

LOW QUALITY HAY SUPPLY WILL CONTRIBUTE TO PROBLEMS FOR COW-CALF HERDS

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With the supply of low quality hay that is available to feed cow-calf herds, problems with calf survival this winter can be anticipated. Increased incidence of scours, other health problems and eventually death of calves are the result of poor nutritional condition of pre-calving cows.

Most cattle producers will be inclined to place the greatest responsibility for the losses on disease causing organisms. They will attempt to reduce or overcome the problem through vaccinations. However, it should be emphasized that the same disease causing organisms found in herds with incidences of scours and calf deaths can also be identified in herds where there are no losses of newborn calves. Why the difference?

The real culprits in baby calf losses are poor nutrition, winter environment and the inability of the producer to recognize the combined effect of these factors.

Extended periods of wet, cold weather create a "chill factor" that both cow and the calf must endure. Wet weather produces mud. Cold mud has a greater effect on energy expended or energy loss by the cows and calves than if the ground was frozen. Mud is also a reservoir for disease causing organisms. Cold mud with-draws body heat, and therefore energy, of the cows and calves and also harbors populations of disease causing organisms.

Mud affects springing cows just as adversely as it does feedlot cattles, but the results are not as easily quantiated when a late gestation cow's energy or protein needs are not met, and the fetus is deprived of fat reserves. A lactating cow deprived of needed nutrients in late gestation produces less colostrum and milk for her young calf.

Cattle exposed to dry, cold weather will increase their consumption of forages by up to 30 percent, but digestibility goes down. Conversely, precipitation and muddy conditions, at any temperature, may depress forage intake by up to 30 percent. The reduced forage consumption can only be compensated by feeding grain or other appropriate concentrates or providing some type of shelter or wind break. Forages with inadequate protein content will be even less digestible and a poor source of energy.

The energy requirement for an 80 lb. new born calf in good weather (above 45°F) is about 2 megacalories. When the effective temperature (chill factor) falls to 20°F the calf's maintenance requirement increases by about 50 percent. In cold weather, baby calves need more than a gallon of milk a day just for maintenance. A cow in a poor condition, fed low quality hay will produce very little milk. It will not be difficult to determine the fate of a calf that is receiving a quart to half-gallon of milk per day.

Feeding cows in a muddy area adversely affects their calves in several ways: 1) the calves use a tremendous amount of energy following the cows; 2) every time a calf nurses it gets a belly full of germ-laden mud; 3) contact with the cold mud conducts heat from the calves' bodies. It is not surprising therefore, that the disease challenge exceeds the calves' resistance level, in spite of a good immunization program.

Here are some suggestions that should help to minimize losses when a calving season is beset by miserable weather:

1. Feed grain and/or a protein supplement to cows when their intake of forage (or its quality) is inadequate to meet their energy and protein needs.
2. Emphasize to cow-calf producers the importance and the role of forage testing. A forage test is essential to develop an effective, economical winter feeding program. (See number 1).
3. Plan a system that will allow feeding of cows on sod, or otherwise out of the mud. Feed hay over as large an area as possible.
4. Provide a solid, relatively dry, sheltered area for cows to bed down. Access to woods would be a plus.
5. Prepare a clean, bedding calving stall or shed where calves can be delivered, dried, warm and helped to an udder that is clean and dry. Calves need adequate colostrum within two hours after they are born, preferably within 15 minutes. Once a calf is dry, fed, moving about, has a clean udder to nurse, and two hours old, it can withstand considerably more stress.
6. Check on expectant cows as often as possible. A calf is most vulnerable to chilling and infection during birth and immediately thereafter.
7. Keep colostrum or a colostrum substitute on hand for emergency use. Colostrum from mature cows is better than that from heifers. Check with a local veterinarian for a colostrum substitute.
8. Quickly rewarm newborn calves that have become chilled before being discovered. In a study by the University of Idaho, chilled calves were rewarmed effectively, and much more quickly, by immersing in tepid water (110-115⁰F) than by using a heat pad or heat lamp. (Don't put the wet calves back out in the cold.) Animal scientists at the U.S Meat Animal Research Center effectively rewarmed chilled calves by placing them in a metal cage and in the deflected airstream from an oil-fired portable heater.
9. Some producers might want to consider using portable calf shelters. Shelters should be open-fronted structures, 8 feet x 8 feet and 4 feet high. Situate portable shelters

in the area where the cows bed down. Calves use them to good advantage when they are located on high ground, faced away from the prevailing wind and kept bedded with deep straw. A wooden floor would also aid in keeping the calves off the ground. It would be more expensive, however; it would probably be a good investment.

10. Make sure cows and calves have constant access to clean drinking water.

Yes, many calves that die during the winter are infected with identifiable pathogens. And, yes, vaccinating pregnant cows will increase the antibody content of their colostrum and milk. But, newborn calves will still be unnecessarily lost in the future if the effects of nasty weather and poor quality feed are not adequately compensated for. We don't know about the weather conditions, but we do know that the quality of a great percentage of the feed available to feed cows, will not be "good."