

Is The Colostrum Intake of Newborn Calves Affected By Time Since Birth and Provision of Heat?

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To ensure calf health, experts recommend feeding calves 4 L of colostrum before 6h after birth, but dairy farmers often say that the animals have difficulty drinking this amount. A better understanding of the factors affecting calves' motivation to ingest colostrum could help with the development of better management strategies.

Forty Holstein calves were tested in a 2 × 2 factorial model to evaluate the effects of time since birth (2h vs. 6h) and provision of a heat lamp on motivation to ingest colostrum. Calves were randomly assigned to treatments, with the groups balanced for birth weight and gender. Calves were provided colostrum (>68 g lactoglobulin [Ig] per litre) from a teat bottle.

In a first meal, 35% of calves drank 4 L or more, 30% drank 3–4 L, and 35% drank 2–3 L. To ensure adequate colostrum intake, we fed a second meal and then tube-fed colostrum at the end of the experiment. Weight was highly correlated with colostrum intake and intake speed. There was a significant effect of gender on drinking duration: females drank longer (average: 23±5.7 min) than males (average: 17±6.1 min). No significant effects of heat supply or time since birth were found on intake. Provision of a heat lamp for 1h did not improve colostrum ingestion, but rectal temperature prior to first meal was correlated with total intake. Time since birth did not affect colostrum intake. Although provision of a heat lamp did not increase colostrum intake, calves with a low rectal temperature ingested less colostrum, suggesting hypothermia as a cause of poor colostrum intake.

Implications: The development of knowledge to help producers improve colostrum management is a major issue for the welfare of dairy calves.