

BCRC BEEF SCIENCE CLUSTER

RESEARCH

Facts

IN PROGRESS

Predicting feed efficiency more economically FDE.06.09

Project Title: Biological Predictors of Feed Efficiency in Feedlot Cattle

Researchers: Dr. Stephen P. Miller, University of Guelph, Dr. Yuri Montanholi, University of Guelph, Dr. Kendall Swanson, University of Guelph and Dr. Brian McBride, University of Guelph

Background: Feed efficiency is of tremendous economic importance, but is difficult and expensive to measure. This has limited the beef industry's ability to improve feed efficiency. Identifying biological measurements that can accurately predict feed efficiency would be very valuable if they could be collected more easily, and quickly and economically than actual feed intake.

Objective: To identify whether infrared thermography measurements, specific hormone or metabolite levels, or feeding behaviors can reliably predict feed efficiency.

These researchers will collect infrared thermography measurements of body heat production, monitor hormone and enzyme levels in the blood and feces, and observe feeding behavior to in steers that have high and low feed efficiency. The most reliable indicator(s) of feed efficiency will then be evaluated on different animal types (calves, steers, and cows). Finally, these measurements will be collected from birth through finishing to validate predicted vs. actual feed efficiency.

Implications: Developing an economical, rapid and easy way to predict feed efficiency would be a valuable addition to genetic improvement programs.

The Beef Research Cluster is funded by the Canadian Cattlemen's Association and Agriculture and Agri-Food Canada to advance research and technology transfer supporting the Canadian beef industry's vision to be recognized as a preferred supplier of healthy, high quality beef, cattle and genetics.

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