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

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Background

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

Aims

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

Methodology

101 cows

Monitored behaviour 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

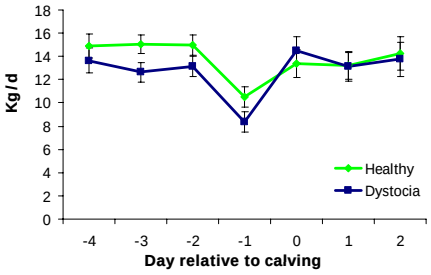
Required no assistance during parturition. Matched with dystocia cows for parity and post-partum disease.

Measurements:

- Feed intake, feeding time and meal size recorded automatically.
- Standing bouts recorded using dataloggers.

Results

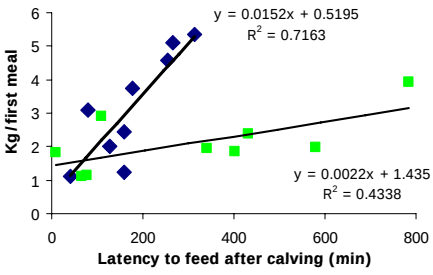
Dry Matter Intake



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).

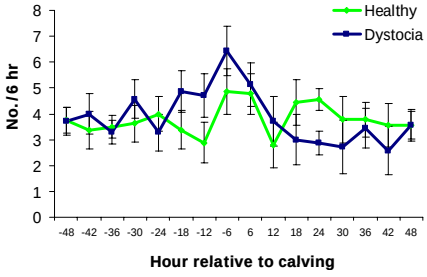
Relationship between meal size and latency to feed after calving



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 changed positions more often than healthy cows (5 vs. 3 /6hr, SED=0.8, P=0.07).

Discussion

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

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

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