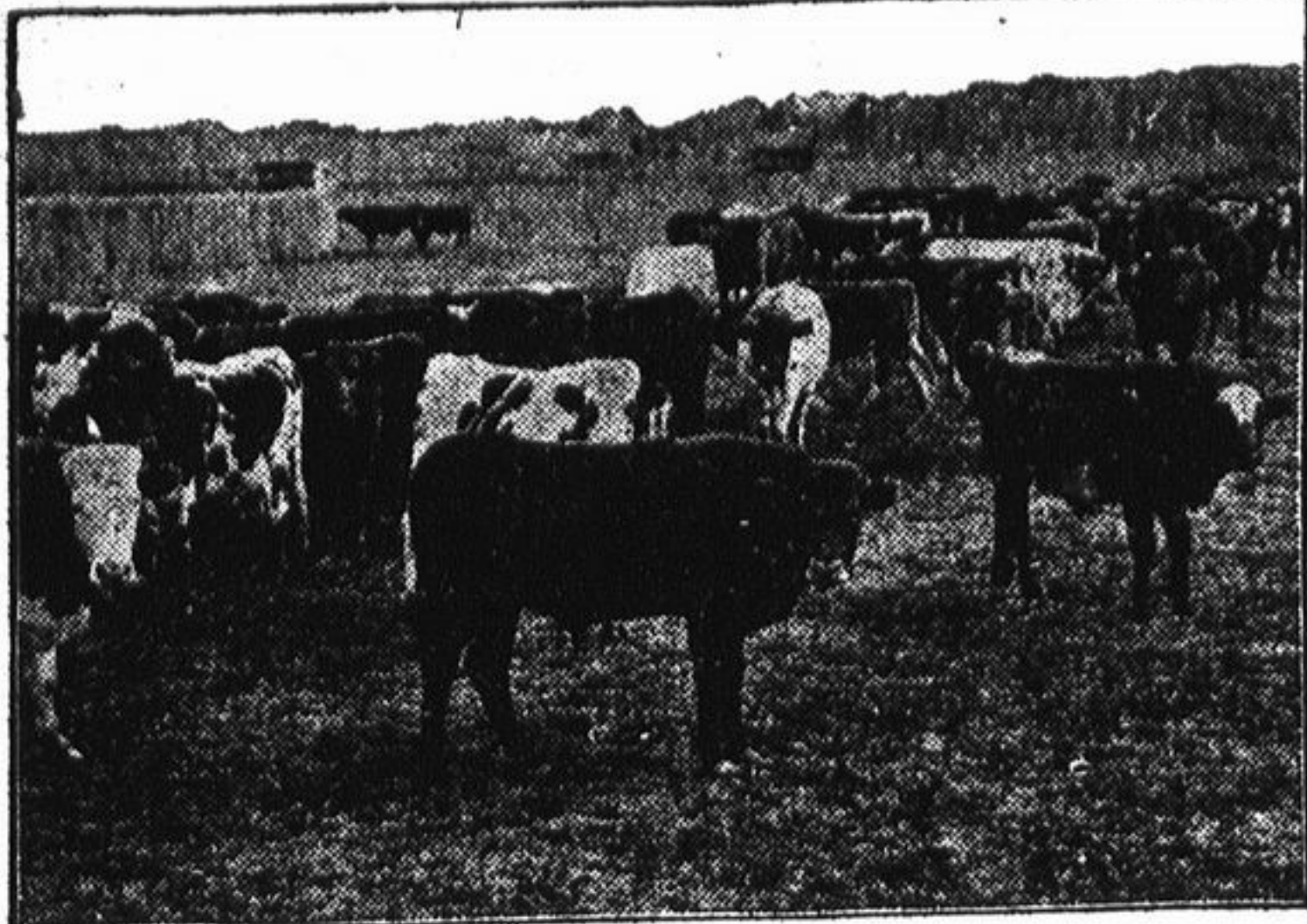


WHY AVERAGE FARM NEEDS LIVE STOCK



HERD OF YOUNG CATTLE ON WESTERN FARM.

(Prepared by the United States Department of Agriculture.)

Seven reasons why the keeping of live stock is essential to sound agriculture are set forth in an article by George M. Rommel in the 1916 year book of the U. S. department of agriculture. Briefly, Mr. Rommel's seven reasons are the maintenance of soil fertility, the utilization of raw material, the need of motive power on the farm, cash income, the added attractiveness of a farm on which there is live stock, the training in business and better and more economical living for the farm family.

To maintain soil fertility, says Mr. Rommel, humus is necessary. This can be obtained from two sources—green crops plowed under, or barnyard manure. When green crops are plowed under, however, there is no direct revenue from them. By feeding these crops to live stock, valuable products that can be exchanged for cash are obtained. At the same time the manure produced by the animals retains a very large percentage of the fertilizing value of the feed. For this reason it is more economical to feed than to plow under without feeding, and the most practical source of humus is stable manure.

Farmer a Manufacturer. The farmer with live stock is from one point of view a manufacturer. He takes lean, unfinished animals and grain or forage as his raw materials and by combining them produces beef, mutton, pork, and dairy products. Like all manufacturing, this process must be conducted with skill and intelligence if it is to pay, but if the farmer possesses these qualities he derives a larger profit than he could obtain through the sale of crops and animals in the raw state. Furthermore there are many products on the farm which bring little or nothing on the market. They can, however, by skillful management be made to assist in the production of meat. The thrifty farmer makes use in this way of all roughage on his farm that would otherwise be unsalable. The cornstalks go into the silo or into the stack as cut fodder. The straw and coarse hay are utilized to the last unit of energy value. Land that cannot produce marketable crops is made to yield a certain amount of sustenance for hogs and sheep.

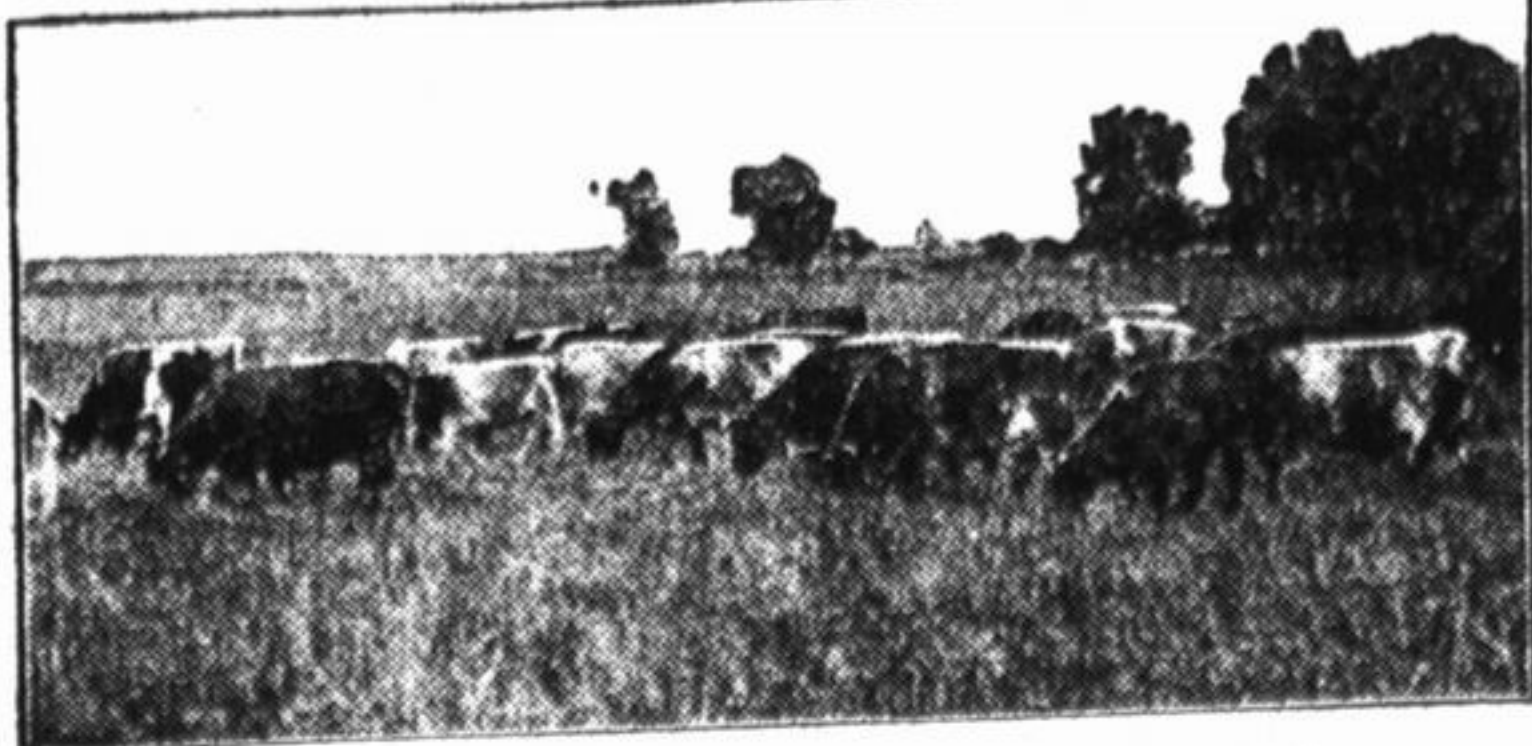
While in cities and factories mechanical power is coming into more and more general use, on the farms of the country the horse and the mule

are still the chief reliance. The proper breeding, maintenance, and employment of these animal engines is a problem of the greatest importance to the farmer.

Specialty Business. As a source of cash income, the keeping of live stock in many sections is what is known as a specialty business. In dairy districts it is the main activity, and every phase of farm management is determined by its interests. Where the principal purpose of live stock feeding, however, is to maintain soil fertility, farms which rely on live stock for the main source of their income will tend to become breeding centers for purebred animals to be distributed through the surrounding country for breeding purposes on those farms on which only a limited amount of live stock is kept. The production of purebred animals is a highly specialized business, and only the most skilled animal husbandmen can make a success of it.

The fifth function which Mr. Rommel ascribes to live stock on the farm is not so directly connected with problems of income but it is nevertheless of vital importance. Experience has shown that nothing tends more strongly to create and maintain an interest in farm life among boys and girls than the care of animals. It is essential to the continued prosperity of this country that young people should be encouraged to make farming their vocation in life. Those who have devoted themselves to this work have found that among their most effective aids are the poultry, calf, and pig clubs.

High Cost of Living. That the neglect of live stock results in increasing the cost of living on the farm and in lowering the standard of that living is a fact well known to all agricultural authorities. For example, the annual meat bill of farmers for some states is enormous. The meat purchases are made largely on credit, and the proceeds of the year's crop are mostly consumed in meeting debts incurred during its production. This practice is obviously antagonistic to thrift and proper prosperity. The production of home-grown food does not involve in the least the limitation of the crop output of the farm. It simply requires planning and a little more careful management. A cow or two to furnish the family with milk, butter and cheese, and a flock of chickens to furnish poultry and eggs, will do much to make farm fare more healthful and cheaper.



HERD OF DUAL-PURPOSE SHORTHORN COWS.

BALANCING RATIONS FOR A DAIRY HERD

Economy Demands Home-Grown Feeds, Especially Roughage, Be Fed to Cattle.

(By CHARLES I. BRAY, Colorado Agricultural College, Fort Collins, Colo.) Economy in feeding usually demands that as much of the ration as possible be made up of home-grown feed-stuffs, especially with regard to the roughage.

First, provide for all the good, clean farm-grown roughage that the cow will eat up clean, as the nutrients in roughages are generally much cheaper than in concentrated feeds.

Now consider whether the grain on hand is such as to make a balanced ration with the roughage used. Concentrates must be used, because cows cannot consume enough coarse, bulky feed to supply all their own bodily requirements, and have enough left for a large flow of milk. If the dairyman has plenty of alfalfa he can practically balance his rations nicely with ordinary farm grains, such as corn, barley and oats. Five per cent of cottonseed meal or linseed meal added to

Separate Them. Many small pigs are stunted in their early growth because they cannot hold their own against their larger and more quarrelsome brothers.

Variety of Vegetables. Plan for a good variety of vegetables the season through, from radishes to celery. Don't leave out the melons.

Fall and Winter Eggs. Early hatching will produce more eggs in the fall and winter.

this grain mixture will increase production. If the roughage consists entirely of native hay, straw, cornfodder or corn silage, he can still use his home-grown grains, but it will be necessary to use bran, cottonseed meal, or linseed meal also to supply sufficient protein. A good grain mixture in this case would consist of equal parts ground barley, ground oats and all cake or oilmeal.

If the roughage ration is of a mixed nature, such as 10 pounds of alfalfa hay and 30 to 35 pounds corn silage, the dairyman might use a mixture of two parts corn chop, two parts bran or oats and one part cottonseed cake. These grain mixtures should be fed at the rate of one pound of grain for every three and one-half or four pounds of milk each cow is producing.

PLAN TO HAVE FALL GARDEN

Many Vegetables Are Highly Retished Just Before Ground Freezes—Make Preparations.

(By LEROY CADDY, Associate Horticulturist University Farm, St. Paul, Minn.) Plan for a fall garden as well as one in early summer. Radishes, lettuce, beets, rutabagas, tomatoes, cabbage, etc., are relished just as much just before the ground freezes as in early spring. Plan to have them.

Peas for Pigs. The man who raises pigs ought to have a field of peas into which they can be turned just before the peas become hard.

Teach the Hired Man. Don't be afraid to teach the hired man all you know about farming. His better knowledge will be your gain.

Sowing Onion Seed. Onion seed may be sown in the hot bed and transplanted in the garden.

Horticultural Advice

FIX HYPODERMIC FOR TREES

Trouble Experienced in Removing Plants From One Place to Another Overcome by New Device.

A very interesting method of watering newly transplanted trees has recently been brought to the attention of orchardists. All who have had experience in removing trees from one place to another, know that a large number die before the roots become settled in the new location. This simple device overcomes the difficulty.

Take an ordinary bucket, cut a hole in the bottom and solder in it a short piece of three-fourth-inch gas pipe. A few feet of garden hose is then attached to the pipe and extended down to the roots. Now choose a root about the same size as the pipe and cut it off so as to fit tightly into, and form a tight plug for, the free end of the hose. The bucket may then be filled with water and hung from one of the lower limbs of the tree. The root will take sufficient moisture from the supply in the bucket to maintain life until the other roots are ready for work.

CENSUS REPORT ON CHERRIES

Those of Bearing Age Distributed in Every State in the Union—Commercial Interests Small.

(By H. P. GOULD, Pathologist, United States Department of Agriculture.) Probably no tree fruit is grown more widely throughout the country than the sour cherry, or "pie" cherry, as it is often called. The distribution of sweet cherries is more restricted. The thirteenth census reports for the entire country a total of 11,822,044 cherry trees of bearing age, and about one-half as many not of bearing age. Those of bearing age are distributed in every state in the Union and range in number in the different states from 120 in Florida to more than 1,000,000 in each of the states of Pennsylvania and Ohio.

However, in most of the states in which many cherries are grown the commercial interests are relatively small compared with several others in which the number of trees is considerably less. In the latter the industry



Bunch of Sour Cherries.

is largely centralized in certain locations or regions where the commercial interests are extensive, while in the former the trees are distributed quite generally throughout the states, principally as small orchards, the fruit of which is rarely shipped, though in many cases it may be sold in local markets.

Climate is the most potent limiting influence in the distribution of fruits so far as the natural surroundings are concerned. Of the various elements of climate, temperature probably more often governs in this respect than any other single factor. This becomes evident in the distribution of cherries.

SOME "DON'TS" FOR ORCHARD

Spraying is Only Precautionary and Must Be Applied in Advance of Expected Pests.

(By FRANK B. CROSS, Department of Horticulture, Oklahoma A. and M. College, Stillwater.) Don't forget to spray. Don't spray just for the sake of doing something! At best spraying is only precautionary and must be applied in advance of the expected attack of pests.

Don't neglect the fertility of the soil. Plants must "eat" to live.

Don't expect the plants and trees to take care of themselves; cultivate, prune and spray.

Trees and plants are easily grown, and will make life brighter. Don't plant too many annuals—better use perennials and shrubs.

ATTENTION TO BUSH FRUITS

If Patch Is to Produce Heavy Annual Crops Thinning and Pruning Are of Much Importance.

Pruning and thinning of bush fruits are necessary if the patch is to produce heavy annual crops of fruit. All dead and diseased wood should be kept removed and refuse of this sort should be burned to destroy hibernating insects and disease spores. Plants which become affected with the orange rust should be dug out, roots and all, and at once burned.

Care for Young Trees.

Mound up the earth around the young trees. This keeps out the mice, the water runs away from the trees and they are held firmly in place.

Covering for Strawberries. Do not use weedy hay or straw to cover the strawberries. Enough weeds will appear without deliberately sowing them in this way.

Are Rodents Working? Are the rabbits and mice skinned your young trees?

FARM STOCK

MIXING AND WEIGHING FEED

Few Simple and Brief Rules Given for Preparing Best Combination of Hay and Grain.

Corn silage, corn stover, timothy hay, millet hay, prairie hay, hays from the common grasses, straws of the various cereals, and cottonseed hulls may all be classed as low in protein content, while legume hays, such as alfalfa, the clovers, cowpeas, soy beans and on and pen, are classed as roughage high in protein. Grain and con-



Weighing and Mixing.

centrated feeds are the chief sources of protein, and the mixture should be made to fit the class in which the roughage belongs.

A few simple rules for making up a grain mixture are given briefly below:

- 1. Make up the mixture to fit the roughage available. With roughage entirely of a low-protein class the grain should contain approximately from 18 to 22 per cent of protein, while with exclusively high protein roughage the grain ration need contain only 13 to 16 per cent.
- 2. Select grains that will furnish the various constituents, especially protein, at the least cost, using home-grown grains if possible.
- 3. Be sure that the mixture is light and bulky.
- 4. The mixture should be palatable.
- 5. See that the grain has the proper physiological effect upon the cow.

All these suggestions should be kept in mind in order to obtain the best possible combination of grains.

BEWARE OF GARGET IN EWES

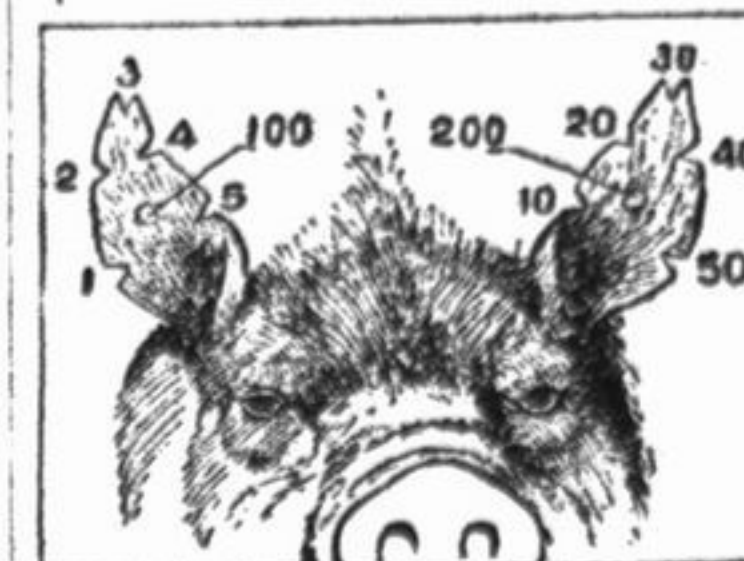
Common Trouble at Lambing Time and Should Be Given Immediate Attention—Some Causes.

(By T. C. STONE, Ohio State University, College of Agriculture.) Garget, or inflammation of the ewe's udder, is a common trouble at lambing time, and it should be given immediate attention. The udders of heavy milking ewes are likely to become inflamed and as a result the ewe may have milk fever. Overfeeding of grain, colds, chills, and lying on wet floors are some of the causes of this condition. When discovered, the ewe's udder should be bathed with hot water by means of woolen cloths. After the udder has been dried, it can be rubbed with turpentine and lard, or with one-half ounce of lead acetate dissolved in one quart of water. The udder should be kept wet with acetate for half a day. It should be milked out thoroughly each time the application is made. It is also advisable to give the ewe a good dose of epsom salts as soon as the trouble is noticed.

EAR MARKS IDENTIFY SWINE

Illustration Given Herewith Shows Position of Incisions—Good Substitute for Tags.

As a substitute for permanent ear tags to identify purebred hogs, their numbers can be registered by cuts in



Simple Ear Marking.

the ears. The illustration shows how the position of the incision determines the figures. The right ear can be used for small numbers, the left for larger.—Farm and Home.

CARE OF HORSES' SHOULDERS

Some Timely Suggestions Given by Ohio College of Agriculture—Be Careful of Collars.

The Ohio College of Agriculture gives some timely suggestions for the care and protection of horses' shoulders:

Do not use sweat pads. Keep collars clean of dandruff and dirt, especially if soreness develops. Sponge the shoulders of work horses with cold water at night after work. If they are sweaty at noon, sponge at noon also.

Care should be taken in fitting collars on work horses. Many collars are too big or too loose. If the withers are fat or especially full, the fitting of collars will need extra care.

Cornfield for Hogs.

In raising hogs it is well to plan for a flint cornfield in which they can feed themselves. Allow a half acre for each hog you wish to finish.

Cheaper to Make Growth. In nearly all cases it is cheaper to make growth than to make fat. Fat is the costliest part of an animal and of the least value as food.

South Side and Stockman. A scrub sire is no worse than a scrub stockman.

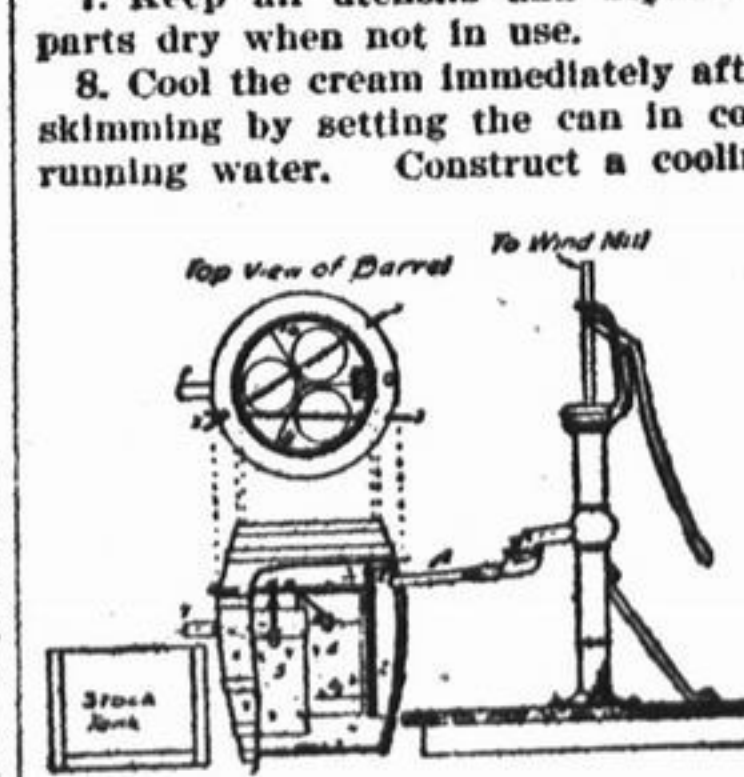
DAIRY FACTS

CARING FOR CREAM ON FARM

Expert of University of Illinois Gives Ten Excellent Rules for Farmer to Follow.

(By H. A. RUEHE, Associate in Dairy Manufacturers, University of Illinois.)

- 1. Keep the cows clean.
- 2. Use covered milk pails.
- 3. Milk with dry hands.
- 4. Remove milk from the barn immediately and separate it at once.
- 5. Set the separator so that it will skim cream that will test from 35 to 40 per cent in the winter and from 40 to 45 per cent in the summer.
- 6. Wash, scald, and dry the separator and all utensils immediately after using. The separator bowl may be dried in a warm oven, though the oven should not be so warm that it will melt the tin on the bowl parts. Setting utensils in the sun is a good practice, as the sunshine acts as a germicide.
- 7. Keep all utensils and separator parts dry when not in use.
- 8. Cool the cream immediately after skimming by setting the can in cold running water. Construct a cooling



Properly-Constructed Tank.

- 1. Inlet, usually 1 1/2-inch pipe.
- 2. Wooden trough, conducting water to within 3 inches of bottom.
- 3. Striker, holding cans in place as shown by cut.
- 4. Shows position of half filled can: run stick through handle in cover to prevent it from sliding out from under the stick.
- 5. Shows position of wire which prevents the cans from tipping.
- 6. Outlet, usually 2-inch threaded nipple.

tank so that the cream will be cooled with the water that is used to fill the stock tank.

- 9. Never mix warm cream with cold cream. Cool the cream before mixing it with previous skimmings.
- 10. Do not allow the cream to freeze in cold weather.
- 11. Stir the cream at least twice a day; this will keep it smooth and free from lumps. Do not use a wooden paddle for a stirrer, as it is unsanitary.
- 12. Deliver cream frequently, at least twice a week in winter and three times a week in warm weather.

PLANT ROUGHAGES FOR COWS

Every Farmer is Advised to Grow Abundance of Alfalfa or Clover—Concentrates High.

Grow an abundance of feed for the cow this season, advises A. S. Neale, specialist in dairy husbandry, division of extension, Kansas State Agricultural College.

"Already the price of concentrates is 'out of sight.' Prices will continue high unless these concentrates are replaced by the cheaper roughages," said Mr. Neale. "Every farmer should plan to grow plenty of alfalfa or clover, or silage. If alfalfa or clover cannot be grown in your section substitute another leguminous crop, such as cowpeas.

"During the next 12 months the production of dairy products will be due largely to the feeding of roughages instead of concentrates, as has formerly been the case.

"Dairy cows of quality receiving nothing but roughage can produce 200 to 250 pounds of butterfat annually, provided the roughage is fed in abundance and is composed of a combination of silage and a leguminous hay. Of course poor cows will not do so well on this ration."

ROUGHNESS FOR DAIRY COW

Animal is Not Content Unless Stomach is Full—Feed Grain According to Milk Yield.

Roughness is the first important consideration. A cow is not contented unless her stomach is full. She should always have all the roughage that she will clean up and then the amount of grain she receives should be regulated by the amount of milk produced.

A dry cow in good condition should be fed roughness only, and does not need any grain. In feeding grain to milk producing cows, the following rule may be used, and is found to work fairly well: Feed one pound of grain for each three pounds or pints of milk produced.

GIVE CALF GOOD ATTENTION

Pen Must Be Kept Clean—Use Plenty of Straw—Furnish Milk, Hay, Bran and Other Feeds.

The calf pen must be kept clean. Use lots of nice straw, not putting it upon a mat of fermented filth, but dig out all manure very frequently and add fresh straw almost daily. Calves are so frisky that they tramp the straw into the manure.

Separator milk, tender clover or alfalfa hay, bran, oilmeal, silage, corn, such feeds are the stuff good calves are made of.

Brine Salting is Best.

Salt that does not readily dissolve requires an excessive amount of working in the butter and unless precautions are used overworked butter is the result. Brine salting is the best remedy for this trouble.

Feeding Young Calves.

Calves should be fed sweet milk of a uniform temperature and should not receive as much milk as they can drink. All calves should be fed regularly, very young calves should be fed three times a day.

Advertisement for OOO DROPS, a remedy for constipation and diarrhea. It features a bottle of the medicine and text describing its benefits for various ailments.

Advertisement for Carter's Little Liver Pills, featuring a parrot logo and text about its effectiveness for constipation.

Advertisement for Pallid People, mentioning Carter's Iron Pills.

Advertisement for Canada's Liberal Offer, Wheat Land to Settle, featuring a map of Canada and text about land acquisition.

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