson, of Ames, on a barn owned by Nobert Brothers, of the same place. Fred R. Cottrell, of Irving, Kansas, won the third prize of \$2.50. The fourth, \$1.50, went to John Regier, of Whitewater, and the fifth, \$1, to T. F. Doran, owner of Dornwood Farm, Topeka. In all, Mr. Mohler received fifty-seven pictures in this contest, and a number of these were given honorable mention.

The order of the prizes does not necessarily mean that the first prize went to the best barn, since there were requirements in photography that must be met, such as clearness, sharpness of detail, and suitability for reproduction. Consideration, however, was given to the barns, emphasis being laid on their apparent sturdiness and permanency of construction, lighting, ventilation, neatness of appearance, capacity, and conveniences. Mr. Mohler plans to use the winning photographs in the twenty-first biennial report of the Kansas State Board of Agriculture, which is now in process of compilation.

Judging Contest

Contests between stock-judging teams from the different agricultural colleges have been held at the International Live Stock Exposition in Chicago for a good many years. At the International this year, to be held during the first week in December, it is planned to stage a live stock judging contest for teams not connected with any college. After a due process of elimination at the various county and state fairs, the plan is for the champion team of each state to enter the contest at Chicago and compete for grand championship honors. This new feature has been added at the earnest solicitation of the United States Department of Agriculture and the Federal Board for Vocational Education. Such a contest will naturally arouse nation-wide interest and will create the keenest rivalry between the competing teams. A number of scholarships and other valuable prizes will be awarded to the winners.

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Silo in Readjustment Period

ECONOMY in the production of live stock and live stock products is one of the problems that must be considered during the readjustment period through which we are passing. Any equipment or practice which will lower the cost of these products will be in favor during this period. The place of the silo is to take during the period immediately ahead of us is indicated by a review of the live stock sales going on over the country. All kinds of purebred live stock are in great demand, as indicated by the prices being paid. New herds are now being founded, and new interest is being taken in the breeding and feeding of better live stock.

The use of the silo has always been of primary importance in connection with economic feeding, and for this reason we can expect a revival in silo building. The results of experimental work have long since demonstrated the value of the silo and the use of the silo in connection with the economic production of live stock has been accepted as a foregone conclusion. Perhaps the lack of agitation has caused a corresponding lack of interest in building silos, for it is hard to understand why so many persist in getting along without silos year after year while their neighbors build new ones and demonstrate each year that silos save them a large amount of money.

As farms become divided and made smaller, more intensive farming will be required. Greater economy must be practiced and the wasting of feed cannot be tolerated. Early frosts often destroy a late crop of corn which could be saved in the silo and put to a full crop use of such an equipment were at hand. Drouth often causes a similar loss, but it has been found that wherever a crop is grown, even to a good stand of forage, it can be saved through the silo. Many silos were filled last year in sections where a severe drouth caught the corn. Recently I visited in Nebraska and inspected silage which did not contain any corn. The field would not have yielded five bushels per acre, nevertheless there was a splendid crop of forage grown and the silage was of excellent quality and quite normal in feeding value. Again there are crops of forage such as millet, sorghum, kafir, oats, peas, cow peas, soy beans and Sudan grass, which can be stored in the silo better than in any other form. Silage makes the cheapest substitute for hay and pasture. This has been well demonstrated and has been proven of such value that many farmers and dairymen have reduced their hay requirements half and their pasture even a greater ratio. Only the best pastures have proven a profitable crop. Good land devoted to pasture where drouth prevails is a questionable crop and it is difficult indeed to make such land earn dividends that would warrant a hundred or a hundred and fifty dollars an acre investment.

Many farmers who have kept a small herd of cows have figured they did not keep enough to warrant the building and filling of a silo. This is often a mistake, for with the small herd the overhead cost of care and management is often higher than it is with a large herd and the need for economy is still greater. As silos become more numerous it becomes easier to fill them, for the community is largely engaged in the work during the month of September and by exchanging help it is easy to arrange for the filling of the small silo which would only require one day.

For several years hay has not only been scarce but very high priced. It is exceedingly difficult to buy high priced hay and feed with a profit for either milk or beef production. A more liberal use of silage will do away with this high cost of hay and the succulent ration will give better returns. Along with the silo should be used leguminous hays or fodders. It has often been said, and truthfully, if you have silage then you also need alfalfa or clover and the soil needs it too. It has proven a wise and economic policy to combine these two great feeds in order to raise stock cheaply and well.

The silo has been making steady advancement for the past twenty-five years but without doubt 1919 will see more silos constructed on the American stock farms than ever before. In practically every state in the Union the silo has been found to be well fitted to the conditions. From Texas to Washington, and from Maine to Florida, this has proven true. I have found silos in the San Luis Valley in Colorado, which is one of the highest valleys in this country, so high in fact that corn will not grow and the silos are filled with Mexican peas. Again the silo can be found in the dry, sandy, arid plains of Texas and has even proven a success when filled with the cactus. Silos are proving a great success in Northern Minnesota and Wisconsin, where only a green corn crop can be raised owing to the short season. They are perhaps most abundant in the

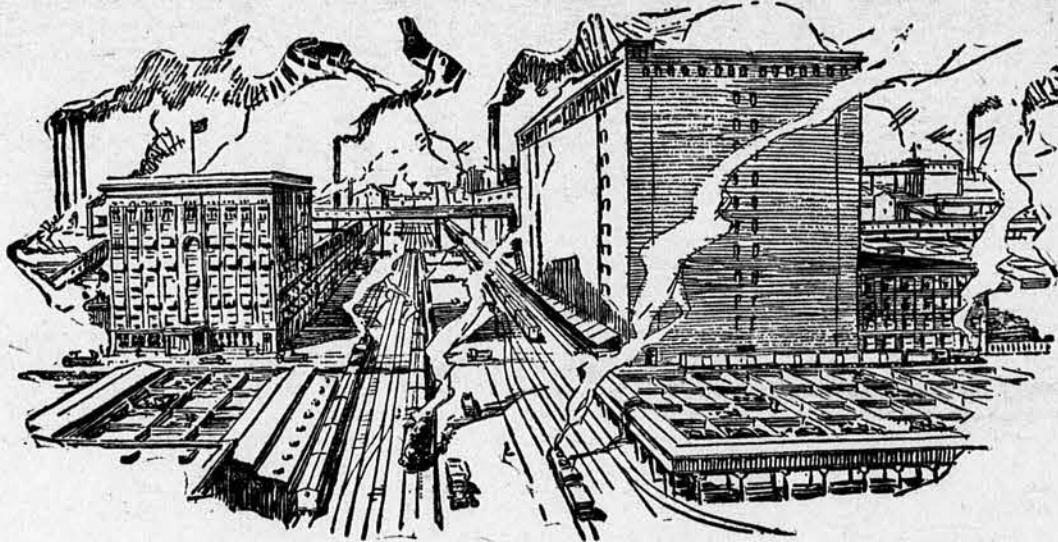
densely populated dairy sections of Wisconsin, Northern Illinois, Central Michigan and Central New York. Iowa has built several thousand silos during the past year and Kansas has at least ten thousand silos to her credit. There is now a great silo drive going on in North-east Missouri where twenty-five counties have banded together through their county agents and sectional directors to carry the message of the value of the silo to every farmer in this great region. Indiana, Ohio and Pennsylvania have long been using the silo and are putting it to even greater use. The southern and eastern states find it necessary to carry some live stock on their farms in order to keep up the fertility. With the silo they can feed economically and utilize all the forage they grow, and so it is in keeping with economic production and with advanced and scientific farming that the silo is an important part in this readjustment period.

—A. L. HAECKER.

What Big Holdings Mean

When the United States Department of Agriculture, through the Bureau of Markets, reports that the cold storage holdings of all kinds of meat and meat products, including lard, amount to hundreds of millions of pounds, perhaps considerably over a billion pounds, the opinion is formed that there is much hoarding. Stocks in cold storage were large at the time of the report for January 1, 1919, and their total was 1,296,000,000 pounds of meat and meat products. At the average rate of consumption for the United States in 1918 this quantity of meat food, enormous enough though it may seem, was after all sufficient to last the United States for only twenty-three days if no other meat were eaten.

Keeping a man fit to fight overseas is all right. How about keeping him fit to fight, now he's back home and on the job again?



Suppose you were managing Swift & Company

Knowledge of the American appetite is one of the requisites of the manager's job.

Suppose you are the manager. You know that more meat is eaten in cold weather. A cold snap begins suddenly, butcher shops enjoy a thriving trade and call for meat. The rush of orders uses up your stocks. Competition among buyers sends the price up.

The next winter, when you are expecting the usual good demand along comes the influenza epidemic and people stop eating meat, leaving a big lot of perishable food on hand!

What would you have done then, if you had been managing Swift & Company? Of course you would have had to reduce prices to get rid of the meat—and taken a loss.

Demand is the queerest thing in the world.

No one ever has put his finger on it. Weather, fashion, business, all control men's appetites, and they buy what they want to eat.

These touches and flurries in different parts of the country cause the price to bob up and down like a cork and bait pulled by an excited fish.

After operating Swift & Company you would see how the public appetite for meat controls the price of live and dressed beef. You would find that the packer doesn't like these fluctuations any better than you do, and that he is powerless to stop them.

You would also find that he has to use the keenest judgment and the best of management to get his profit of a fraction of a cent per pound.

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THE HOME-MAKER'S FORUM

ETHEL WHIPPLE, Editor

Letters from readers are always welcome. You are urged to send in helpful suggestions, to give your experiences, or to ask questions. Address the Editor of this Department.

The Wheatfield

I could put on canvas, perhaps, if skill were mine,
These long, gold rows of wheat where the reapers have been,
Laying their shadows down, soft line by line
On the dim-sunned stubble, brown over tender green.
I might set even the frame of its far, blurred edge,
Young vines and old, dark trees, and the glimpse of blue
Where the sky—or the river's mock of sky—a wedge
Of shining wonder, 'twixt green and green breaks through.

But no smooth skill of color, or wistful brush—
Even if every long-dead artist's prayer Were answered here in me—could catch the hush
Of the alayed wheat, or the sweet, ripe-smelling air,
Or the cricket-rasp that calls the twilight down.
He paints the wheat field who has turned its soil,
Scattered its seed, felt its young hope his own,
Set its example in his own brave toll.

He who must live in cities—use his arm
For spreading musty colors, or marshaling men
To muster duties—can never know the charm
Of the rich, quiet harvest, set again
In golden aisles. From fruitful age to age
Only the men of open spaces guide
The uncanceled beauty of their heritage.
Know their part in it, and are satisfied.
—Katharine Atherton Grimes.

A Lover of Country Life

Because people think pleasures are few in the country, they are leaving the farms by the dozens. One seldom meets a young person these days who is planning to live on the farm. I am a woman who lives on a farm and I enjoy country life so much I feel sure others would, too, if they could only be made to see the bright side.

The farm woman seems to be thought, the drudge of the world. Yet if the "shop girls" of the large cities and the country women were to change places it would be the country women who would suffer most, for they could never work under "a boss" and "take talk." Besides, like the flowers, they need the fresh air and the sunshine.

It is true farm families are in a way tied at home, but so are the city people, and the country life is much more innocent and pure. In towns one must see and hear too much. Yet few even of the country children want to stay on the farm. They know there is no quick money in farming and that farm men and women must practice thrift and economy to make ends meet.

The facts are that if the farmer should quit business all other trades must die, for the farm is not only the foundation of all other works in the world, but the only work made directly by the Father's hand. Those who really think farm work is a disgrace, yet love the things made by God, should turn to the beginning and read the words: "In the beginning God created the heavens and the earth. . . . And God said, 'Let the earth bring forth grass and herb-yielding seed and the fruit trees yielding fruit.' * * * For the Lord God had not caused it to rain upon the earth, and there was not a man to till the ground." —LYDIA SMYRES, Cherokee County.

Red Cross and Home Nursing

The scarcity of trained nurses growing out of the war has made evident the need for a wider knowledge of the principles of home nursing. To help meet this need, the Red Cross is giving systematic instruction in home hygiene and home care of the sick in communities where short courses in those subjects are desired. Such instruction is always given by an accredited Red Cross nurse, and while it does not make those taking the course nurses in any sense, it does introduce women to the elementary principles of home nursing and better equip them to take care of sickness in their own families or to volunteer

for public health work in the community in case of emergencies, such as an epidemic, flood, or other disaster. It is carried on through the county chairman of nursing activities under the direction of the Red Cross. In counties where there is a home demonstration agent having home nursing as one of the county projects, the Red Cross will cooperate with the agent and the county farm bureau in carrying out this work.

Love and Praise

I wonder if there is any mountain in all the wide, wide world that love and praise would not, in time, remove! Try them, mother, on that wayward boy or girl you have been breaking your heart over. Don't, in indignant protest, cry, "But I love them! I always have! Why, they're mine; given me by God!"

It is true—but maybe the love hasn't had just the right quality. Maybe—and this is the test, the real test of the love that tells—it has not been tinged quite deeply enough with the God-quality that gives to love its power; the quality that "beareth all things, hopeth all things, endureth all things."

Just as there are flowers and flowers, so there is love and love, and as one blossom gives forth sweetness and another does not, so it is with love.

In the stillness that none but your own soul and God can enter, ask what sort you are giving—whether it be a selfish, demanding, shut-in love, or the God-love that never falters or grows cold.

The answer will come if only you are willing to accept the knowledge given, even though it mean bitter facing of some self-lack you had not dreamed existed.

"Love suffereth long, and is kind." Love accepts heartache, if it comes, and draws not back. Love never fails, if it be love worth the name. And I do not believe there is a normal boy or girl on the face of the earth today who can continuously hold out against the home love that gives itself in God-directed sweetness, hand in hand with judicious approval and praise.—L. D. STEARNS in American Motherhood.

Let Children Have Flowers

If the round of one's activities confines his attention to the sordid things of life; if he never takes the time to see and appreciate the numberless appeals that nature constantly makes to the finer instincts of his being, he will eventually lose the power of response and become blind to the beauties, deaf to the harmonies of his surroundings.

I can imagine no greater misfortune befalling a man than the realization in the later years of his life that he has passed through a world where others have seen beauty in myriad forms and heard harmonies of song in every bush and from every tree, to which he has been blind and deaf.

We can do our children no greater wrong than to deprive them in their earlier years of the means of cultivating the highest susceptibilities of their nature. On every farm, within the narrow limits of every city lot where children grow, in every school yard there should be as great a wealth as possible of blooming plants and shrubs, and the children's attention should be directed to the wonderful adaptation of insect to flower, of seed distributing attachments, the pappus of the dandelion, the down of the thistle, the wing of the maple, the parachute of the linden.

Once opened to the beautiful activities of nature, the eye of the child will never cease to find new wonders; his

mind grows into the habit of seeking relations of cause and effect; his soul becomes filled with admiration for the skill with which part has become adjusted to part, and he ultimately finds himself possessed of a source of pleasure which outlasts all the misfortunes of life.—O. F. DAVIS, Colorado Agricultural College.

Sponging and Pressing

When sponging materials it is better to rub with the nap or the weave, using a cloth dampened in a sponging liquid to brighten the color and remove the dust. Two commonly used sponging liquids are ammonia water and potato liquid. To make ammonia water use one tablespoonful of household ammonia to every quart of water. The liquid aids in brightening the color and freshening the material.

Potato liquid is made by grating two medium-sized potatoes into one quart of clear water. Stir the mixture well and then pass it through a fine sieve. Let it settle, and pour off the clear liquid. Instead of using soap and water for cleaning delicate fabrics, this potato water may be used. Bran water, made in the same way, may also be used. It imparts a slight dressing to the material.

In pressing materials which have been sponged it is best to cover the right side, which is damp from sponging, with a dry muslin cloth and to press with a hot iron. In all other instances the muslin cloth may be slightly dampened. It is advisable not to rub the iron over the cloth in pressing but to lift it and apply it firmly to one part and another until the material is dry.

When the material is very heavy and it is not thoroughly dried when the pressing cloth is removed, the iron should be applied to the wrong side and the material pressed until dry. The iron should not be used directly on the right side of woolen materials, as a shiny surface will result.

A very satisfactory way to handle

such delicate materials as chiffon, net, and tulle, is to steam them. Place about one inch of water in the tea kettle and allow it to boil violently. Hold the material over the spout of the kettle and shake it until the creases are removed. The steaming is more effective if a tea kettle with a straight spout is used.—Making Clothes Last Longer, Wisconsin College of Agriculture.

Iceless Refrigerators

If it is necessary to get along without ice in hot weather, food can be kept at a low temperature in an iceless refrigerator. These vary in construction, but all use the principle of lowering temperature by the evaporation of water.

A box or wire frame having shelves and a door is covered with canvas, burlap or carpet, and placed in a current of air. It may stand in a shallow pan of water and should have a pan or can of water on top with strips of cloth reaching into it and connecting with the box covering, or the can may have a slow leak which will saturate the box cover. The evaporation of water cools the temperature of the box sufficiently for food storage.

What Shall We Wear?

The patterns illustrated this week include designs for the little boy or girl, the young lady, cool, comfortable one-piece house dresses for the housewife to wear at her work, negligees for her moments of rest, and a stylish guimpe and a sleeveless jacket for dress up occasions.

The guimpe is a very attractive part of a coat suit. It may be of satin, silk, or cloth, in contrasting color. The sleeveless jacket is nice for warm weather wear. It may be worn with a skirt of material to match the collar, or of white or contrasting cloth, silk, crepe, or linen.

The two patterns are sent for 10 cents. No. 2889 is a pleasing style for forlard, embroidered crepe, or voile, or for serge, gabardine, or satin. The under-

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waist and sleeves may be of crepe de chine or georgette, chiffon, or net. Linen and organdie or serge and satin are good combinations for this design.

For the negligee, crepe, crepe de chine, lawn, albatross, batiste, silk, satin, cashmere, and gabardine, are suitable materials.

The house dresses are easily made and lend themselves readily to any of the serviceable and pretty wash fabrics now in vogue. Either would be neat and attractive in gray or blue chambray with a belt, and sleeve bands of plaid or

FASHION DEPARTMENT

All patterns, 10 cents.



No. 2712—A Comfortable Negligee: Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. The medium size requires 5/8 yards of 36-inch material. No. 2864—Ladies' House Dress: Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38 requires 5 1/2 yards of 36-inch material. Width of dress at lower edge is 2 1/2 yards. No. 2869—A Smart Glimpe and Sleeveless Jacket: Cut in four sizes—small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. A medium size will require 1 1/2 yards of 36-inch material for the glimpse, and 2 1/2 yards of 30-inch material for the jacket. No. 2870—Ladies' House Sacquet: Cut in four sizes—small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. Size medium requires 1 1/2 yards of 36-inch material.



No. 2883—Boys' Suit: Cut in five sizes—2, 3, 4, 5 and 6 years. Size 4 requires 2 1/2 yards of 44-inch material. No. 2871—A Simple Dress: Cut in four sizes—2, 4, 6 and 8 years. Size 4 requires 2 1/2 yards of 36-inch material. No. 2863—Ladies' Apron: Cut in four sizes—small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. A medium size requires 5/8 yards of 36-inch material. Width at lower edge is about 2 1/2 yards. No. 2889—Misses' Dress: Cut in three sizes—16, 18 and 20 years. Size 18 will require 5 1/2 yards of 36-inch material if skirt is made with tucks, and 4 1/2 yards if made without tucks. Width at lower edge is about 1 1/2 yards.

checked gingham or of white or contrasting material, or they might be made of checked gingham with trimming of the solid color.

For the little girl's dress, any of the pretty wash materials will be appropriate. This is also a good model for gabardine, serge, flannelette, or velvet. The right front overlaps the left, buttoning at the side. The small boy's suit may be made of galatea, gingham, seersucker, linen, khaki, or drill. As here shown, striped and plain galatea were combined. Serge, corduroy or khaki could be used for the trousers, and cambric, percale or gingham for the blouse.

Canning Compounds Harmful

Insuring the keeping qualities of canned foods by means of canning compounds is a practice that cannot be continuously and extensively carried on without endangering the health of the household. Foods spoil because of the action of bacteria. Chemical preservatives owe their preservative power to their poisonous effect upon these microbes. It is fair to assume that the cells of the human body are injured by any chemical strong enough to destroy these organisms. It is very doubtful whether such compounds can be continuously used, even in minute quantities, without eventually undermining the health of the consumer. By the use of scientific canning methods it is possible to destroy or restrain the growth of microbes and successfully can fruits and vegetables without resorting to the use of such chemicals.

Creole Chicken

- 1 medium sized chicken
- 6 tomatoes, or one No. 2 can of tomatoes
- 3 sweet red peppers, cut in small cubes (if desired)
- 3 sweet green peppers, cut in small cubes, or one No. 2 can peppers (if desired)
- 1/2 pound ham or two or three slices bacon chopped fine
- 1 bay leaf
- 1 tablespoon chopped parsley
- 2 teaspoons salt
- 1 onion size of egg
- 2 tablespoons butter or bacon drippings

Some people will prefer this without the peppers. Place the chicken with a cup of boiling water in the fireless cooker vessel, cover and simmer for half an hour. Brown the chopped onion in the fat. Simmer tomatoes for fifteen minutes with the bay leaf, strain and pour over the onions. Add minced ham and parsley and cook for fifteen minutes longer. To this mixture add the chopped peppers and chicken stock and bring to a boil. Place the chicken in the cooker vessel, pour over the mixture of vegetables and let it boil five minutes. Put at once into the fireless cooker. With hot soapstones let the chicken stay in the cooker for two hours; without soapstones for three hours.

Fish Salad with Rice

Remove bones and skin from the contents of one can of salmon or tuna fish, or from cold boiled codfish, and mince finely. Add an equal amount of cold boiled rice and season with salt, pepper and vinegar. Stir in plenty of salad dressing and set away for a while in a cold place. When ready to serve, add a little crisp celery finely cut, some cubes of cucumber or a few chopped nasturtium stems, and shape in molds moistened with cold water. Turn out on a plate of lettuce leaves, crisp shredded cabbage, or celery tips; garnish with a spoonful of dressing and with stuffed olives cut lengthwise, or with nasturtium blossoms and leaves.

The Reward of Politeness

They were entertaining the minister at dinner, according to the London Telegraph, and after dessert little Johnny said:

"Won't you take another piece of pie?" The minister laughed. "Well, Johnny," he said, "since you are so polite, I will have another."

"Good!" exclaimed Johnny. "Now, ma, remember your promise. You said if it was necessary to cut into the second pie I could have another piece."—Youth's Companion.

Freedom from dust is not only a matter of neatness, but insures some protection against disease. A dry cloth will not absorb dust. Before using the dust cloth, dip it in water and wring it as dry as possible, or dampen it with oil. Wash out the cloth and dry thoroughly after using. Keep several absorbent cloths on hand and change to a fresh one frequently.

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You smack your lips over it, because you like its taste, its quality, its genuine gratification. It satisfies thirst.

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Kansas Fairs in 1919

The following is a list of the fairs to be held in Kansas in 1919, their dates (where such have been decided on), locations and secretaries, as reported to the State Board of Agriculture and compiled by Secretary J. C. Mohler:

Kansas State Fair—A. L. Sponsler, secretary, Hutchinson; September 13-20.

Kansas Free Fair Association—Phil Eastman, secretary, Topeka; September 8-13.

International Wheat Show—E. F. McIntyre, general manager, Wichita; September 29-October 11.

Allen County Agricultural Society—Dr. F. S. Beattie, secretary, Iola; September 2-5.

Allen County-Moran Agricultural Fair Association—E. N. McCormack, secretary, Moran; September 3-5.

Barton County Fair Association—Porter Young, secretary, Great Bend; September 30-October 3.

Bourbon County Fair Association—W. A. Stroud, secretary, Uniontown; September 9-12.

Brown County-Hiawatha Fair Association—J. D. Weltmer, secretary, Hiawatha; August 26-29.

Clay County Fair Association—O. B. Burtis, secretary, Clay Center; September 1-5.

Cloud County Fair Association—W. H. Dambarger, secretary, Concordia; August 26-29.

Coffey County Agricultural Fair Association—C. T. Sherwood, secretary, Burlington; October 5-10.

Comanche County Agricultural Fair Association—A. L. Beeley, secretary, Coldwater; September 10-13.

Cowley County-Eastern Cowley County Fair Association—W. A. Bowden, secretary, Burden; September 3-5.

Dickinson County Fair Association—T. R. Conklin, president, Abilene; September 16-19.

Douglas County Fair and Agricultural Society—W. E. Spaulding, secretary, Lawrence.

Ellsworth County Agricultural and Fair Association—W. Clyde Wolfe, secretary, Ellsworth; September 2-5.

Ellsworth County—Wilson Co-operative Fair Association—C. A. Kyner, secretary, Wilson; September 23-26.

Franklin County Agricultural Society—L. C. Jones, secretary, Ottawa; September 23-26.

Franklin County—Lane Agricultural Fair

Association—Floyd B. Martin, secretary, Lane; September 5-6.

Gray County Fair Association—C. C. Isely, secretary, Cimarron; September 30-October 3.

Greenwood County Fair Association—William Bays, secretary, Eureka; August 26-29.

Harper County—The Anthony Fair Association—L. G. Jennings, secretary, Anthony; August 12-15.

Haskell County Fair Association—Frank McCoy, secretary, Sublette; about September 15.

Jefferson County—Valley Falls Fair and Stock Show—V. P. Murray, secretary, Valley Falls; September 2-5.

Labette County Fair Association—Clarence Montgomery, secretary, Oswego; September 24-27.

Lincoln County—Sylvan Grove Fair and Agricultural Association—Glenn C. Calene, secretary, Sylvan Grove; September 2-5.

Lincoln County Agricultural and Fair Association—Ed M. Pepper, secretary, Lincoln; September 9-12.

Linn County Fair Association—C. A. McMullen, secretary, Mound City.

Marshall County Stock Show and Fair Association—J. N. Wanamaker, secretary, Blue Rapids; October 7-10.

Meade County Fair Association—Frank Fuhr, secretary, Meade; September 2-5.

Mitchell County Fair Association—W. S. Gabel, secretary, Beloit; September 30-October 4.

Montgomery County Fair Association—Elliott Irvin, president, Coffeyville; September 16-20.

Morris County Fair Association—H. A. Clyborne, secretary, Council Grove; October 7-10.

Nemaha Fair Association—J. P. Kiezer, secretary, Seneca; September 2-5.

Neosho County Agricultural Society—Geo. K. Bideau, secretary, Chanute; September 29-October 4.

Norton County Agricultural Association—A. J. Johnson, secretary, Norton; August 26-29.

Pawnee County Agricultural Association—H. M. Lawton, secretary, Larned; September 24-26.

Phillips County—Four-County Fair Association—Abram Troup, secretary, Logan; September 9-12.

Pottawatomie County—Onaga Stock Show and Carnival—C. Haughwout, secretary, Onaga; September 24-26.

Pratt County Fair Association—W. O. Humphrey, secretary, Pratt.

Republic County Agricultural Association—Dr. W. R. Barnard, secretary, Belleville; August 19-22.

Rooks County Fair Association—F. M. Smith, secretary, Stockton; September 2-5.

Russell County Fair Association—H. A. Dawson, secretary, Russell; September 30-October 3.

Smith County Fair Association—J. M. Davis, secretary, Smith Center; September 2-5.

Trego County Fair Association—S. J. Straw, secretary, Wakeeney; September 9-12.

Wilson County Fair Association—Ed Chapman, secretary, Fredonia; August 18-23.

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 25 words, including address, will be inserted free of charge for two weeks, for bona fide seekers of employment on farms.

AGENTS WANTED

AGENTS—MASON SOLD 18 SPRAYERS and Autowashers one Saturday; profits \$2.50 each; square deal; particulars free. Rusler Company, Johnstown, Ohio.

MISCELLANEOUS.

RICHMOND AND MONTMORENCY cherries, \$3 24-quart crate. Address Vanstrom & Son, Edgar Greenhouse, Edgar, Neb.

OUT OF SIGHT CATTLE POKE—BEST, cheapest and most effective poke made. \$1 per dozen; sample, 10c. F. I. Burt, Shallow Water, Kansas.

THRASHING OUTFIT FOR SALE cheap. Case 50-horse engine, 30-inch Buffalo-Pitts separator, tank, etc.; six-bottom plow; all first class condition. Write or come and see. Prices right. Carl Miller, Belvue, Kansas.

CORN HARVESTER—ONE-MAN, ONE- horse, one-row, self-gathering. Equal to a corn binder. Sold to farmers for twenty-three years. Only \$25, with fodder binder. Free catalog showing pictures of harvester. Process Corn Harvester Co., Salina, Kan.

CATTLE.

FOR SALE—REGISTERED JERSEY cow, three years old. Also a few young bulls sired by Owl's Pogis Torono. R. O. McKee, Marysville, Kansas.

HIGHLY BRED HOLSTEIN CALVES, either sex, 15-16th pure, from heavy milkers, five to seven weeks old, beautifully marked. \$25, crated and delivered to any station, express charges paid here. Send orders or write. Lake View Holstein Place, Whitewater, Wisconsin.

THE STRAY LIST.

TAKEN UP ON THE 21ST DAY OF MAY, 1919, by B. E. Swarts of White Church, Wyandotte County, Kansas, one bay mare, 16 hands high, no marks or brands. William Beggs, County Clerk, Wyandotte County.

TAKEN UP—BY J. A. ROBERTSON, OF Rago, Kingman County, Kansas, on the 24th day of April, 1919, one heifer, color red, weight 700 lbs., letter "V" on right hip, both ears clipped. Appraised at \$65. Geo. Howe, County Clerk.

TAKEN UP ON THE 14TH DAY OF MAY, 1919, by Ray Roberson of Route 1, Crestline, Shawnee Township, Cherokee County, Kansas, one red sorrel mare 16 hands high, weight 1,200 pounds, small curb inside left front ankle. Appraised at \$135. Anna Masterson, County Clerk.

TAKEN UP—BY PAUL BALCAEN, Florence, Grant Township, Marion County, Kansas, on the 15th day of August, 1918, one red steer, weight 1,100 pounds; two notches in left ear, tip of both ears cut off. O. V. Heinsohn, County Clerk.

TAKEN UP—BY LEE SPICER OF KI- owa Township, Barber County, Kansas, on or about the first day of October, 1918, one light red heifer branded with "T" and one other letter undecipherable. O. T. Thom, County Clerk, Medicine Lodge, Kansas.

DOGS.

SHEPHERD PUPPIES (FEMALES), \$5.00 each. From natural breeders. H. W. Chestnut, Kincaid, Kansas.

AIREDALES, COLLIES, AND OLD ENG- lish Shepherd dogs. Trained male dogs, brood matrons, pups all ages. Fleishman, New Zealand, and Rufus Red Belgian rabbits. Send 6c for large instructive list of what you want. W. R. Watson, Box 128, Oakland, Iowa.

HONEY.

REGARDING THE LAST WORD IN FINE honey, write to Drexel, the Bee Man, Crawford, Colorado.

HONEY—CHOICE ALFALFA, 60 LBS., \$12.50; 120 lbs., \$24. Amber Dark Honey, 60 lbs., \$11; 120 lbs., \$20. Bert W. Hopper, Rocky Ford, Colo.

SEEDS AND PLANTS.

TWO MILLION CABBAGE PLANTS, Surehead, Ballhead, Flat Dutch, Copenhagen. \$2.50 thousand, 35c hundred. Address Vanstrom & Son, Edgar Greenhouse, Edgar, Nebraska.

AUTO TIRES.

TIRES—FORD, \$6.75; LARGER SIZES equally low. Lowest tube prices. Booklet free. Economy Tire Co., Kansas City, Mo.

REAL ESTATE.

RED RIVER VALLEY PRAIRIE LANDS, Wilkin Co., Minn. Improved and unimproved. Prices ranging from \$45 to \$125 per acre. Send for our list or call and see us when in Minneapolis. We have been in business since 1885. Thorpe Bros., 1-206 Andrus Bldg., Minneapolis, Minn.

Chickens never wash, as many birds do, but cleanse themselves of insects by wallowing in soil. For this reason every poultry house should be provided with a dust box.

Real Estate For Sale

HOME FARM, 320 ACRES

Out 6 1/2 miles. Good buildings. Fine water, 160 wheat, half with sale; some alfalfa. Only \$8,500, with \$2,500 cash, balance long time. One good 160, out 9 miles, small house, 100 smooth, 60 wheat, 40 spring crops, one-fourth with sale; shallow to water; only \$2,500, with \$500 cash, balance terms. Have other farms and ranches on small payments now, another payment after harvest.

R. C. BUXTON, Utica, Ness County, Kansas
SOUTHEASTERN KANSAS—Farms, all sizes; lowest prices. Terms, \$1,000 and up. Send for booklet. **THE ALLEN COUNTY INVESTMENT CO., Iola, Kansas.**

FARM FOR RENT

Half section wheat land 2 miles east of Preston, Pratt County, Kansas. Seven room house, big barn, good water, wind mill, cribs, granaries, etc. Fenced and cross-fenced. W. H. Maxwell, 420 Jackson St., Topeka, Ka.

FOR SALE—\$2,500 CASH

Stock ranch in coast mountains of Oregon. Sixty acres. Very easily cleared. Five in cultivation. \$1,500 worth cedar on place. Buildings fair. Good soil. Unlimited range for stock. Bees do fine. A trout pond easily made. Large pure cold stream, fine water power. Can pasture hundreds of cattle at 75 cents each month for six months of the year. Address

OWNER
1623 MACADAM ST., PORTLAND, OREGON

Phillips County, Kansas, Land

A section of choice level wheat land, well improved, six miles from Logan, Kansas; 400 acres fine wheat, 80 acres corn. Share of crop goes to purchaser. Price, \$50 an acre. Good terms.

A section of choice river bottom land, the best farm in Phillips County, Kansas, well improved; 50 acres alfalfa, 200 acres wheat, 150 acres corn and other crop. Close to market, on Solomon Valley highway. Price, \$75 an acre. Easy payments.

McAuley & Eldred, Logan, Ks.

— LAND —

If you have land to sell in Western Kansas, send us numbers and price.
Niquette & Bosworth, Garden City, Kansas

— OTTAWA —

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PURE BRED POULTRY

SCORED BIG BLACK LANGSHANS, laying strain, guaranteed. Cockerels, pullets, eggs. H. Osterfoss, Hedrick, Iowa.

NARRAGANSETT TURKEYS, STOCK and eggs for sale. Mrs. John Mitchell, La-fountain, Kansas.

PURE-BRED WHITE WYANDOTTE eggs—Fifteen, \$1.25; 100, \$6. Elsie Acheson, Palco, Kansas.

BABY CHICKS—GUARANTEED BEST grade. White Leghorns, Brown Leghorns, \$16 per hundred; Barred Rocks, Buff Orpingtons, \$17; Reds, \$18, postpaid, live arrival guaranteed. Same rate on twenty-five or fifty. Booth Hatchery, Clinton, Missouri.

POULTRY WANTED.

FOR BETTER PRICES, EXPRESS YOUR poultry and eggs to "The Copes," Topeka, Kansas. Established 1883.

WHEN WRITING TO ADVERTISERS PLEASE MENTION KANSAS FARMER

Revenue Officers on Salary

Reports have reached the Bureau of Internal Revenue that some taxpayers are under the impression that revenue agents sent out to check up income tax returns are receiving commissions on amounts found to be due the government. The Bureau of Internal Revenue has issued a statement declaring such impression to be erroneous and wholly without foundation. Revenue officers engaged in checking up returns, it was stated, are on a salaried basis, and there is no incentive to add to the correct amount of the tax due.

Tools and materials should be kept in their proper places. Do not keep all sizes of bolts or screws mixed together in a single receptacle, but fit up suitable boxes or bins so that the supplies may be accessible on short notice.

HELPFUL POULTRY HINTS

Practical Ideas on How to Fill the Egg Basket and Increase Profits

Grading Decreases Egg Losses

THE egg candling records in Kansas for the years 1916, 1917 and 1918 show that extra care in handling eggs during the spring and summer season has brought about a material decrease in the number of rotten eggs. These reports, obtained by the food research laboratory of the Bureau of Chemistry from Kansas shippers, show that in August, 1916, receipts at the packing house contained 11.7 per cent rotten eggs, while the average from June to October, inclusive, was 4.4 per cent. During August, 1917, the eggs as they reached the packing house contained 7.7 per cent "rots" with a June to October average of 2.8 per cent, while in August, 1918, rots decreased to 5 per cent and the June to October average was 2.4 per cent.

These figures are even more significant when considered from the viewpoint of temperature. The summer of 1916 was rather warm. The weather bureau figures indicate that June, July and August had an excess of temperature of about 1.6 degrees Fahrenheit. The same months in 1917 gave a sub-normal average of 0.4 degrees Fahrenheit, which, of course, helped to keep the eggs good. However, the summer of 1918 was hot. The average was 4.4 degrees Fahrenheit above usual summers. In spite of the unfavorable weather conditions the rotten eggs in August which was furthest from the average, dropped 2.6 per cent as compared with the relatively cool August of 1917.

The shippers whose egg receipts are included in the above statement have co-operated with the United States Department of Agriculture in advocating and practicing the buying of eggs the year around on a graded basis. Therefore, they are getting higher quality eggs than the shippers who buy "case count." If the total number of eggs which rotted in Kansas during the three years cited could be obtained, the average would be higher than the figures given here, it is believed.

It is shown, also, that nearly one per cent of rotten eggs were found during April and May, when all eggs are supposed to be so good that there is no need for shippers to candle, not even for storage purposes. However, three rotten eggs in each case of storage packed eggs means that somebody pays on a carload of 400 cases for the transportation and storage of 100 dozen useless eggs.

Color of Baby Chicks

Mrs. W. E. F., who is evidently a beginner with pure-bred chicks, is worried because some pure-bred White Plymouth Rock chickens hatched from eggs purchased as from pure-bred stock, show a dark smoky color when hatched, although becoming white later. She asks if this is an indication that the chicks are not pure.

The appearance of dark color is not an indication of impurity. Chicks of pure white breeds frequently are dark in color when hatched. The baby chick is quite often different in color from the mature fowl. Barred Rock chicks, for example, are black when hatched.

Poultry Profitable Side Line

A net return of nearly \$300 in two and one-half months from a side line on the farm is the record made by a Gendale, Ariz., poultry raiser. The figures are reported by a poultry specialist of the U. S. Department of Agriculture. In connection with his general farm work he kept a flock of 210 hens, which produced an average of ten dozen eggs during the four winter months. During February the eggs brought an aver-

age of 55 cents a dozen, or approximately \$150, while the feed bill, including feed for the young chicks, amounted to \$50. The following month the flock showed a profit of a little over \$100. During the first half of April the gross receipts were \$97.50. In April the extension specialists conducted a culling demonstration on this farm and week fifty-six hens from the flock. The hens were kept in a separate pen for a week following the demonstration, and made practically no returns in egg yields. This indicates, the specialist says, that the remaining 154 hens probably made the record with which the flock 210 had been credited.

Egg Storage and Distribution

Notwithstanding all the efforts that have been put forth by poultry breeders to produce better laying hens—hens that will be efficient winter-egg producers—it still remains that the great volume of eggs is produced during the spring months, and thus far no system utilizing all of the spring output of eggs has been devised other than that now employed by the commission men who buy the eggs and put them in the cold storage plants. Under the present system the enormous quantities of eggs are saved and made available for use during the winter when the production is lowest. Without this system of handling the product of the hen, eggs would be so scarce, and the price would be high, during the winter, that, except in a few cases, they could not be considered as an article of food. The cold storage egg business is a big business, and, like the packing business, railroad business, and other big businesses, there are times when it needs regulating. No one yet has been able to devise a system of handling the egg crop so that eggs are available at all times of the year, that is better than the system now employed.—G. D. McCLASKEY.

In an effort to promote the breeding of high laying strains, the Nebraska Agricultural Experiment Station has announced an egg laying project to be known as the Nebraska National Egg Laying Contest. Poultry breeders will be invited to send hens to the university farm, where they will be tested to test their laying qualities. Information also will be obtained on the cost of egg production and on various problems of the poultry industry. Present plans provide for 100 entries of standard-bred pullets each. A five-acre tract has been set aside at the university farm for the project, which will be under the immediate supervision of the department of poultry husbandry.

Even if chicks have been hatched early, pullets that will lay in the fall and winter can not be looked for until the early chicks are kept growing from the very start. Chicks should always be kept away from cold, wet ground; they should not be allowed to run outside until they reach an age and size enabling them to withstand such conditions. Inside runs where the floors are covered with sand are better. Chicks should be fed little and often, and kept moving with good, clean grain mixtures through in chaff, and a dry meat or milk meal in the hopper. Milk in most any form to chicks is a sure life preserver.

In most communities there is a great opportunity for marketing eggs and poultry by parcels post. Often this plan gives better satisfaction than the usual method.

GENERAL FARM ITEMS

Is there open water about the yard at birds may get into? They need water to drink and bathe in at this time of year and will very soon show their appreciation of water placed for them. Put the pans on posts, or something which will protect them from cats.

Do Not Overfeed Calf

W. S. Morris County, asks about the quantity of skim milk to feed a calf. He is having his first experience in raising calves by hand.

We would urge those who are inexperienced in raising calves on skim milk to guard against overfeeding. This is a mistake often made and is the most common cause of scouring and other digestive troubles occurring in raising calves by hand on separated milk. The calf does not need more milk because the butter fat has been removed. Assuming that this is necessary is an error so often made. Skim milk is unbalanced in its feed-nutrients. It contains an excess of protein and of course is short on fat. Feeding more does not overcome this shortage of fat. The lack of fat can only be met by getting the calf to eating starchy grains, such as corn, kafir, or oats, as soon as possible. When properly digested, the starch is substituted in the animal body to a considerable extent for fat. There is no provision in the digestive system of a calf to handle starch, however, until it is three or four weeks old. This is the reason it is necessary to feed the calf whole milk for three or four weeks, or until it begins to eat a little grain.

The skim milk calf fed from a bucket keeps its milk down so rapidly that its appetite is only half satisfied, even though it has taken all it can properly digest. A good rule to follow in feeding calves is always to keep them a little hungry. If the calf does not show strong appetite for more, there is something wrong with it or too much milk has been given.

The average calf at the age of two to three weeks when it can be gradually started on skim milk should not as a rule be given more than three to four quarts at a time, and at no time in the feeding of a skim milk calf is it necessary to feed over a gallon at one feeding. If there is an abundance of skim milk, thrifty calves may be fed up to five quarts at a feeding until they are three months old.

In feeding skim milk calves they should always be fed separately. The practice sometimes followed of allowing two or more calves to drink from the same bucket or a trough into which the milk is poured is almost certain to lead to trouble.

It is of the greatest importance to get the skim milk calf to eating grain as early as possible, since the grain is necessary to make up for the fat removed from the milk. Usually they will begin to show a little appetite for grain by the time they are a month old. This can be encouraged by sprinkling a little grain in the bottom of the bucket after they have cleaned up their milk.

At the first indication of indigestion, which is usually shown by a strong odor in the manure, the amount of milk should be cut down to a third of the normal output for two or three feedings. It helps matters sometimes to give three ounces of castor oil in the milk to a calf showing the first signs of indigestion. Digestive troubles are far easier to prevent than to cure and one who would succeed in raising skim milk calves should watch closely for the slightest indication of trouble and apply the necessary preventative measures.

Canned the "Sas" in Kansas

Kansas boys and girls, 4,386 strong, enrolled last year in clubs organized to conserve surplus fruits and vegetables. The result was 521,910 quarts of canned food products and 31,050 quarts of jelly. The total estimated valuation was \$268,555.80. The amount would have been

larger but for the dry summer and the consequent shortage of fruits and vegetables in the state. These clubs for young people were organized co-operatively by the United States Department of Agriculture and the State Agricultural College. All Kansas is behind the work that the boys and girls are doing in the clubs. The Kansas Bankers' Association paid the expenses of fifteen club members—state project winners of 1918—to the "Farm and Home Week" held at Manhattan in February of this year.

Killing Plant Lice

Plant lice are apt to become a serious pest in the home garden. Practically every plant that grows seems to have a plant louse of its own. These aphids, or plant lice, lay their eggs in the stalks of old plants or leaves and go through the winter in this form. If the garden ground had been carefully plowed in the fall, turning under all the stalks of old plants, the harboring places of these and other insect pests would have been destroyed. Early in the spring the best gardeners always burn up all the trash and rubbish about their gardens in order to destroy as many eggs as possible of the various insect pests.

To control the plant lice, you must watch your plants from the beginning, and as soon as you see these little green insects working on them on the under side of the leaves, get busy with the proper spray, for you may know that in a few days there will be hundreds of them. The best spray to use is the nicotine sulphate, commercially known as "Black Leaf 40." If you cannot get this material, use strong soap suds, using about a pound of soap to a couple of gallons of water. This is not as effective, however, as the spray made of the Black Leaf 40. In preparing this spray, follow the directions given on the package. A teaspoonful to a quart of water to which is added a small piece of soap is about the right proportion. In spraying aphids, remember that the spray must actually get on the insect to kill it. They do their injury by sucking the juice from the leaf and cannot be poisoned. They live on the under side of the leaves and the spray must be applied with some force and so directed as to thoroughly wet the leaves on the under side.

Some Cow Testing Figures

A summary of the reports of the various cow testing associations of the state for April shows that F. N. Latimer of Jackson County has the highest herd average for the month, the average butter fat production being fifty-one pounds to the cow. Lewis Koenig of Dickinson County, who stood at the top in March, dropped to second place with an average butter fat production to the cow of 46.5 pounds. L. E. Johnson of Harper County comes third with an average production of 39.95 pounds.

The high cow for the month is also found in a Jackson County herd—a cow owned by George Walton—her butter fat production for the month being 68.3 pounds. There were thirty-three cows in this association producing above forty pounds of butter fat for the month, that being the highest of any association reporting. There were nine cows in this association which produced more than sixty pounds of butter fat for the month and forty-two produced between thirty and forty pounds of fat. A junior three-year-old owned by John Stevenson produced 20.6 pounds of butter fat in seven days, which makes her the second cow in her class for the state. A pure-bred Holstein cow owned by J. D. Bonnett, a member of the Jackson County Association, has produced 8,981 pounds of milk and 298 pounds of butter fat in the period from December 20 to May 1.

The Dickinson County Cow Testing Association, which is the oldest in the state, reports that nine grade cows were sold for beef during the month. This indicates that even in this association which has been in operation for a number of years members are still finding unprofitable cows.

W. E. Peterson, who furnished us the figures on the various associations for the month, calls attention to the fact that several of those in operation in the state are not represented because the testers failed to send in their reports for the month. If there are any injus-

19th. Annual Kansas State Fair

HUTCHINSON, KANSAS, SEPTEMBER 13-20, 1919
UNDER THE AUSPICES OF THE STATE BOARD OF AGRICULTURE

Big Annual Agricultural and Live Stock Event of Kansas.
The Natural Meeting Place of the Breeder and His Buyer.
Seventeen General Educational Departments.

Send for catalog now and make your entries and reservations early. New Live Stock Pavilion—New Mineralogy Building—New Swine and Sheep Pavilion—New Addition to the Big Grandstand—New Walks and Drives.

Three Days Harness and Running Horse Races

Two days Auto Races and Auto Polo every day and night. Grand Free Attractions and Music. The Grand Victory and Patriotic Pyrotechnic Panoramic Spectacle of the Battle of Chateau Thierry, together with free acts and grand music, will provide an entertainment each night that will have no superior at any of the great fairs of America. Send for catalog or information.

H. S. THOMPSON, Pres.

A. L. SPONSLER, Secy.

Beautiful Waterproof Apron

FREE

This is not an ordinary apron, but is made of beautiful waterproof material which gives the appearance of the finest quality of checked ging-ham.

EASILY CLEANED

The waterproof material of which this apron is made will keep clean much longer than any ordinary apron, and it can be easily washed with soap and water or cleaned with gasoline without injury to the fabric or color.

COLOR

We can furnish these aprons in either light blue checked or pink checked. In ordering, state color wanted.

The aprons are 30 inches long and 28 inches wide, with bib 9½ to 10 inches.

OUR OFFER

We will send this beautiful and useful waterproof apron to all who will send us only two subscribers to Kansas Farmer for one year at \$1.00 each. Send us two subscribers on the blank below, with \$2.00 to pay for them, and we will send you the apron by return mail, postage prepaid.

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KANSAS FARMER, Topeka, Kansas.

Gentlemen: Enclosed find \$2.00 to pay for one year's subscription for each of the following:

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Sell Him Now!

If you have a pure-bred bull, boar or other breeding animal that you cannot use in your own herd another season, why not sell him now? There are always buyers looking for pure-bred sires. Their trouble is to find a good animal. Your cue is to tell them where to find him, through the Classified Columns of

Kansas Farmer

tices or inaccuracies in the figures as given, they are due to the fact that some of the associations have not filed their reports.

If your luck isn't what it should be, write a "p" in front of it and try again. —The Advertising Age.

Ninety-four and three-tenths per cent of the men in the army were fit for service at all times, and of the 5.7 per cent of non-effectives, only 3.4 per cent were rendered so by disease. Of 195,000 Americans who were wounded, the lives of 182,000 were saved.

HOLSTEIN CATTLE.**CHOICE HOLSTEIN COWS FOR SALE**

One carload fresh Holstein Cows—One carload heavy Springers
These cattle are extra good. A few choice registered bulls.

HOPE HOLSTEIN FARMS . . . HOPE, KANSAS

SAND SPRINGS FARM HOLSTEINS

On yearly test fourteen cows in our barn average 13,329.6 pounds milk, 522.6 pounds butter, in 348 days. Average age 4 years, 10 months, 23 days. Possibly we could interest you in a young bull. Have one whose dam made nearly 20,000 pounds in a year.

E. S. ENGLE & SON . . . ABILENE, KANSAS



Large Cows
Most
Economical

"Both milk and fat are produced at lowest rate in general by the cows consuming the most food." This conclusion is reached by Prof. H. H. Wing, Professor of Dairy Husbandry at Cornell, after a year's observation of the University Experiment Station's herd.

Holsteins are large and healthy, capable of converting large quantities of coarse feed into the best of milk suitable for all purposes, but particularly in demand for infant feeding and for cheese making.

If interested in

HOLSTEIN CATTLE

Send for our booklets—they contain much valuable information.

HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA, Box 114, Brattleboro, Vt.

HOLSTEINS!

We are offering a choice selection of both registered and high grade springer cows and heifers. Also pure-bred bulls and young females. All reasonably priced. Come and see them or write.

T. R. Maurer & Co.

EMPORIA . . . KANSAS

Selected Holstein Calves

Calves from four to six weeks old of either sex from selected cows and pure-bred sires. Satisfaction and safe delivery guaranteed at \$25 each. Write us for description and prices on older stock.

Spreading Oak Farm, R. 1, Whitewater, Wis.

GOLDEN BELT HOLSTEIN HERD

Herd headed by Sir Korndyke Best Hello No. 15546, 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

CHOICE HOLSTEIN CALVES

12 Heifers and 2 Bulls, highly bred, beautifully marked, and from heavy producing dams, at \$25 each, crated for shipment anywhere. Safe delivery guaranteed. Write

FERWOOD FARM, WAUWATOSA, WIS.

BUTTER-BRED HOLSTEINS

Three choice registered Holstein bulls, ready for light service, and some bred heifers to a 32-pound sire.

J. F. MAST, SCRANTON, KANSAS

REGIER'S HOLSTEINS

Registered bulls ready for service and bull calves, out of good producing dams. Sire: Sir Rag Apple Korndyke De Kol and Duke Ormsby Pontiac Korndyke.

G. REGIER & SONS, Whitewater, Kansas

BRAEBURN HOLSTEINS

Looking for a bull? I can generally offer you choice of half a dozen, by two different sires. That saves time and travel.

H. B. COWLES

608 Kansas Avenue Topeka, Kansas

Holstein Calves

Extra choice, beautifully marked, high-grade calves from heavy milking dams, either sex. Write us for prices and description.

W. C. Kenyon & Sons

Holstein Stock Farms, Box 33, Elgin, Illinois

\$25.00—HOLSTEINS—\$25.00

Practically pure-bred Holstein calves, either sex, four to six weeks old, nicely marked, \$25.00 each, from registered sires and choice heavy milking cows.

CLOVER VALLEY HOLSTEIN FARM

Whitewater, Wisconsin

SEGRIST & STEPHENSON, WOLTON, KANSAS

Breeders exclusively of pure-bred prize-winning record-breaking Holsteins. Correspondence solicited.

SHROPSHIRE SHEEP**FOR SALE**

A bunch of registered Shropshire rams ready for service, priced worth the money.

HODARD CHANDLER, Chariton, Iowa.

A weed is any plant in the wrong place. Vegetables too close together are as injurious to each other as weeds. Thin them out before they are large enough to crowd.

HOLSTEIN CALVES**SHORTHORN CATTLE.****It Pays to Grow Shorthorn Beef**

You get quality and weight both with the Shorthorn. AMERICAN SHORTHORN BREEDERS' ASS'N. 13 Dexter Park Avenue Chicago, Illinois Ask for a copy of "The Shorthorn in America."

MARK'S LODGE RED SHORTHORNS

For Sale—25 well bred cows and heifers bred, priced reasonable. A few young bulls by Double Diamond by Diamond Goods. Price, \$150. Come and see my herd.

M. F. MARKS, VALLEY FALLS, KANSAS

ALL SCOTCH SHORTHORNS

Herd headed by Walnut Type, a grand son of White Hall Sultan, and Silver Plate, a son of Imp. Bapton Corporal. A few young bulls for sale. Robert Russell, Muscotah, Ks.

SHORTHORN CATTLE

For Sale—Five young Scotch bulls and ten head of females, bred or calves at foot.

H. H. HOLMES, R. F. D. 28, Topeka, Kan.

DUROC JERSEYS.**Woodell's Durocs**

A choice lot of extra well bred gilts bred for late farrow. Few fall boars.

G. B. WOODDELL, WINFIELD, KANSAS.

OTEY'S DUROCS

One spring yearling sire, fall boars by Pathfinder Chief 2d, "the mighty sire." Real herd headers. Priced right. Would exchange for good gilts.

W. W. OTEY & SON, WINFIELD, KANSAS

HIGHVIEW DUROCS

FOR SALE—TWENTY FALL BOARS By Repeater, Golden Reaper and Pathfinder. Guaranteed and priced to sell quick.

F. J. MOSER - SABETHA, KANSAS

MULEFOOT HOGS.**REGISTERED MULEFOOTS**

Twenty choice weaned gilts; ten fall gilts; a few bred sows. Boars no kin. Catalog and prices on request.

KNOX KNOLL STOCK FARM

Humboldt - - - Kansas

BREEDERS' DIRECTORY

RED POLLED CATTLE

Mahlon Greenmiller, Pomona, Kansas.

Horn Dorset Sheep

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

RED POLLED CATTLE.**RED POLLED BULLS**

Twelve head coming two-year-olds and twenty head of coming yearling bulls. This is an extra nice and well colored bunch of bulls sired by ton sires. Inspection invited.

E. E. FRIZELL & SONS, FRIZELL, KAN.

RED POLLED CATTLE FOR SALE

Young bulls and some extra good young cows to calve in early spring. A few yearling heifers.

I. W. FOULTON, MEDORA, KANSAS

RED POLLS, BOTH SEXES, BEST OF BREEDING.

Charles Morrison & Son, Phillipsburg, Kan.

AYRSHIRE CATTLE.**AYRSHIRE BULLS**

For Sale—Several pure-bred Ayrshire bull calves, three months to a year old, from excellent dams. Priced for quick sale at \$60 to \$100.

RAY FELTON - DWIGHT, KANSAS

ANGUS CATTLE**Dietrich's Aberdeen-Angus**

Aged bulls, fifteen choice spring bulls. Females, all ages.

GEO. A. DIETRICH, CARBONDALE, KAN.

How About an Account Book?

Hundreds of farmers have sent to Kansas Farmer for their Farm Account Book. Have you got yours? If not, HURRY!

Our Liberal Offer Will Soon Be Withdrawn

Do not delay in starting your records for this year, but get the best and cheapest book. The account book furnished by KANSAS FARMER is small, convenient, easy to understand and easy to keep. ORDER IT TODAY.

HERE IS OUR OFFER

We will mail you absolutely free and postpaid one of these Account Books with your renewal subscription to KANSAS FARMER for one year at \$1.00.

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GENTLEMEN: Inclosed please find \$1.00, for which renew my subscription for one year and send me the Farmers' Account Book as per your offer.

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FARM AND HERD NEWS NOTES

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

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CLAIM SALE DATES.**Hereford Cattle.**

July 28 and 29—J. O. Southard, Comiskey, Kansas.

Jersey Cattle.

June 24—Dr. J. H. Lomax, Leona, Man.
June 23—Mrs. William Knabb, Leavenworth, Kan.

Spotted Poland Chinas.

Oct. 11—R. W. Sonnenmoser, Weston, Mo.
Feb. 14—R. W. Sonnenmoser, Weston, Mo.

Poland Chinas.

Aug. 6—A. J. Erhart & Son, Ness City, Kan. (Sale at Hutchinson.)

Aug. 21—Earl Bower, McLouth, Kan.

Oct. 3—Ezra T. Warren, Clearwater, Man.

Oct. 4—Geo. Morton, Oxford, Kan.

Oct. 7—Jones Bros., Hiawatha, Kan.

Oct. 8—Dr. J. H. Lomax, Leona, Kan.

Oct. 9—Herman Groninger & Son, Bendena, Kan.

Oct. 6—Ross & Vincent, Sterling, Kan.

Oct. 10—Plus Haug, Seneca, Kan.

Oct. 11—Ketter Bros., Seneca, Kan.

Oct. 13—H. L. Glover, Grandview, Mo.

Oct. 14—H. E. Myers, Gardner, Kan.

Oct. 15—H. B. Walter & Son, Edinburg, Kan.

Oct. 16—A. J. Erhart & Son, Ness City, Kan.

Oct. 17—Adams & Mason, Gypsum, Kan.

Oct. 20—P. M. Anderson, Holt, Mo.

Oct. 22—Fred G. Laptad, Lawrence, Kan.

Oct. 23—McClelland & Sons, Blair, Kan.

Oct. 24—Dubach Bros., Wathena, Kan.

Feb. 11—Ross & Vincent, Sterling, Kan.

Durocs.

Aug. 13—F. J. Moser, Sabetha, Kan.

Aug. 20—W. T. McBride, Parker, Kan.

Oct. 22—Fred G. Laptad, Lawrence, Kan.

A. J. Erhart & Son of Ness City, Kansas, have announced August 6 for their annual summer sale of bred sows and gilts. On this date they will offer forty head of choice fall yearling gilts and tried sows that have raised litters. About twenty head of the offering will be bred to the great show boar, Big Sensation. This boar is the best son of the grand champion Smooth Big Bone and his official weight when shown last year was 1,204 pounds. He is the largest boar living of any breed. This hog has proven a great breeder of large even litters. The best pigs on the Erhart farm this year are sired by Big Sensation.

HORSES AND MULES.**Percherons--Belgians--Shires**

Some choice stallions and mares for sale. All registered. Terms: Fred Chandler, Route 7, Chariton, Iowa. Above Kansas City.

JACKS AND JENNETS

Registered Jacks and Jennets. Good individuals, good colors. Have some choice young jacks that are priced to sell quick.

GEO. S. APP, ARCHIE, MISSOURI

Twenty of the choice sows and gilts in the sale offering are bred to this hog for early September farrow. Other sows in the offering will be bred to Long Bob, Erhart's Big Chief, and Pister Price, one of the best sons of Giant Buster. The sow offering will be sired by such boars as Wonder Buster, Big Hadley Jr., A Big Wonder and Robidout. The sale will be held on the Kansas State Fair grounds at Hutchinson.

"Fifty Common Birds of Farm and Orchard" is the name of Farmers' Bulletin 513. If you wish to become better acquainted with the birds of our state, this bulletin will give you their names and interesting facts concerning them. It also tells which are useful and which are injurious to farm crops. The bulletin may be obtained from the Superintendent of Documents, Washington, D. C., for 15 cents.

A certain farm equipment dealer has one record customer who buys a new binder every three years, and who at one time was in debt for three binders which he purchased in a period of seven years. This farmer uses a ready-made apple tree as a shelter for his grain harvester. When one tree rots he plants another. And, although he and his family work hard, he is always paying last season's debts with next year's income. —Western Farm Life.

Young pigs should be given their feed in such a manner that each individual pig gets its share. The simplest way to accomplish this is to allow the pigs to eat from a properly constructed feed trough, one that will keep the pigs out of the feed and will lessen the possibility of crowding.

A rank growth of weeds becomes an asset when plowed under before they make seed.

REGISTERED JERSEY SALE AT KNABB FARM

Leavenworth, Kansas, June 23

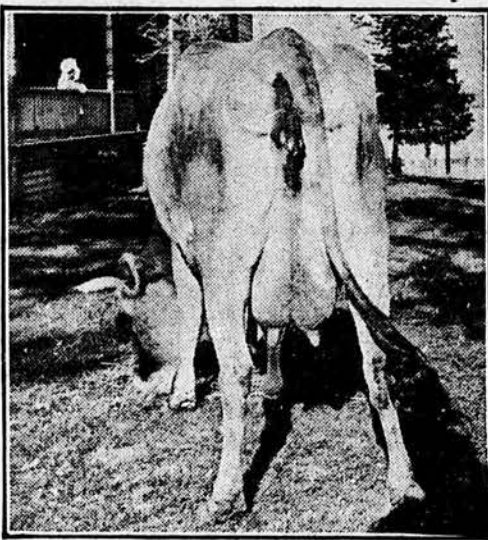
Buy Jerseys---She is the Money Cow

FIFTY HEAD OF JERSEY CATTLE

Twenty cows in milk, 25 heifers six months old to long yearlings, four young males, one herd bull three years old.

Stockwell's Orderly Lad 2d and the sire of several good calves in the sale. Popular sires and blood lines.

I have faith in the Jersey cow. They have made me money. I have more than I can care for and am making my first biennial sale. These cattle are not fat, but have good breeding and will pay at the pail. If you want a real profitable cow, come to my sale and buy a bargain. The young heifers are extra good.



Silverine's Sylvia 194587, Six Years Old.—One of the Foundation Cows of the Herd

Buy Jerseys---She is the Money Cow

Farm located on new Lawrence road, three miles south of Leavenworth, three miles west of Lansing.

Parties from a distance will come to the National Hotel at Leavenworth and find free conveyance to farm morning of sale.

For catalog write

B. C. SETTLES, Sale Mgr., Palmyra, Mo.

MRS. IDELL KNABB

R. F. D. 2 LEAVENWORTH, KAN.

Auctioneers—Col. D. M. Perry, Murry & Strouse.

POLAND CHINAS

POLAND CHINAS.



Faulkner's Famous Spotted Polands

The World's Greatest Pork Hog

Now booking orders for spring pigs. Shipment when weaned. Pairs or trios, no kin.

H. L. FAULKNER, Box K, Jamesport, Missouri

CLINTON HERD
BIG TYPE POLAND CHINAS
Is ready to ship you a spring boar that will make you a real herd boar, sired by Giant Buster's Equal. Will sell a few trios not related. We have satisfied customers in 25 different states and can satisfy you. Everything immune and we record them.

P. M. Anderson, Holt, Missouri

ERHART'S POLAND CHINAS

Have a few bred sows and bred gilts priced reasonable. All immune. Several fall boars ready for service. Write your wants.

A. J. ERHART & SONS
NESS CITY, KANSAS

CHOICE LOT OF POLAND CHINA BRED SOWS AND GILTS FOR SALE.

A Few Fall Pigs.
CHAS. E. GREENE
Townview Farm Peabody, Kansas

SPOTTED POLANDS—SHROPSHIRE
Choice fall boars. Registered ram lambs by Broughton 2434 and Senator Bibby VI.
R. W. SONNENMOSE, WESTON, MO.

Big-Type Poland Weanling Boar Pigs
Bargain prices. Satisfaction guaranteed.
Isaacs Stock Farm, Peabody, Kansas.

MYERS' POLAND CHINAS
Large spring pigs in pairs or trios, priced to sell. Write your wants. Annual fall sale October 14.
H. E. MYERS - GARDNER, KANSAS

SPOTTED POLAND CHINAS.

Herd Boar Prospects by Spotted Colossus, Spotted to Date, and Woodrow Wilson; \$50 to \$250.
T. T. Langford & Sons, Jamesport, Mo.

AUCTIONEERS.

LIVE STOCK AUCTIONEER—Fifteen years' experience. Wire for date.
JOHN D. SNYDER, HUTCHINSON, KAN.

HAMPSHIRE HOGS

Registered Hampshire Hogs—Sows and Spring Gilts, bred or open. Choice spring boars. Double treated. Geo. W. Ela, Valley Falls, Kansas

JERSEY CATTLE.

ALLEN CENTER STOCK FARM
Registered Jerseys from choice Jersey cows. Sire's dam is the highest producing cow in Kansas. Prices reasonable.
TREDWAY & SON, LA HARPE, KANS.

BROOKSIDE JERSEYS
REGISTERED JERSEY BULLS, few old enough for service from Eminent Flying Fox dams, sired Raleigh, a son of the great Queen's Raleigh. Write for prices.
THOS. D. MARSHALL, SYLVIA, KAN.

Encouragement to Horsemen

A good many farmers have been a bit discouraged over inability to sell horses just when they want to. You know, men who are impatient think there should always be a good cash market for anything they have to sell, at the moment they want to sell it. These are the fellows who have sacrificed their wheat at a discount rather than to borrow money and wait a few months till railroads and elevators could handle their product. The world is full of such fellows, and just now some of them are knocking good horses. It is refreshing, therefore, to have such a statement as the following, which I recently received from Peter Wagner, of West Butte, Montana, when he called at our office. Wagner is a practical ranchman who has made a comfortable fortune in the live stock game. His comments were substantially as follows:

"I believe good draft horses, especially good Percherons, are the best buy a farmer or ranchman can make right now. We are short on feed, and I have no more than I absolutely need to carry through the horses and cattle I now have; but if I had the feed available or could purchase it, I should buy a thousand head of the best young draft horses I could get.

"What wealth I have obtained has been by going contrary to the road most men follow. In 1893, when no one wanted horses, I went into Southern Iowa and bought seven carloads of good grade Percheron mares. I did not buy any that weighed less than 1,600 pounds and they were good, clean, well shaped mares. I paid from \$50 to \$90 per head for them, and they cost me an average of \$65 per head on the farms where I bought them. The same kind of mares are today bringing from \$175 to \$225 per head, yet farmers are now grumbling about low prices. They don't know what low prices are.

"I shipped these mares to Tyndall, South Dakota, and sold them at approximately \$400 per pair. In nearly every case I had to take small horses in as part of the purchase price, but I got money enough to boot to pay the original cost of the big mares, leave me a good profit, and I had the plugs left over. I then shipped all these plugs up to the northwestern corner of the state, where the farmers lacked horses and money, and sold them on time. Practically every man paid up eventually, so that I cleared some money for my work.

"About the time that I distributed these seven carloads of mares around Tyndall, and took their inferior horses

away, an Illinois horseman traded several good Percheron stallions in that locality. He took them for stallions and sent some very good horses into the neighborhood.

"The resulting improvement in the horses of that vicinity was almost beyond relief. I was back there about fifteen years afterward, and in walking down the street one Saturday afternoon I remarked to Dr. Hamlin, a local veterinarian, that I had never seen so many good, big, grade Percheron teams in any locality. He told me then that the improvement dated back to 1893, when I brought in seven carloads of good mares, and the good sires were brought in. He also said that horse buyers came to Tyndall from all parts of the United States, and that single geldings had been sold direct from the plow for prices as high as \$425 per head.

"History repeats itself. Today foreign countries are almost stripped of horses suitable for farm work. All European countries will want horses as soon as ships are available to take them over. Good, big drafters are bringing from \$800 to \$1,000 apiece in Great Britain, and in France \$600 is the lowest price for even a common sized chunk. The American consul's report from Stockholm, Sweden, in August, states that the German military commission had recently bought 250 horses at 3,400 crowns each, Swedish money, which means that they paid \$1,740.21 per head for them.

"The United States is the only nation

Sterling 500-Shot Air Rifle

FREE



Boys, here is your chance to get that air rifle.

This is a real up-to-the-minute Air Rifle. Shoots 500 shots without stopping to reload, and is guaranteed to shoot accurately. We are going to give away several hundred of these guns to boys who will send us only two subscriptions to Kansas Farmer at \$1.00 each and 25 cents extra for shipping charges. Just send us two subscriptions for one year each and \$2.25 to pay for them, and we will send you this fine air rifle free and postpaid. Use the blank for sending us your order.

ORDER BLANK

KANSAS FARMER, Topeka, Kansas.

Gentlemen: Enclosed find \$2.00 to pay for one year's subscription for each of the following:

Name..... Address.....

Name..... Address.....

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away, an Illinois horseman traded several good Percheron stallions in that locality. He took them for stallions and sent some very good horses into the neighborhood.

"The resulting improvement in the horses of that vicinity was almost beyond relief. I was back there about fifteen years afterward, and in walking down the street one Saturday afternoon I remarked to Dr. Hamlin, a local veterinarian, that I had never seen so many good, big, grade Percheron teams in any locality. He told me then that the improvement dated back to 1893, when I brought in seven carloads of good mares, and the good sires were brought in. He also said that horse buyers came to Tyndall from all parts of the United States, and that single geldings had been sold direct from the plow for prices as high as \$425 per head.

"History repeats itself. Today foreign countries are almost stripped of horses suitable for farm work. All European countries will want horses as soon as ships are available to take them over. Good, big drafters are bringing from \$800 to \$1,000 apiece in Great Britain, and in France \$600 is the lowest price for even a common sized chunk. The American consul's report from Stockholm, Sweden, in August, states that the German military commission had recently bought 250 horses at 3,400 crowns each, Swedish money, which means that they paid \$1,740.21 per head for them.

"The United States is the only nation

with any surplus of big horses. I know Russia does not have them for I lived there for twenty-one years and know Russia as only a native of that country, can.

"Some men fear the influence of the tractor on the horse market. As a practical farmer, with long years of experience in the West, I know they will not displace the horse. Don't fret about them. While my chief interests have been in cattle, I have sold \$27,000 worth of horses off the range since 1911, have twice as many horses left as I ever had, and my horses have made me more clear profit, proportionately to numbers, than my cattle.

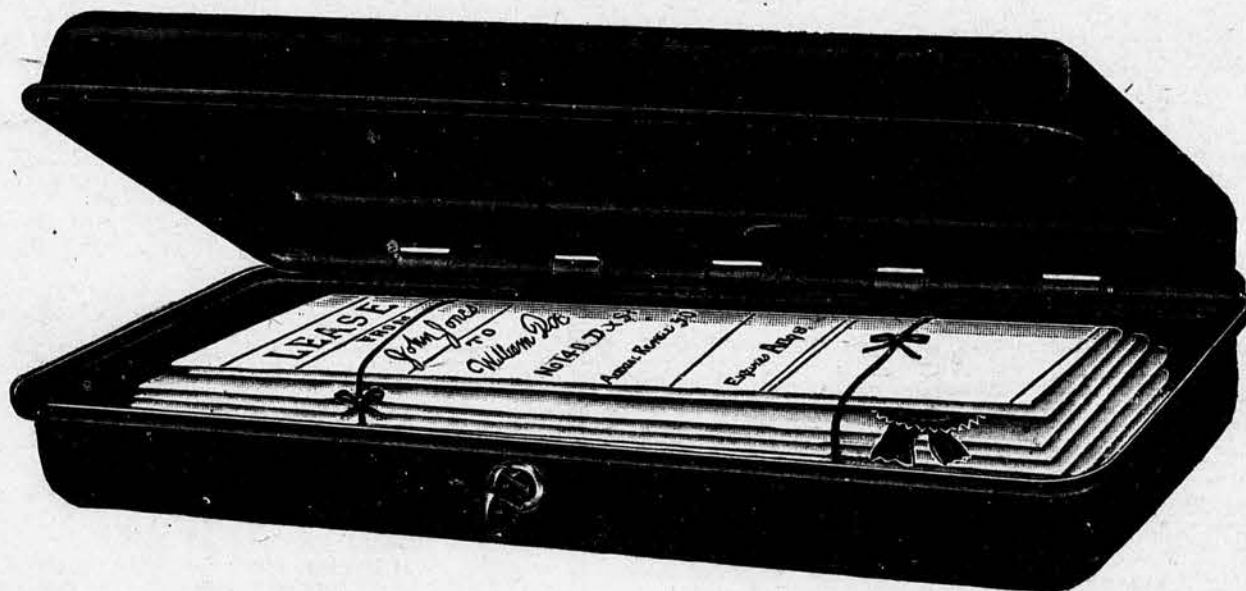
"My advice to my friends is to get rid of their inferior horses, and to put in all the good ones they can handle now. Don't sacrifice a single good drafter, and go in debt, if necessary, to put your teams on a first class basis now while horses are relatively cheap.

"The time to buy is when the average man is discouraged and wants to sell. You can never go wrong on that plan."

I give you the comments of this practical old Russian ranchman, who has achieved success in the West and whose son will soon be on the fighting line in France, as he gave them to me. Use them. If you cannot use in full, take extracts from his comments. They will stiffen the courage of some faint hearts and encourage others to rebuild their horse stocks while the opportunity is open.—WAYNE DINSMORE.

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