

Heifer Feeding Practices the First 3 Days of Life Impact Growth and Production*



By Donna M. Amaral-Phillips

- **Colostrum feeding management impacts calf growth and future production:** Timely intake (within 6 hours of life) of adequate amounts (4 quarts versus only 2 quarts) of colostrum impacts more than a calf's immunity against disease. Besides IgGs that improve a calf's immunity, colostrum and transition milk from the next few milkings contain various growth factors and cells that program future growth as a heifer and improve production later in life.
- **Colostrum intake improves bone growth and weight gain:** Calves fed 4 quarts of colostrum show better bone growth resulting in an increase in hip height and weight gain in the first year of life. Calves fed more colostrum have higher survival rates through their second lactation. Bottom line— colostrum and transition milk fed the first 4 to 5 days of life impact more than the immunity of the calf and improves her future production and potential profitability.
- **Sex of fetus impacts dam's production:** First lactation heifers pregnant with a female fetus give more milk over their first 2 lactations compared to those pregnant with a male fetus. One trial showed a 980 lbs increased production over the first 2 lactations when pregnant to a female fetus.
- **Dry cow and pre-fresh feeding programs impact calves:** We are learning more about the role of nutrients fed to the dam and the resulting positive changes in performance of the fetus as she develops into a cow entering the herd. For example, feeding rumen-protected choline to the dam may increase the absorption of immunoglobulins in the calf. As more research results become available, we will learn more about how we can “program” a calf through nutritional interventions of her dam.
- **Dr. Van Amburgh's calf feeding recommendations:** Given the choice, feeding fresh colostrum to a calf provides some components (leucocytes) that do not survive freezing or pasteurization. To increase the amount of growth factors and other cells found in colostrum and milk the first few days after calving, Dr. Van Amburgh recommends:
 - ✓ First feeding within 6 hours of life - 4 quarts for large breeds
 - ✓ At 12 hours - first milking colostrum
 - ✓ Day 2- second milking colostrum
 - ✓ Days 3 and 4 - third and fourth milking colostrum

*Material was presented by Dr. Mike Van Amburgh in a webinar “Successfully Developing a High-Performing Heifer”

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