UBC animal welfare program

The effect of dystocia on the feeding and standing behavior of Holstein dairy cows

K.L. Proudfoot, J.M. Huzzey*, M.A.G. von Keyserlingk

Background

Dairy cows often experience difficult calvings (dystocia). Cows that experience dystocia are likely to develop health complications after calving, negativity impacting their productivity and welfare. However, it is unclear how dystocia directly affects cow behavior during the period around calving.

Aims

- To describe the impact of dystocia on dairy cow behavior.
- To compare the behavior of cows that experience dystocia with cows that calve without assistance.

Methodology

101 cows

Monitored behavior from 4 d before to 2 d after calving.

10 "dystocia" cows

At least two experienced farm workers were required to assist during delivery.

10 "healthy" cows

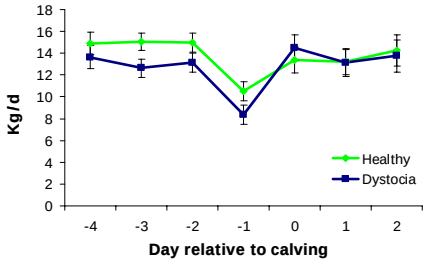
Required no assistance during parturition. Matched with dystocia cows for parity and post-partum disease.

Measurements:

- Feed intake and meal size recorded with automatic feeding system.
- Standing bouts recorded using dataloggers.

Results

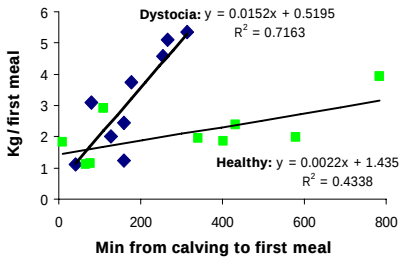
Dry Matter Intake



Dystocia cows ate a total of **6.4 kg less** than healthy cows in the 3 d before calving (34.2 vs. 40.6 kg/3d, SED=2.2, P=0.06).

Dystocia cows tended to eat more in the 24 h after calving than in the 24 h before calving compared to healthy cows (6.2 vs. 2.9 kg/d, SED=1.3, P=0.08).

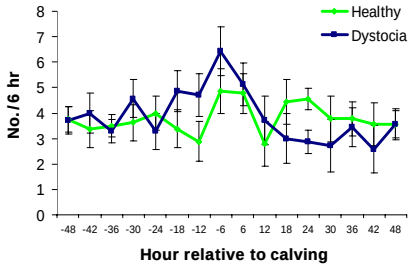
Meal Size x Latency to Feed after Calving



Dystocia cows with the longest latency to eat a meal after calving showed increased DMI during their first meal (R^2=0.72; n=9, P=0.004).

Compared to healthy cows, a shorter latency was required to increase meal size for dystocia cows, likely as a result of hunger (dystocia*latency, P=0.002).

Standing Bouts



In the 6 hr before calving, all cows transitioned from standing to lying positions more often than in previous periods (bouts*period, P<0.001).

By **12 hr before calving** dystocia cows tended to change positions more often than healthy cows (5 vs. 3 /6hr, SED=0.8, P=0.07).

Conclusions

Cows that experience dystocia alter their feeding behavior beginning 3 d before calving, and standing behavior beginning 12 hr before calving compared to cows that calve without assistance.

An improved understanding of how dystocia impacts cow behavior will aid in the development of housing practices that accommodate cows at-risk for experiencing difficult calvings.

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