Impact of dietary transition at dry off on the feeding behavior of dairy cows
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Introduction & Objective

Introduction:
- To reduce milk production before dry off, producers may:
  - ↓ milking frequency
  - ↓ nutrient availability
- Dry off strategies that excessively restrict feed quantity or quantity may cause cows to experience hunger or negative energy balance
- Producers may transition cows directly to the dry cow diet:
  - Limits number of dietary changes
  - But, feed sorting may result in cows consuming a diet nutritionally different than intended

Objective:
- To assess the impact of the magnitude change in dietary nutrient density at dry off on the feeding behavior of dairy cows

Methods

- At the start of dry off (d 1), cows were randomly assigned to 2 TMR offered ad libitum:
  1) Higher Nutrient Density (HND; NE\textsubscript{L} = 1.55 Mcal/kg)
  2) Lower Nutrient Density (LND; NE\textsubscript{L} = 1.48 Mcal/kg)
- 48 late-lactation Holstein dairy cows
  - Milked 2x/d, producing 26 ± 5.5 kg/d
  - Consuming a TMR (NE\textsubscript{L} = 1.66 Mcal/kg)
  - Dried off in groups of 6 over a 5-d period by milking 1x/d on d 1, 2, 3, and 5
- Cows were assigned to individual feed bins
- Particle separator was used to separate feed samples into 4 particle size fractions to determine sorting

Results

- Cows consistently sorted against long particles (Fig. 2)
- Sorting for short particles increased ($P\leq0.04$) similarly from baseline for both treatments (Fig. 2)
- Sorting for fine particles increased ($P=0.03$) from baseline for cows fed the LND diet (Fig. 2)
- Accounting for observed sorting, LND cows consumed 1.52 Mcal/kg and HND cows consumed 1.56 Mcal/kg

Implications

- The results characterize the changes in feeding behavior that may occur following dietary change at dry off and suggest that feed sorting may result in cows consuming a diet that is of higher nutrient density than intended
- These findings help inform recommendations for feeding at dry off

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