
Scientific Care and Management of New Born Calf in Winter Season

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Introduction

The future of a stock depends upon care and management of the newborn calf. In cattle rearing, good dairy herds are raised rather than purchased. The care and feeding of calves truly before they are born immediately after birth, any membrane or mucous adhering to the mouth, nostrils, eyes and ears of the newborn should be carefully removed to facilitate normal breathing. Use a clean dry cloth for this. In dairy cattle a cow will lick her calf dry. Licking can be induced by sprinkling a little common salt on the calf's body. In total weaning, a calf should be thoroughly cleaned before shifting it to a warm, well ventilated house.

If the calf's temperature is between 35 to 38°C this is borderline hypothermia. Below 35°C you've got to quickly warm that calf. For the ones between 35° and 38° degrees you can probably just put them in a warm room, a hot box, the cab of your truck anywhere warm and tube them with warm colostrum and they will be fine." The warm colostrum helps to warm them from the inside and the high fat content provides energy to create body heat. You don't want the colostrum too hot, but it needs to be cow body temperature.

How to care for a newborn calf

The winter season has started after arrival of November in India. During the first two to three hours of life, calves are unable to regulate body temperature and even a normal calf can become hypothermic quickly if weather is cold. "Those chilled calves are unable to get up,

unable to suckle, so they don't get colostrum — and this compounds the problem. Even if they survive, they are likely to get sick later," says Campbell. "One of the rancher's most valuable tools is a digital thermometer, especially when calving in cold weather. These are inexpensive, and a far better indicator of body temperature than just feeling the calf's mouth. If the calf's temperature is higher than 38°C (about 100°F) it's normal enough. You still might need to worry about ears freezing, but the calf is not at risk for severe cold stress,"

The cow does a neat job of licking the calf dry and stimulating its circulation and respiration with hard liking. However, some time primiparous cows may be nervous and inexperienced, or it may be that the cow is exhausted after a prolonged labour. Under such circumstances, the husband's man should assist by removing the phlegm (mucus) from the nostril of the newborn calf and wipe it dry with a clean towel. He should also massage the calf vigorously for same time with a handful of straw rolled in to a ball.

Sometimes the respiratory passage of the calf may be blocked by mucus which may cause death due to choking if unattended. On noticing such a condition, immediate attention is needed as described below

1. Hold the calf head down by lifting it holding the hock. The phlegm may flow off.
2. Take a twig of hay or grass and tickle inside its nostrils. The calf will sneeze and expel the mucus.

3. If the above methods fail, little time is left to lose. The attending person should apply his mouth to the nostrils of the animal and suck out the mucus. After that he should blow in his expired air through the calf's nostrils closing its mouth. Carbon dioxide in the expired air which has been blown-in the lungs of the calf will act as a respiratory stimulant to initiate respiration. This should be followed with intermittent pressing and releasing of pressure on the chest wall of the calf to give artificial respiration.

During winter season in North India and other colder parts of the country, the calves need some provision of warmth. If the calving takes place on a sunny winter day just allowing it to bask in the sun is all that is needed. Otherwise, the calf may be shifted to a protected pen with plenty of dry bedding.

Attending to the navel of young once is very important as infections gaining entry through the navel at the time of calving can cause serious ailments like navel ill, joint ill etc., which can debilitate and cause mortality. The calf's navel should be painted with antiseptics like tincture of benzoin or tincture of iodine soon after birth to prevent this. If the umbilical cord is not broken, a ligature may be put 2-3 cm away from the body with a sterile thread and cut 1 cm distal to the ligature with a clean sterile scissors. A small amount of antiseptic lotion may be painted at the cut end and protracted from flies and crows.

Feeding of colostrum:

1. Colostrum, or first milk produced by the mother after birth, is high in nutrients and antibodies. A newborn calf lacks disease protection because antibodies do not pass

across the cow's placenta to the fetus' circulatory system. Antibodies in colostrum provide calves with their initial protection.

2. A new born calf should be given 2 liters of colostrum within the first 2 hours of birth and 1-2 liters (based on size) within 12 hours of birth.

3. A calf must receive adequate colostrum to protect it from diseases for the first three month of its life. Colostrum is the calf's passport to life

4. General schedules are worked out for feeding calves economically from birth, giving milk allowance up to 60 days of age. The basis of calculation of milk allowance is 1/10 of body weight for the first 3 weeks and 1/15 of body weight for the next 2 weeks and 1/20 of body weight subsequently.

Composition of colostrum and milk

Constituents	Colostrum (%)	Milk (%)
Total	28.30	12.86
Ash	1.58	0.72
Fat	0.15 to 12.0	4.00
Lactore	2.50	4.80
Casein	4.76	2.80
Albumin	1.50	0.54
Globulin	15.06	-
Total protein	21.32	3.34

Source: Petersen, W.E. 1950 Dairy Science, 2nd Ed. J.B. Lippincott Co. Philadelphia.

Conclusion

A good heifer can be gotten by taking good care of the newborn in winter, which means a good profit for the farmer, therefore, focus on the above-mentioned practices so that a good profit is gained by the dairy farm.

