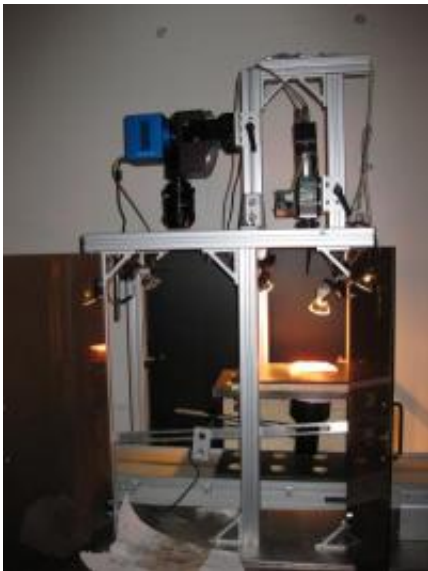# Pigs reveal secrets: New research shines light on Quebec industry

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This shows an analysis of meat quality by spectroscopy. Credit: Dept. of Bioresource Engineering, McGill University.

Which are the best pieces of pork, what their texture is, how moist they are – the secrets pigs keep from even the most skilled butchers – are about to be revealed, thanks to a sophisticated new technique that has been developed by McGill University researchers in conjunction with Agriculture Canada and the pork industry.

"This is about giving industry workers better tools to do their job," explained Dr. Michael Ngadi of McGill's Department of Bioresource

Engineering. "Computer-aided analysis of meat will result in higher-quality jobs, optimal production, and exports that fit more closely with the target markets."

The technology involves spectroscopy, a technique based on the analysis of the wavelengths of visible and invisible light produced by matter. By measuring the wavelengths of reflected light that pork cuts release, the researchers discovered they could easily determine the colour, texture and exudation (water release) of the meat. The technique is revolutionary, as previous laboratory techniques had involved destroying the testing sample. "The technique enables production workers to conduct objective and scientific analysis of the meat very quickly on the production line," Dr. Ngadi said. It means the meat can be more accurately sorted according to the quality demanded by different export markets.

The research is not far from leaving the laboratory and entering factories, according to Dr. Ngadi. "We are currently looking for partners who will work with us to build a ready-to-use device for a commercial production line," he said. The researchers are also looking to extend the technique for the evaluation of other aspects of meat quality, such as marbling and fat content.

Provided by McGill University