Make it short and sweet!
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Relevance & Objective:

- The transition period (3 weeks pre-calving to 3 weeks post-calving) is a challenging time for dairy cows as they adapt to changes in energy supply and demand. We strive to increase feed intake in the dry period (45-60 days prior to calving) and to minimize the drop in feed intake in the week prior to calving in attempt to reduce the risk of metabolic disease after calving.
- Objective: To manipulate high-straw dry cow diet characteristics to promote greater intake and metabolic health across the transition period

What we did:

- Over 3 trials, we investigated how a) the chop length of wheat straw (Short = 2.54cm; Long = 10.16cm), b) the moisture content of the diet (water added to decrease the dry matter by ~10%), and c) the addition of a molasses-based liquid feed (2 kg/cow/day as fed) can effect feeding behaviour and physiology of dairy cows in the transition period
- Outcome Measures: feeding behaviour and intake, rumination activity, rumen pH, blood metabolites, milk production and components, and changes in body weight and body condition scores

Research impact:

- Identifying strategies to reduce the risk of metabolic disease in the weeks following calving is crucial to both the farm and cow success
- This research provides dairy producers with cost-effective feeding strategies promoting feed intake and improved metabolic health

Take home messages:

- This research provides novel insights into how feeding behaviour and nutritional management influences the health and productivity of dairy cows across the transition period. The increased global demands for food is coupled with increased public concern for the welfare of food producing animals. This research helps to ensure the health of food producing animals, and can reassure consumers that their food products originate from cows that were raised in a humane manner with their health management as a top priority.

Key Findings:

- ‘Short’ (Figure 1a), ‘Water’ (Figure 1b) and ‘Liquid Feed;’ (Figure 1c) treatments had higher feed intake in the dry period
- ‘Short’, ‘Water’ and ‘Liquid Feed’ treatments maintained more consistent feed intake in the week leading up to calving
- There were no differences in feed intake after calving
- ‘Short’ and ‘Liquid Feed’ treatments had improved metabolic health after calving.

Figure 1. Daily feed intake (kg/d) for cows across the transition period relative to day of calving

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