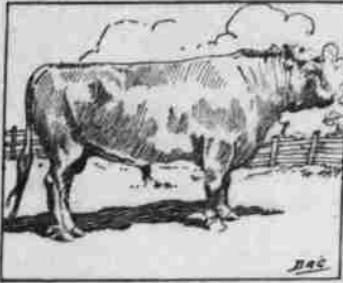


BABY BEEF.

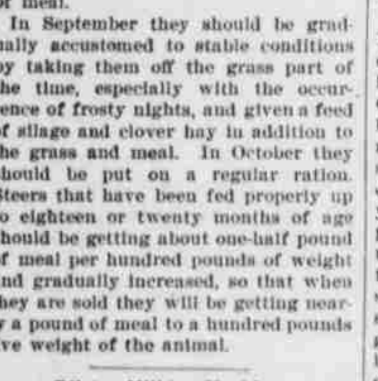
Profit in it if Quikly Matured and Properly Finished.
To raise baby beef profitably it is absolutely necessary to have calves of the best type. They must possess the ability to put on flesh in the right spots—that is, they should be well developed where the most expensive cuts are to be found. Then, too, they must have the power to mature early. The majority of animals cannot be got into that condition at the desired age. Early maturity must be a characteristic of the animals bred from, and particularly should the sire selected possess that special quality.
The growing time in an animal's life is the time at which to feed it, as it has been proved time and again that



HEAD OF AN OHIO BABY BEEF HEAD.

A hundredweight can be added then at less than half the cost of the same gain on the same animal at maturity, writes J. Hugh McKinney in Farm and Fireside. For the first two weeks each calf should have a quart of whole milk three times a day, care being taken to feed it at blood temperature. During the next three weeks half a quart of skim milk should be added to the whole milk at each meal. When the calf is five weeks old it should be so developed that feeding twice a day will be sufficient, also dispensing with the whole milk and giving about three quarts of skim milk twice a day.
To supplement the loss of butter fat in milk a small amount of flaxseed meal is used. It may be prepared in the proportion of a cupful of meal to one and one-half quarts of water put into a common stove kettle and kept at a temperature just below boiling for three or four hours, which reduces the meal to a kind of jelly. This is mixed with the skim milk at the rate of about a tablespoonful to a pound of milk and may be gradually increased up to a cupful when the calf is three months old. By this time the stomach will be strong enough to assimilate and digest other food, and he should be taught to eat a little bran, oats, clover or any other dainty that he can be persuaded to consume.
The second summer is perhaps the most critical period in the life of an animal intended for early beef. While experience has shown that there is very little difference in feeding inside or outside, so far as gain in live weight is concerned, the latter method will prove the less expensive. When fed inside it is absolutely necessary that the ration consist of a certain proportion of green feed. To a certain extent ensilage will answer this purpose, but does not seem to have the same flesh producing effect as the green grass. Of all the grass mixtures with which the writer is familiar, oats and vetches with a little clover or alfalfa hay are the most suitable. All things considered, however, it is preferable to turn them out about the first of June, being careful to keep them on good pasture, supplementing it with a small quantity of meal.
In September they should be gradually accustomed to stable conditions by taking them off the grass part of the time, especially with the occurrence of frosty nights, and given a feed of silage and clover hay in addition to the grass and meal. In October they should be put on a regular ration. Steers that have been fed properly up to eighteen or twenty months of age should be getting about one-half pound of meal per hundred pounds of weight and gradually increased, so that when they are sold they will be getting nearly a pound of meal to a hundred pounds live weight of the animal.

Dilator Milking Machine.
An Ohio inventor has secured a patent for a new dilator milking machine. When the machine has been adjusted to the cow's udder and the teat openings or ducts have been dilated by means of the dilators to form artificial openings, the milk, it is said, flows freely and automatically from the



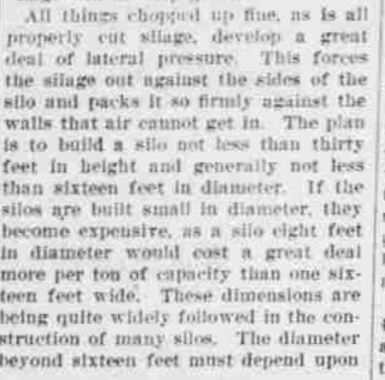
MILKING MACHINE IN PLACE.

openings thus formed in a much more natural manner than by the use of the suction milking machine.
In a recent test fourteen quarts of milk, it is said, were drawn from a cow by this machine, the same being applied, operated and removed in six and one-half minutes. Each machine is complete in itself, requiring no air tubes or power plant, as in the case of the pneumatic milkers.
According to the description, but little or no attention is required once the adjustment is made until the cow is milked dry.

Feeding Cows.
Cows of a decided type will return the greatest profit when fed to their full capacity.—Nebraska Experiment Station.
Cool the Milk Quickly.
A handy arrangement for quickly cooling milk in both winter and summer consists of a large tub with a cake of ice placed in the center. Set the cans of milk around it and cover with a tight lid. The piece of ice should be placed upon three inch strips of wood to allow for drainage. You will be surprised how quickly milk will cool in the sort of simple arrangement. In the summer time it is a good thing to have this tub so placed that cold water from a spring can be run through it at pleasure.

BUILDING THE SILO.

The building of a silo is of a great deal of importance, and before it is undertaken a man should investigate thoroughly the principles relating to the construction and storage of silage. One of the early mistakes was to build silos too large in diameter and too small in height. This resulted in getting very little pressure on the silage, which permitted the air to get in and consequently caused the ruin of the silage. Wherever air can touch the silage numerous germs from the air attach themselves to the moist surface of the silage, and the sugars in the silage become food for the minute plants that cause putrefaction or mold. If the silage is very green the putrefaction bacteria develop most, while if the silage is old—that is, made from mature cornstalks—the spores of mold develop most. In either case the silage is ruined. The first thing, therefore, a farmer must look out for is to have sufficient height to his silo, so that the pressure on the underlying silage will be very great.
All things chopped up fine, as is all properly cut silage, develop a great deal of lateral pressure. This forces the silage out against the sides of the silo and packs it so firmly against the walls that air cannot get in. The plan is to build a silo not less than thirty feet in height and generally not less than sixteen feet in diameter. If the silos are built small in diameter, they become expensive, as a silo eight feet in diameter would cost a great deal more per ton of capacity than one sixteen feet wide. These dimensions are being quite widely followed in the construction of many silos. The diameter beyond sixteen feet must depend upon



A CONCRETE SILO.

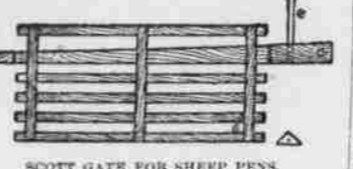
the size of the herd. The larger the herd the greater may be the diameter of the silo.
For myself, I believe that any one handling twelve head of cows or steers can well afford a silo, writes a dairyman in Rural New Yorker.
Perhaps to the small dairyman or stock raiser the difficulties that stand in the way of the silo are imaginary rather than real. First in order, perhaps, is the cost of the silo and, second, the expense of filling. But a good silo that will last for a number of years can be erected at a nominal cost. Every farmer should be able to do his own cementing and thus make his own silo foundation, also with a little help to erect it. This would materially lessen the first cost of silo.
As regards the kind of silo to erect, I can recommend a good homemade elm hooped henlock silo as being perhaps as satisfactory as any other. Good silos all ready to put up can be bought at a fair price. One of my neighbors has an elm hooped henlock silo, which he built himself, that has done duty successfully for over fifteen years and is still in a good state of preservation. The inside lining of rough boards has to be removed every four or five years, but the rest of the silo stands as it did when first constructed. This kind of silo is giving good satisfaction and with a new lining once in awhile will last a number of years.

Don'ts For Pig Feeders.
Don't give the liquor in which potatoes are boiled to the pigs. The tannin destroys the lining of the stomach.
Don't keep pigs in confined places up to their bellies in mud. They are not dirty in their habits except you make them so.
Don't feed pigs solely on corn, as pigs so fed do not command the prices that pea fed pigs do.
Don't send discolored grain away. It will pay you better to give it to the pig and let him do the marketing.
Don't discard straw or any straw stuff that will do for bedding. It will give comfort to the pig and ultimately make good manure for the farm.
Each individual animal is a separate machine, and our work is successful only when this machine is a profitable one.—Joseph R. Lewis.

Cleanliness in the Dairy.
To produce clean and wholesome cream we must have clean and wholesome milk, and to do this it is essential that we have clean stables, clean dairy utensils, clean yards, clean and wholesome feed and that the cows be milked by men who are clean. To obtain the best results it is important that the cows be kept comfortable at all times.
Health of the Herd.
The dairy herd should include no sick animal, and especially none showing signs of tuberculosis, contagious abortion or other trouble associated with parturition or with mammary, uterine, uterine or other uterine disease, actinomycosis, fever or any febrile disease.
Atlanta's Great Mule Point.
G. M. Hummel in a summary of the mule trade says: Atlanta is coming to be one of the great mule distributing points of the south and is now the greatest one in the southeast. No doubt South Carolina farmers get many of their mules from Atlanta, which were first sold on markets two or three times as far from Atlanta as Columbia. With the development of Atlanta as a mule market a golden opportunity exists for any one brave enough to break away from custom and act as a planner in mule raising in South Carolina and the southeast.

EARLY LAMB PRODUCTION.

One of the most interesting and profitable branches of the sheep business is the growing of winter lambs for the early spring market. This requires special care, constant vigilance and properly arranged barn and yards. But most of the work comes at a time of year when outside farming operations do not claim attention. This is no small item in its favor. Writing of his experience in this line in New England Homestead, F. G. Scott of New Hampshire says:
As to breed of ram, the Downes are preferable. The ewes may be Downes or one of the heavier wool breeds, such as Rambouillet or Dorset. I am



SCOTT GATE FOR SHEEP PENS.

breeding Rambouillet ewes to a Hampshire ram. The result of this cross is a lamb well marked in face and legs, broad chest and heavy quarters and a splendid fleece at maturity. Mine are western ewes, and owing to the conditions under which they have been raised, they flock closely together in pasture and are not at all inclined to be broody. They are heavy milkers and make good mothers.
The hours of feeding are 7 a. m. and 4.30 p. m. In the morning the flock is admitted to the waiting yard. Next the grain is strewn in the troughs in the feed yard. For this purpose a two bushel bag is most convenient. Meanwhile the flock has collected at the gate ready for admittance. The gate is then swung up and away from the sheep, and the whole flock immediately rushes through under the gate to the feed troughs.
The gate is then lowered and the racks inside the barn filled with hay. By the time the sheep have finished their grain the gate is swung up again, and they quickly pass back into the barn, eager for the hay ration. One man can easily lay and grain 100 sheep in ten minutes. But best of all is the fact that by use of this gate each member of the flock gets absolutely a square deal and a square meal.
Suppose the gate to be sixteen feet long. When it is opened the sheep enter the feed yard sixteen abreast, those in front being compelled by the rush of those behind to pass on to the farther troughs. Thus the entire flock begins eating at practically the same instant. The gate's simplicity and worth at once commend it to practical sheep men.

In constructing the gate the main center piece A, in which the lever E is placed, is preferably a dry pine pole of 4 by 4 inch and should be two feet longer than length of gate desired. It rests and turns at either end upon a short piece of board nailed crosswise on two posts set in the ground, with proper space between for the pole. The lever has a small hole near the end in which an iron rod is placed with hook on end to engage a spike or bolt driven into one of the posts near the ground, so that the gate can when desired be fastened open.
The troughs in feed yard are V shaped, made of a six inch and a seven inch board nailed together and stand on legs of 2 by 4. Spikes are driven through bottom of legs into the ground to prevent shifting of troughs.
Hayracks are twenty-four inches wide, thirty inches high and fourteen feet long, with no bottom. Legs are of 2 by 4, lower board twelve inches wide, upper board nine inches wide on ends of rack and ten inches wide on sides. The upper side boards are set

at an angle. This prevents waste of hay and also stiffens rack in center. Space between upper and lower boards is seven inches. Material for one of these racks consists of two side boards 10 inches by 14 feet, two end boards 9 inches by 2 feet, two end boards 12 by 26 inches, two side boards 12 inches by 14 feet, four pieces 2 by 4 cut thirty inches on long side and twenty-one inches on short side, as shown in figure; two pieces 2 by 4 cut twenty-eight inches on long side and nineteen inches on short side. The latter are placed in middle of rack, one on each side.
At two months old the lambs should weigh forty to forty-five pounds. Some markets like them at this weight; others prefer them heavier. They are either shipped alive, two in a crate, or neatly dressed and sewed up in muslin and burlap. If properly marketed such lambs should return a good profit to the grower.
English Sheep Fattening.
Some English farmers fatten their sheep on grass alone, but the large majority feed some concentrate in addition, cottonseed or linseed cake being generally used. Some good feeders use a small amount of bran in connection with it, while others feed equal parts of cottonseed and linseed cake. The amount varies from three-fourths to one and a fourth pounds per head per day.
Essentials in Good Butter.
I consider the essentials to producing fine dairy butter to be pure water, a temperature of 45 degrees, a centrifugal separator and especially good form pans in every detail, says a dairyman. I pack in sixty pound, paper lined tubs and ship direct to a consumer who appreciates a fine grade of butter and is willing to pay for it. My usual output is 100 pounds a week. The quantity of butter color should vary with the season and the various feed used.

THE FEEDER.

Professor Henry of Wisconsin places the following values on skim milk when fed with corn: When corn is worth 25 cents a bushel, skim milk fed at the rate of one to three pounds to one pound of corn is worth 15 cents per 100 pounds, but when fed in the proportion of seven to nine pounds to one of corn it is worth but 9 cents per 100 pounds. When corn is 50 cents a bushel the milk fed in the first proportions is worth 31 cents, but in the latter proportions only 8 cents per 100 pounds.
Soy Beans For Hogs.
As a grain crop to use in connection with corn for crowding the spring crop of pigs to market the soy bean is a very valuable crop. It is essentially a grain plant, very rich in protein, and while the hogs are running on soy beans they should have access to corn to balance the ration. While the corn does not contain enough protein to balance the ration, soy beans contain more than is profitable to feed, and the combination of the two grains is therefore much better.
Feed For Work Horses.
The work horse should be supplied with about two pounds of provender for each 100 pounds of weight. Of this from ten to eighteen pounds, according to the severity of the labor performed, should be grain in some form. The heavy feeding should come at night, after the long day's work is over and when the animal has time for masticating and digesting his food.
Feeding the Calves.
A Pennsylvania dairyman reports that he kept a record of eighty calves, which consumed 12,000 quarts of milk, for which he received \$481, or over 4 cents a quart, and the calves did the milking. He estimates that it takes 146 quarts of milk to make a calf four weeks old, which will weigh 100 pounds if they have Holstein blood.
Experiments With Steer.
In some experiments to test the amount of feed needed to keep a thousand pound steer in condition without making him grow it was found that there was required fifteen pounds of timothy hay, twelve pounds of clover hay and seven pounds of corn meal. In other words, unless more than this amount of feed was consumed the steer would not make a growth worth considering.
Fattening Hogs After Steers.
Where cattle feeders keep hogs in rattle feed lots some protein feed should be given the hogs so their growth need not all be made from corn not used by the steers. Striking results have been secured in recent Ohio tests showing that when tankage was fed to the hogs in the form of a wet slop once a day much better gains were secured. The gains made by hogs fed tankage in addition to the corn they got were much cheaper than where no additional feed was used. The tankage used was ordinary digester tankage and cost about \$38 per ton. Only about 80 cents' worth of this was fed to each hog, and the gains were over 50 per cent more than where no tankage was used.

Care of Cream.
Aside from the scouring of cream, there are other things which enter into its care and which should be observed to insure cream of first quality. Cream rapidly takes up odors and for this reason should be kept in a pure atmosphere. Do not set cream in the kitchen, for it will absorb kitchen odors. A great deal of cream, otherwise first grade, tastes of fried onions and of fried ham and of tobacco, all of which things may have been used in the kitchen. Likewise do not place the cream can in the cellar where there are potatoes and cabbage and other vegetables. Keep the cream away from the barn, for the barn and cowy odors are the most objectionable odors it is possible for cream to have.

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