



PORK CLASSIFICATION

Classifying Canadian pork based on quality attributes

Manuel Juarez, Lacombe Research & Development Centre (AAFC)

Why is this project important?

In Canada and around the world, initiatives to implement quality grading systems for pork are being developed as a competitive measure in increasingly demanding national and international markets. In recent years, the organization Canada Pork has been working on the development of a quality-based Canadian classification system. Such a system could lead to increasing consumer confidence, as well as differentiating pork qualities from Canada's main competitors.

The comprehensive system developed by Canada Pork will provide buyers with detailed information regarding expected quality of the product. Since not only lean colour and marbling will be considered, but also fat colour and firmness, the grades assigned to Canadian pork have the capability of

being transformed into grade classes from the U.S. or any other competitor. This new classification system has the potential to impact national and international market shares; however, it is recognized that its implementation could have a significant impact on the operations of commercial packers. Therefore, additional information would need to be provided in order to promote the adoption of Canada Pork's classification system.

The main objective of the currently ongoing study is to generate research, commercial testing and cost estimates of different technologies for on-line pork classification based on the proposed Canada Pork quality grading system.



Photos: AAFC Lacombe

What will researchers do?

- Analysis of preliminary data: Data from AAFC Lacombe, CDPQ (Centre de développement du porc du Québec) and Canadian Centre for Swine Improvement was combined to create a powerful starting point to test pork grading systems in Canada, and to identify areas of interest and quality attributes in individual pork primals.
- Development and research testing of new systems and existing technologies for the classification of individual pork primal cuts based on commercially important quality attributes.
- Research testing on hyperspectral imaging.
- Commercial testing.

What will be the benefit of this research?

This study's activities will strengthen the validation of technologies recently installed at Canadian plants, by tracking individual carcasses and cuts with carcass data on a subset of pigs with accurate reference data. This research will also introduce new technology that can be used to more accurately assess carcass and cut leanness, along with predicting intramuscular fat content and fat quality, which is important for both export and domestic markets.

The strategies from this study will lead to greater sow milk yield and growth rate of suckling piglets.

What has been done so far?

As of 2021, the project team has been able to deliver a number of new approaches to classify primals at commercial plants. Commercial testing has started, and the results look promising at this point. It is too early to have definitive answers, but industry support and the experience at the plants so far seem to indicate a willingness to evaluate and adopt technologies that can add value to current systems.

Genetic and consulting companies, both in Canada and the US, have requested information regarding multiple methodologies developed within the project for primal quality evaluation in order to generate phenotypic data for clients. Commercial packers participating in the project have kept some of the instruments and protocols to continue testing and running quality studies within their operations.

Collaborators

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Project status

Currently in progress.
Results expected in 2023.

Additional resources & information about this project

R&D Featured Articles by Swine Innovation Porc

- [Classified Information: The Great Canadian Pork Sort](#)
February 11, 2021

Farmscape interviews

- [New Tools Under Development to Improve Quality Classification of Pork](#)
June 25, 2019

Additional resources

- Ayers, K. (2019, October). Modernizing Pork's Grading System. *Better Pork*. pp. 6-13.
<https://www.betterfarming.com/flippingbook/better-pork/2019/october/#6>
- Siemens, H. (2019). New Tools Under Development to Improve Quality Classification of Pork. *Prairie Hog Country*.
<http://www.prairiehogcountry.com/2019/09/06/new-tools-under-development-to-improve-quality-classification-of-pork/>

Financial support for this project

This project is part of the Swine Cluster 3 (2018-2023) research program, made possible through financial support from Agriculture and Agri-Food Canada's Canadian Agricultural Partnership, eight provincial pork producer organizations and over 30 industry partners. [Click here to learn more about the financial partners for Swine Cluster 3.](#)