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Cooperative Extension, South Dakota State University

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Cooperative Extension Service

Raising Dairy Herd Replacements

Raising Dairy Replacements

Raising dairy calves is one of the important jobs of the South Dakota dairyman. The man who is willing to invest in the right feeds and proper care and management will be rewarded with top-quality replacement heifers.

Success, of course, begins with the bull. He should have the breeding ability to transmit to his offspring the capacity to produce more than their dams.

FROM BREEDING TO BIRTH

But after the breeding, it's up to the cow. This means she needs the best feed and care possible, especially during the last few weeks before birth. It is during this period that the calf makes the most growth, and heaviest demands are made on the cow. Because of this, it is important to give her a dry period of 6 to 8 weeks and to feed her liberally during this rest period.

During the grazing season, good pastures provide all the nutrients, vitamins, and minerals the dry cow needs. During early spring, winter, and late fall, however, high quality roughage of hay and silage, as well as grain, are needed to nourish the unborn calf and to build up the cow for the coming lactation, or milk-producing, period.

CARE AFTER BIRTH

After birth, a calf needs immediate attention. Clean the nose and mouth of membranes and treat



Average live weight of calves raised in hutches like this was 224 pounds at 3 months of age. Calves raised in barns weighed 194 pounds at 3 months.

By Ervin Kurtz, Extension dairyman

the navel cord with iodine. Slap the calf's chest sharply with the hand and rub it vigorously if it has difficulty breathing.

The calf should be up nursing within an hour. If not, lift it to its feet and help it get started. Before it nurses, wash the udder and teats of the cow with warm water containing a small amount of disinfectant.

Be sure the calf gets the colostrum, or first milk, from its mother for the first 3 days, either by being allowed to nurse or fed by hand.

Colostrum is beneficial to the calf as it cleans out the digestive system and furnishes vitamin A, minerals, and other materials that will help resist disease.

If the calf is hand fed, keep it from gulping or drinking too fast. Use a milk scale and weigh the milk separately for each calf, making sure the milk is kept at 90 to 100 degrees F. Wash and scald the pails after each feeding to avoid harmful germs.

The amount of milk to feed depends on the weight and condition of the calf. A good rule to follow is 1 pound of milk per day for each 10 pounds of calf weight. It is better to underfeed than to overfeed the newborn calf. Average birth weights are given in Table 1.

Table 1. Average Birth Weight of Calves

Breed	Weight (lbs.)
Ayrshire	72-81
Brown Swiss	85-90
Guernsey	65-71
Holstein	90-94
Jersey	53-60

Calf meals, either homemade or commercial, can be used to reduce the amount of milk needed. (See Fact Sheet No. 17 "Feeding the Dairy Calf on Limited Milk," Cooperative Extension Service, South Dakota State College).

HOUSING THE CALF

Housing is an important part of good calf health.

Present experiments at South Dakota State College indicate that good housing is very important in controlling both pneumonia and scours.

In the past, dairymen believed calves needed warm barns, where temperatures were properly regulated. This idea is being challenged because in too many cases warm barns lack proper temperature controls and ventilation.

Difficulty was encountered at State College when calves were raised in old, contaminated surroundings even though thermostatically controlled heat was provided with fan ventilators. Calves were inclined to develop pneumonia and high death losses resulted.

Individual out-door hutches¹ have since been constructed. Table 2 gives data on current results.

Table 2. Comparison Between Calves Raised in Barns and Hutches

	No. of calves	Death loss	Av. live weight at 3 mos.
Raised in barn.....	38	7	194 lbs.
Raised in hutches.....	36	1	224 lbs.

The State College dairymen feel there are many advantages to hutches:

1. Fewer deaths
2. Faster growth

¹For complete plans write to Agricultural Engineering Department, South Dakota State College, Brookings. Ask for "Calf Pen and Shelter Plan," No. 212.

3. Feed stays fresh and calves eat hay and grain at earlier age
4. Sunshine and fresh air
5. Less skin disease
6. Easier manure removal
7. Less veterinarian expense
8. Requires less bedding

However, they did list these disadvantages:

1. Initial cost of units
2. More labor involved in calf care
3. More exposure to undesirable weather (snow removal—frosted ears occurred in a few cases)
4. Calves may acquire less immunity to disease

In summarizing this experiment, it is well to point out that if the present housing system of raising calves is satisfactory—do not change. However, if disease, such as calf scours or pneumonia, is present hutches should be considered.

Summary

To summarize, the following suggestions must be followed to get the best possible calf crop:

1. Breed each cow to the best dairy bull available.
2. Condition the cow for the coming lactation during a 6 to 8 week dry period.
3. Provide a dry, draft-free, sanitary maternity stall or a clean lot for calving.
4. Be present and help, if necessary, when the calf is born.
5. Disinfect the navel of the new-born calf with tincture of iodine.
6. Make certain the new-born calf gets the colostrum milk.
7. Provide a dry, draft-free disinfected stall for each calf.
8. Feed warm, clean milk according to body weight.
9. Make gradual changes in feeding.
10. Feed good quality, green, leafy hay.
11. Provide fresh, clean water.