



Are feed efficient beef females more weather resilient?

HOW DOES WEATHER EFFECT FEED EFFICIENCY?

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LEAD RESEARCHER: Gleise Medeiros da Silva
(University of Alberta)

COLLABORATORS: Graham Plastow, John Basarab,
Edward Bork (University of Alberta); Carolyn
Fitzsimmons (Agriculture and Agri-Food Canada)

Background: Previous work has shown that five main physiological processes are likely to contribute to differences in feed efficiency: feed intake/digestion, metabolism, physical activity, and thermoregulation. Pinpointing the exact contribution of these processes has been somewhat more challenging.

While some research has occurred in the United States examining the effect of heat stress on feed efficiency, there is a lack of information in Canada regarding the interaction between feed efficiency and environmental conditions, particularly during summer and winter grazing where cattle may be exposed to more severe weather.

Objectives: The objectives of this study are to:

1. Reveal the relationship between between cow weather resilience and feed efficiency by assessing cow physiological status, growth performance, immune status, and behavioural responses during summer and winter grazing.
2. Associate environmental conditions using equations that account for air temperature, wind speed relative humidity and solar radiation exposure with changes in cow physiology, behaviour, immune status, and reproductive success.

Implications of the Research: This project will provide information on the physiological and behavioural responses experienced by low and high feed efficient cows under natural fluctuations in weather conditions, and explore if there are any significant impacts on immune status and reproductive success.

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