

BCRC BEEF SCIENCE CLUSTER

RESEARCH

Facts

IN PROGRESS

Using New Technologies to Grade Beef Carcasses BQU.02.09

Project Title: Carcass Classification and Grading Capacity and Technology Development

Researchers: Dr. Bethany Uttaro, AAFC Lacombe, Dr. Heather Bruce, University of Alberta, Wayne Robertson, AAFC Lacombe and Dr. Jennifer Aalhus, AAFC Lacombe

Background: An independent and objective grading system is essential to maintaining the scientific credibility of Canadian beef in both domestic and foreign markets. Beef carcass research has traditionally been supported by scientists at Agriculture and Agri-Food Canada's Meat Research Centre in Lacombe, Alberta. These scientists are now retiring. A complex set of skills and knowledge is required to ensure that the grading system adapts appropriately and successfully. A bridging program has been developed to mentor new scientists and expand work on instrument grading and carcass evaluation.

Objective: To (a) ensure that the infrastructure and expertise needed to conduct beef carcass evaluation and grading research is maintained, (b) to invest in the development of new technologies to improve carcass grading and (c) develop new measurements that respond to consumer preferences.

Post-doctoral researchers and graduate students will work with current scientists to investigate:

- ✓ How carcass chill time, bloom time and aging affect the color of beef carcasses that have borderline color to achieve the Canada A grades at time of grading.
- ✓ Whether rapid chilling affects carcass color, and whether carcass pH can be used to distinguish dark-cutting carcasses from those that are slow-blooming.
- ✓ How anabolic implants and high voltage electrical stimulation affect selected carcass and meat quality traits.
- ✓ Whether cow carcasses can be segregated into yield and quality groups.
- ✓ Whether ultraviolet, visible and near infra-red light reflectance measurements obtained on the carcass be used to predict juiciness and tenderness.

Implications: An independent, objective, constantly improving grading system is essential to respond to customer demands and to maintain the scientific credibility of Canadian beef in domestic and international markets.

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