Introduction & Objective

Introduction:
- Increased adoption of intensified feeding programs
  - Feeding higher levels (≥20% birth body weight) of milk
  - ↑ growth
  - More natural feeding behaviors
  - Weaning off high levels of milk can be stressful
  - Gradual weaning is better than abrupt weaning
  - ↓ behavioral signs of hunger
  - ↓ health challenges

Objective:
The objective of this study was to investigate how two gradual weaning programs affect intake and growth of dairy calves from birth (day 0) until 2 weeks post-weaning (day 70).

Methods
- 60 female Holstein dairy calves fed 12.5 L/d (2.5 L meals, 5x/d) by automated rail milk feeder until day 43
- Day 43-56 weaning occurred according to treatment:
  - Continuous gradual weaning (n=30)
    - 12.5 → 2 L in small equal increments
  - Multi-step gradual weaning (n=30)
    - 10 L/d for 3 days
    - 8 L/d for 4 days
    - 6 L/d for 3 days
    - 3 L/d for 4 days
    - Access to water ad libitum from birth, starter feed from d 5
    - Milk, water and solid feed consumption measured daily
    - Body weights taken 2x/week
    - Blood β-hydroxybutyrate (BHB) measured weekly

Results
- Figures: a) milk intake (L/d), b) solid feed intake (kg/d), c) free water intake (L/d), d) average daily gain (kg/d), e) body weight (kg), and f) blood BHB concentrations (mmol/L) for calves on either continuous or multi-step gradual weaning programs.

Implications
The results indicate that when feeding a high level of milk to dairy calves, there are no differences in calf intakes or growth when weaned by a continuous gradual weaning program compared to a multi-step gradual weaning program. Regardless, gradual weaning has been shown to be beneficial for calf performance and welfare and, therefore, some type of gradual weaning program should be used.

Acknowledgements: This project was financially supported by a Natural Sciences and Engineering Research Council of Canada Engage Grant with Grober Nutrition, as well as received support from Forster Technik and the Ontario Ministry of Agriculture, Food, and Rural Affairs – University of Guelph Research Partnership.

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