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Raising Calves on Skim Milk

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Improvement in the yields of milk and butter from the dairy herd depends upon the careful rearing of the heifer calves from the best cows in the herd and sired by a pure bred bull of good breeding. As these heifers come in milk they should replace the poorer cows of the herd. Good breeding alone will not develop a high producing herd. Good feeding from birth to maturity and throughout the productive life of the cow is just as important as good breeding.

The dairyman cannot afford to let his calves nurse their mothers or feed them on whole milk. It has been demonstrated conclusively that just as good calves can be raised on skim milk as by allowing them to nurse their dams, and more economically. The poor results sometimes obtained by feeding skim milk are due to improper methods of feeding.

Teaching the Calf to Drink.

Take the calf away from its dam as soon as it has nursed, or it may be taken away and not allowed to nurse at all. It is better to let the calf nurse its first feed in order that it may get it warm. Anyone who has had experience in feeding a newly born calf its first feed from the pail knows that the milk gets cold before the operation is completed. The calf that is taken away from its mother the first day is much more easily taught to drink than the one that nurses for a week or more. It is important that the calf get the first milk (colostrum) from its mother. This milk is especially fitted to the needs of the calf at that time and has a laxative and stimulating effect on the digestive system.

One of the important characteristics in the makeup of a successful calf feeder is patience. In teaching a calf to drink, far more may be accomplished by patience than by force. If the feeder will back the calf into a corner of the stall, get astride its neck, hold the pail firmly, let the calf have hold of two or three fingers of one hand, gently coax nose into the milk, then slowly slip the fingers out of its mouth, holding them on the nose; and each time the calf jerks his head out of the pail and sticks his head into the air

looking for something to suck let him have the fingers and repeat the operation, the calf will learn to drink by the second or third day. But when the feeder sets the pail down, takes the calf by both ears, forces his nose to the bottom of the pail and holds it there until the calf "bellers" for air, all that is accomplished is that the feeder gets mad, likewise the calf, and together they spill the milk.

Amount to Feed.

The amount of milk to feed is one of the most important things to be considered. Over feeding and especially a sudden heavy increase in the amount fed is one of the most common causes of indigestion or scours in calves. It is much better to feed a little less than the calf needs than to overfeed. The small calves should be started on not more than 8 pounds and the larger ones on not to exceed 10 pounds per day for the first week. Then increase the amount gradually at the rate of one-half pound at a time. After an increase is made hold the amount uniform for three or four days and if there are no ill effects add another half pound. If at any time you see the first sign of scours, reduce the amount of milk.

Temperature of Milk—It is important that the milk be fed at blood heat (100° F), especially while the calf is young. When the calf is two months old he may gradually be accustomed to somewhat colder milk, but even then the temperature of the milk should be the same at each feeding.

Changing to Skim Milk—One may begin adding skim milk at any time after the calf is a week or ten days old. In fact, when feeding calves on very rich milk such as is often produced by Jersey or Guernsey cows, it is often best to add some skim milk or a little water from the beginning to reduce the percent of fat. The change from whole milk to skim milk should be made gradually, at the rate of one-half pound to a pound a day. The amount of skim milk to be fed daily after the change is made may be gradually increased to 16 to 18 pounds per day. If skim milk is plentiful the larger calves may be fed as much as 20 pounds per day after they are five months old. For best results the calf should have skim milk until five or six months old, but the milk may be taken away after three months if plenty of good hay and grain is supplied.

Feeding Grain—As soon as the calf is changed to skim milk it will need some grain to replace the butter fat taken out. A number of different feeds may be used for this, but rolled barley, wheat or oats, or cracked corn will give excellent results. For Washington conditions barley or equal parts of barley and oats will make an excellent supplement to skim milk. Wherever corn is available it is one of the very best feeds to use with skim milk for calves. It is not economical to purchase high priced feeds like oil meal for calves when just as good results may be secured by using our cheaper farm grains.

To teach the calf to eat grain, place a small amount in the pail just as it finishes drinking its milk. With calves that are slow to learn place a little grain in their mouths just as they finish drinking their milk and while they are sucking their tongues they will get a taste of the grain and will soon learn to eat. Bran or a mixture of bran and shorts is excellent to use while teaching the calf to eat grain as it is less sharp than other ground or rolled grains and the calf takes to it more kindly.

Give the calf all the grain it will eat up readily until it is eating two pounds per day. The amount of grain need not exceed two pounds per day at any time unless it is desired to push the calf to very rapid growth or fatten it for slaughter. If the calf is fed a heavy grain ration it is well to include some growth producing feed, such as oats, bran, or oil meal in the grain

mixture. All grain should be fed dry after the milk is eaten. Feeding the grain in the milk often causes indigestion.

Feeding Hay—The calf will begin to eat hay almost as soon as grain and should have all the nice, bright hay it will eat. Any good bright hay will do at first. It is best to use hay that is not too coarse as the calves will eat the fine, leafy hay better. Later clover, alfalfa, oats and peas or vetch hay are best as they produce rapid growth. If these hays are used while the calf is quite young they should be given in rather small amounts as they are somewhat laxative. Never feed the calf molded hay. If any hay is left it is best to clean out the manger before the next feeding.

Importance of Sweet Milk—It is best to feed the milk sweet at all times. If for any reason it is impossible to have it sweet it is better to feed sour milk all the time than to be constantly changing from sweet to sour. Although excellent results have been secured in a few cases with sour milk it must be remembered that milk that has soured under ordinary conditions is very often injurious to calves, being a frequent cause of scours. If sour milk is to be fed to calves it should be handled in a cleanly manner and fed as soon as curdled. If butter milk is used it should be fed when fresh.

Water and Salt—The calf will drink water when only a few days old and should be allowed all the clean, fresh water it wants. As soon as the calf will eat salt it should have a little every day or two, or place the salt in a box where the calf can get it as desired.

Feeding Pails—Keep the pails clean. Filthy pails are a frequent source of scours. The pails should at least be rinsed after each feeding, but it is better still to wash and scald them. Do not allow them to remain in the stall from one feeding time to another.

Stalls—Calf stalls should be cleaned frequently and well bedded to keep dry. If any outbreak of scours occurs all stalls should be cleaned thoroughly, disinfected and bedded with clean bedding.

Stanchions—When several calves are being fed at one time especially where they have to be kept in the same enclosure it is much more convenient to have stanchions for them at feeding time. The use of stanchions not only does away with the annoyance of having all the calves trying to drink out of one pail at the same time, but, if the grain is fed as soon as the calves are through with their milk, by the time the grain is eaten, the calves will have forgotten to a large extent the desire to suck each others ears and udders. This habit of sucking each other often results in frozen ears in winter. It probably also results in unevenly developed udders.

Calf Scours—The most common trouble in raising calves by hand is indigestion or scours. This trouble is caused by over feeding, cold milk, sour milk, feeding grain in milk, dirty pails, and dirty stalls. It is much better to prevent scours by careful feeding than to have to resort to some treatment to cure a case brought on by carelessness. If the instructions given in the preceeding pages are followed carefully there will be little trouble from scours. The feeding of dried blood or blood meal in the milk is excellent for calves, especially the weak or sickly ones, and is also both a preventative and cure for scours. One teaspoonful of dried blood per feed is plenty. Use the dried blood until the calf has entirely recovered from the scours. If the feeder desires, the dried blood may be fed all the time with good results. With weak or sickly calves the amount may be gradually increased to a tablespoonful at each feed.

As soon as the first signs of scours appear the milk should be reduced to one-half the regular amount and feed the dried blood until the calf re-

covers. The use of one teaspoonful for each pint of milk fed of a mixture of one tablespoonful of 40% formalin to 31 tablespoonfuls of water will help to check scours. In severe cases it is well to give a drench of two or three ounces (4 to 6 tablespoonfuls) of castor oil in a pint of milk.

Common scours should be distinguished from contagious or white scours, which is caused by an infection through the naval cord at birth. To prevent white scours provide that the calf be born in a clean, well bedded stall or on pasture. Thoroughly disinfecting the naval cord with a weak solution of creolin as soon as the calf is born will reduce the danger of infection. There is little that can be done to save a calf once it is affected with white scours.

Mineral Matter—"In many cases calves otherwise well nourished suffer from lack of lime or phosphorus, or both. As hay from the grasses contains a fair amount of lime, and legume hay" (such as clover, alfalfa, vetch, etc.) "is rich in this mineral constituent calves will ordinarily receive enough lime when they are eating hay regularly. In districts where the feeding stuffs are low in lime or phosphorus, or when straw, which is deficient in these mineral nutrients, forms the roughage, either lime alone or both lime and phosphorus should be added to the ration." (Feeds and Feeding—Henry and Morrison, pages 416-7). The use of one-half ounce of either common chalk, ground bone, or ground rock phosphate daily for each calf is recommended.

It pays to raise well the good heifer calves for the dairy herd; but careless feeding which results in pot bellied, weakly, stunted calves is a waste of time and money. If the heifer is worth raising at all she is worth raising well. Give her a square deal while she is growing up and she will repay you when she becomes a cow.