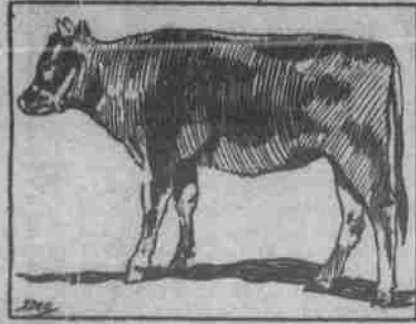


RAISING THE DAIRY CALF.

It seems as though the raising and developing of the dairy calf should be as plain as the A B C's to every farmer, and yet so many neglect this most important part of the dairy farmer's work. No set rule can be given to use for all calves. My rule is this, writes C. I. Hunt in Kimball's Dairy Farmer: The calf is left with the cow for a week or ten days and allowed to suck one teat only. This, I find, gets the digestion of the calf in good working



NO. 1.—RAISED WITH VERY LITTLE FEED. order, and it is much easier than to begin feeding milk as drawn from the cow. The quantity to be fed must be governed entirely by the capacity of the calf. Twelve pounds fed in three feeds and at 100 degrees is a safe start.

As soon as the calf will eat clover hay and grain it should be given. Hay should be before it all the time and grain all it will clean up after each feed of milk. There is nothing better than coarse middlings. Some of our breeders keep grain before the young stock all the time, and it cannot be denied that it makes sleek looking calves, but when that calf goes to the average farmer with his care he will practically be a ruined calf.

The dairy calf should have good every day in the year, with the possible exception of during May and June, when pasture is at its best. If they have been so fed they should be bred to freshen at about two years, never less. After the heifer is bred is a critical time, because she then has two babies to feed and provide for, and if she is tied up you must remember that it depends on you whether you develop her or make a fizzle. A well bred dairy cow will return with good interest every dollar spent for her welfare while she is growing and getting ready for her life work.

I recently heard of a man who boasted that he had kept fifteen head of two-year-old heifers since Jan. 1 and not fed a spear of hay. Thinking that both he and his cattle would be curiosities, with camera in hand we started for his place. He was very glad to have me take a picture of one two-year-old. It is shown in illustration No. 1. She is now twenty-three months old, due to freshen soon and will not weigh 200 pounds—surely a wonderful development. Illustration No. 2 shows a cow that was developed



in Alaska. You can see her position on Friday, July 1, Oregon Day. There has been such a general movement of people beyond the state expected to be seen this week.

"Judging" WITH PLENTY OF FEED. tion of how they will eat" plan. She handle," pounds of milk as a two-year-old was still fed on the above fair at six years of age gave over 100 pounds of milk, making over 100 pounds of butter in one year—more than the other will do in five years.

Which is the more profitable? It cost money to develop No. 2, but in seven years she gave over 71,000 pounds of milk. As the time for the cows to freshen draws near, make up your mind to keep only the best heifer calves, and don't be afraid to feed. One calf properly cared for is worth a carload like the one first described.

Must Earn Their Feed.

My favorite breed, or rather type, is the popular dairy Shorthorn, says a successful dairyman. These cattle are growing more and more in favor both east and west. I weigh the milk from each cow night and morning, keep complete records and find that at a consistent cost my cows annually return a good amount of dairy products. I have set a mark at 300 pounds butter each per year at maturity. All cows falling below this will be disposed of at the block.

Pasture For Calves.

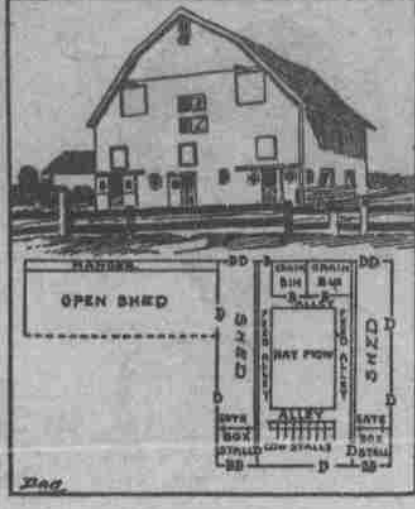
The wisdom of having a nice pasture for calves will be readily apparent to all keepers of live stock. They cannot thrive on short or soiled pastures. Other animals that are older can fight their battles on these. Calves cannot do so. They cannot hold their own in pastures with older animals. The latter will monopolize the pastures. They will take all the choice portions. The former need these. It is better, therefore, in fact, it is necessary—that the calves shall have a separate pasture.

RAISING YOUNG BEEF.

A Conveniently Arranged Building For Quartering and Feeding. The illustrations show a cattle barn and shed adjoining which I have used for five years with satisfactory results in raising and fattening young beef. writes a breeder in the Breeder's Gazette, Chicago. The main barn is 60 by 56 feet and 22 feet to the eaves, which gives ample loft room over the sheds, in which I put hay and blow the center mow full of straw.

The box and milk cow stalls have the sunlight and are closed but few

days in the year. I keep about twenty-five cows for the raising of my calves.



PLAN OF BARN AND SHED.

They have the protection of the open shed, with mangers in which is fed roughage, usually corn fodder, while their calves get through a creep into the shed of the main barn, where they are fed clover hay, oats, bran, a little chopped corn and oilmeal, which they learn to eat long before they are weaned.

As I aim to market my cattle at about twenty months of age, I find early feeding, comfortable quarters and good breeding all in line to produce prime beef at so early an age. The second summer and winter the calves are changed to the opposite shed of the barn, where they have protection from flies in summer and a good place to enjoy their clover hay or shredded corn fodder. Their grain is fed in troughs in an open yard. A large gate between box stall and shed admits of driving the entire length of the barn, which makes hauling out the manure a simple matter.

I find the arrangement of the barn, both storage and feeding capacity, very convenient.

CARE OF SHEEP.

Some Points on Feeding and Keeping the Flock Thrifty. Sheep must be fed with great regularity. Slipshod methods are fatal to success.

Do not feed corn to the breeding ewes. It is too heating. Give two-thirds oats, one-third wheat bran, with a little oilmeal mixed in. The grain should be selected with care.

Lambs should be taught to eat grain by themselves as early as possible and should be eating well before weaning. On an average they should be fed ten weeks before weaning.

If you can do no better by way of making troughs for the sheep to eat their grain out of, you can nail two boards together in the shape of a V, with a couple of short pieces across the ends to keep them right side up. This will save much grain, and grain is money this year.

Ensilage furnishes a good succulent food for sheep. In the absence of roots it is most valuable. Keep salt in the pens at all times.

Night is the favorite time for dogs to make their raids, so make it a rule to have the sheep near the barn every night. Dogs are much less apt to trouble them then.

Dip the sheep immediately after shearing and again in about three weeks to destroy eggs and all ticks that may have escaped at the first dipping.

The lambs should be dipped at the same time, for when the ewes are shorn the ticks flock on to the lambs.

Expert Milking.

A dairyman who generally did his own milking employed a boy. The milk shrank one-third in two weeks. The farmer resumed milking and in two weeks got the same amount as before. Afterward he set the hired man to milking, and the milk shrank 10 per cent in two weeks and in two weeks more, the farmer milking again, was back at the standard. This man milks quietly and very clean. He closes the forefinger and thumb around the teat high up and makes a downward motion, tightening the grip and forcing out the milk. He then lets go his hold, keeping the finger and thumb in circle, carries up the hand and presses it smartly against the udder, closes and pulls down as before. The idea is to give as near as may be the same motion the calf does in sucking.

Concerning the Calf. The heifer calf should develop muscle and bone rather than fat. Too much cream for the calf is about as bad as too much money for the boy. Never sacrifice a heifer calf from a first class butter cow. All are needed to supply the depleted dairies.

It is detrimental to allow a calf to run with a cow even for a few days. As soon as the milk is fit to use the calf and the cow should both be accustomed to the separation. Never tie a calf with a rope about its neck. Ten chances to one it will get choked to death. A stout strap about the neck, with a ring and a chain, is far better. A swivel will keep the chain from being twisted.

SELECTING SHEEP.

The Value and Indications of a Strong Constitution. By HOWARD A. CHANDLER. There is one very important thing which is oftentimes never thought of or taken into consideration by the sheep breeder or buyer—that is, constitution. Weak sheep cannot produce good, strong lambs; neither can they give good returns in the feed lot. The healthy, strong constitutional sheep has a much different appearance and general make-up than the weak one. In the examination of a sheep I always start at the end of the nose and work back. The indications of strong constitutions are a wide, open nostril, a short, broad head, width and depth of chest, fullness behind the shoulder both on top and at the side and well sprung ribs coming wide out from the backbone. Such a sheep has room for the vital organs to perform their work in a proper manner. Neither the breeder nor the feeder can afford to lose sight of the constitution in his sheep, because his profits will certainly be cut short.

To have the wool dense and of good length is a prime requisite. Although the breeders in the corn belt must pay

attention to the mutton qualities of their flock, a good fleece can also be a period of it. This will be the most beneficial in the long run.

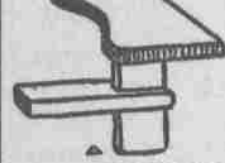
Much food is given to some classes of animals in a very sloppy condition. They often get terribly tired of it, and dry materials are gone for greedily. Milk cows are given a lot of moist food in the hope that this will increase the flow of milk, but when the time comes, as it certainly will if persisted in, when they are indifferent to it there should be no delay in introducing more dry food.

Pigs are often extremely "nice." How frequently do we see their troughs nearly full of food that has been given hours previously. This is especially the case when fattening is going on. That they should refuse to be fed is no way surprised, as they know the results of persisting with one kind of food only.

A change from fine to coarse material is generally advantageous. It must not be inferred that I mean a change from superior to inferior foods. That is quite a different method, which I do not support.

Improving the Milk Stock.

A Kansas dairyman claims that an improvement over the ordinary milk stool can be made by simply attaching an extra piece of 2 by 4 about ten inches long, as shown in the illustration. The purpose of this strip is to provide a rest for the milk pail. The proper height for this strip will be dependent upon the general height of the cows. The rest saves the milker the work of holding the pail between his knees or keeps it off the stable floor in case this undesirable practice is followed.



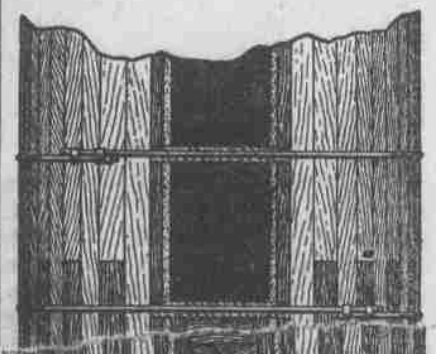
BEST FOR MILK STOOL.

FAILURES OF SILOS.

Why Some Structures Have Not Given Good Service.

Some of the failures of silos have been due to carelessness in filling, but more frequently to faulty construction of the silo. Too often the walls of silos are not made airtight. Unless the walls of wooden silos are made airtight, with tar paper, felt pads or clay worked into the joints, much silage will be wasted. Ninety per cent of stave silos are not airtight at the foundation. The shrinkage and swelling of staves break the cement, which must be frequently mended. Some losses have occurred because the ends of the staves have decayed. The illustration shows how some durable wood may be used at the bottom of the silo, which is one method of overcoming this difficulty. The iron bands of the stave silo must frequently be examined or they will fall down as the staves shrink. Sometimes the iron splices rust.

The walls of the silo must be rigid or they cannot stand the pressure. A number of concrete silos have failed on this account. When the sides begin to bulge, air can get between the sludge and the walls. Brick silos with



A SILO WITH REDWOOD STAVES AT THE BOTTOM, CHEAPER WOOD ABOVE.

out-reinforcement have been failures because of this pressure from the inside.

A mistake sometimes made is in building the silo too large a diameter for the size of the herd, so that silage spoils by too long exposure of the surface. In one case a man with a small herd built a silo in his barn eighteen feet square and sixteen feet high. After two years' trial he gave up the use of the silo in disgust because his silage did not keep. A year or two later he sold his farm to a more progressive man, who built partitions across the same silo, making four small silos out of the large one, and had no difficulty in obtaining good silage for stock.

The silos should be deep. The deeper the silo the better the silage. The diameter should conform to the size of the herd, and if two inches of silage are fed each day there will be no loss from surface exposure.

To Make Ewe Own Lamb. A breeder has a little trick to make an ewe own a lamb that is worth copying. A stanchion is made in the middle of the stall and the ewe fastened in. The lamb can get all around her, and she cannot hurt it, and of course it will want to lie on the hay in front of her. In a few days it is her lamb.

THE VETERINARY

Pure creolin applied once a day for a week or so is a remedy used for ringworm on a cow. First wash the part with soap and water.

A Remedy For Colic. A home mixed colic remedy which is a favorite with many horsemen is composed of one ounce each of tincture of opium, sulphuric ether, tincture of ginger, spirits of niter, essence of peppermint. Give two tablespoonfuls in a pint of hot water and give one tablespoonful every half hour until improvement begins. After an attack of colic horses should be fed with care for a few days.

Castor Oil For Horses. The Horse Breeder says: "Hardly a season passes that castor oil is not recommended by some turf paper as a medicine for horses or colts. It may be used in some cases without causing death, but a valuable young colt, owned by the writer some thirty-five years ago, was killed by giving him

castor oil for constipation. The oil was administered and the colt died before we knew that he was sick. Our advice to horsemen is, never give castor oil to any animal of the horse kind, old or young. Whenever a purgative is needed always give raw linseed oil, which is both effective and safe and much cheaper than the poisonous castor oil, bulk for bulk."

Three Valuable Remedies. There are three remedies every farmer should have on hand for treating sick calves, says a New York breeder. One is the formalin treatment for white scours, one-half ounce of 40 per cent formalin in fifteen and a half ounces of pure water. Use one teaspoonful to every pint of milk fed. White scours are easily recognized both by the whitish color of the voiding and by the odor. Another remedy is the two-hundredth dilution of sulphur for regular looseness of the bowels. This is a homeopathic remedy. Give from three to five tablets three times daily to young calves under two weeks and more to older ones.

The other remedy is cantharis for bladder trouble. If you find your calf wet on belly or inside hind legs or eyes running profusely, with bowels loose, five drops of homeopathic tincture given three times daily will soon cure.

BREEDING THE MULE.

Strong Demand in Many States For Those of Heavy Type.

For no class of stock is there a stronger demand than for big, well broken mules in six or eight of the agricultural states. Whoever would raise them has a hungry market already established, says the Breeder's Gazette, Chicago. It is not necessary to precede the work with a campaign of education. The multiple merits of the mule are familiar to thousands of farmers and planters who are unable because of the inadequate supply to buy the mule stock that they want. An attractive opportunity invites farmers to undertake the production of high class commercial mules, and it is certain that many of them will grasp it within the next few years.

While the day of the small mule is not past and probably never will be in the sugar and cotton country of the south, he is sure to yield considerable ground in the border states and elsewhere to the draft mule, which is clamorously sought at the leading mule markets at stiff prices. But this type cannot be produced without big mares. No matter how big a jack may be, he cannot sire draft mules from the ordinary run of small native mares common in the mule belt. Mammoth jacks are capable of notable results in increasing the size of mules, but they are much handicapped by the want of scale in the mares to which they are bred. An improvement in native mares increasing their size 200 to 400 pounds would benefit the mule industry immeasurably. It would endow the country with big mule possibilities such as never before existed. This change in the type of farm mares in those sections where the mule is the main reliance for field and other hard labor would not upset the other purposes for which they are usually maintained. Probably 90 per cent of the mule bearing mares could be improved in size without detracting from their value

Ridding Cattle of Grubs. Grubs under the skin of cattle may be killed in several ways, according to S. Arthur Johnson, Colorado Agricultural college. One common method is to rub down the humps on the hide with a round stick, such as a broom handle, thus killing the grubs where they lie. Oil or lard may be applied to the holes in the hide, which will stop the breathing pores of the grub and kill it. If a little carbolic acid is put in the lard it will help the wound to heal more quickly. By pinching on either side of the lumps the grubs will often be forced out. They should be killed by the foot if they drop to the ground. The holes may be treated with carbolic lard. This method is to be preferred, for it does not leave the grub under the hide to fester.

Tobacco For Scours in Sheep. A breeder who uses homespun tobacco for scours in sheep says of the treatment: I used it all last summer and winter and am using it now. I had no scours in my flock last summer and have had none to amount to anything since. I sometimes mix salt with it, but I know sheep will and do eat it alone. I give thirty-five sheep about one-half pound once a week. I give clean tobacco, just as it is stripped from the stalk. They will eat the leaves as they will eat corn fodder, but not nearly so much. I also used a worm powder last summer with the tobacco. I buy lugs.

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TYPE IN STRONG DEMAND.

for the other uses to which they are put. More scale would indeed improve them for much of their work on the road and in the field.

If our reasoning is sound and the experience and observation of mule and horse breeders are trustworthy in an economic study on which they directly bear, it would pay the generality of farmers in the mule belt to add to the stature of their farm mares with the special object of breeding larger and better mules. One cross of draft horse blood would effect the needed improvement. Bred to draft stallions of standard size, native mares would produce capital types from which to breed fifteen and sixteen hand mules. A second cross of draft blood in some cases might be used in the interest of an extra big type of mule, but in the majority of instances the initial cross would suffice. It is obvious, therefore, that in founding a big mule industry on a secure commercial basis the draft stallion must precede the mammoth jack.

The Price of Sires. Good fleshy bulls have sold recently at \$5 to \$8 per hundredweight in leading markets. This means that the man who has bought, used and fed a pure bred bull can sell him for more than enough to buy another one. An aged bull that brings \$5 per hundredweight on the farm will pay for his successor and more, too, in some cases.

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And yet too many cattle raisers think that a pure bred bull at \$75 to \$125 is away out of sight. Counting the improvement made in the herd, the better quality and higher price of the cattle sold from it, the pure bred bull is about the cheapest investment in sight.

Pure Water For Calves. It is very easy in the summer to allow calves to suffer for lack of fresh, clean water. Where calves are compelled to drink from stagnant ponds or foul troughs they cannot be expected to do their best—in fact, they are pretty likely to become poor and suffer from digestive troubles. In a trial at the Kansas station with thirteen calves ranging from two to three months of age it was found that 808 pounds of water were drunk in seven days, or nearly ten pounds per head per day. It was observed at the same time that the calves drank many times, drinking only a little each time.

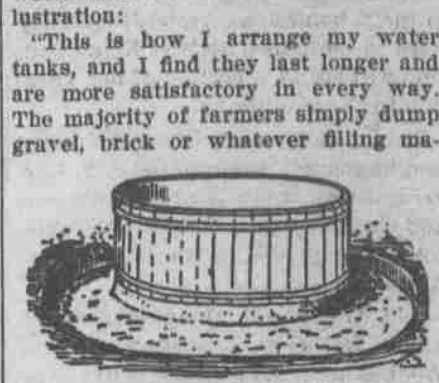
These Having an Excavation Around Base Give Better Service. A Nebraska stockman says of the water tank for stock shown in the illustration:

"This is how I arrange my water tanks, and I find they last longer and are more satisfactory in every way. The majority of farmers simply dump gravel, brick or whatever filling material is used on the ground around the trough and allow the cattle to pack it down.

"I think a much better plan is to excavate a space around the tank, say, eight or ten inches deep and a couple of feet wide, leaving the tank, of course, on an earth bottom. The filling material is dumped into this excavation and tamped several inches at a time with a tamp that can be improvised from a heavy block of wood or short log.

"The excavation should be filled until it is at least several inches higher than the surface of the yard adjacent to the trough. By this method of filling in around tanks it is more difficult for cattle to wear the filling away or tear it up. It is also practically impossible for hogs to make a mud-hole in this filling, as the water seeps away quickly."

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