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## Assessing Calf Vigor

In human medicine, newborns undergo an APGAR test following birth. APGAR stands for appearance, pulse, grimace, activity and respiration. This test evaluates the baby's tolerance of the birthing process and assesses vitality outside the womb. An APGAR test for calves could give cattle producers a more defined protocol to intervene on the calf's behalf. Developing such a test has been difficult, but there are a couple of studies that provide some practical advice.

In a Canadian study, two good predictors of calf vigor were identified; calving ease and suckle reflex. Most producers have the ability to assess both components. Difficult deliveries tend to lead to acidosis in newborn calves. A calf born in a timely manner that did not require assistance will be less likely to have acidosis. Acidosis is associated with failure of immunoglobulin absorption and sickness. A producer can check for acidosis by pinching the calf's tongue, within 10 minutes or so of delivery. If the calf cannot withdraw its tongue after being pinched, it's likely acidotic.

The second predictor of vigor is the strength of a calf's suckle reflex. To measure the suckle reflex, a producer should put two clean fingers into the calf's mouth and rub the roof, within 10 minutes or so of delivery. A calf should have a strong jaw tone with a rhythmic suckle reflex. A weak suckle reflex indicates the need to feed colostrum.

In a different study, calves that did not sit up within 15 minutes of birth were found to have reduced absorption of immunoglobulins. Calves born to cows that had a difficult delivery took longer to stand. These observations provide clues that the calf will require more care and colostrum intervention to increase the chance of survival.

Immunoglobulins are part of the goodies in the colostrum, along with other antibodies, that are naturally provided by new mothers. Time is important, a newborn calf's digestive tract allows antibodies to pass directly into the blood. After 24 hours, the calf's intestines cannot absorb antibodies properly. The quantity and quality of the colostrum produced by the dam has a direct correlation to the dam's body condition score. A female in good body condition will have the nutrition she needs to make the proteins to pass on the immunity to her baby.

Any calf born to a cow that has difficulty delivering and/or a calf that has problems with these tests would be a candidate for intervention. The best treatment is to give 2 to 3 liters of colostrum from the mother within the first 4 hours of life. Any delay in getting colostrum into the calf will only increase the chance of the calf having problems throughout its life. While this does require more work, it should pay off with more pounds of beef at weaning.

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