

# Meat Quality in Western Canadian Purebred Pigs

P. K. Mathur<sup>1</sup>, L. Maignel<sup>1</sup>, Y. Liu<sup>1</sup>, B. Sullivan<sup>1</sup>, A. Murray<sup>2</sup>,  
S. Chen<sup>3</sup>, W. Van Berkel<sup>4</sup>, A. Wahl<sup>4</sup>

<sup>1</sup>Canadian Centre for Swine Improvement (CCSI), Central Exp. Farm,  
Bldg #54, Maple Drive, Ottawa, Ontario, K1A 0C6, Canada

<sup>2</sup>Lacombe Research Centre (LRC), Agriculture and Agri-Food Canada, 6000 C & E  
Trail, Lacombe, Alberta T4L 1W1, Canada

<sup>3</sup>Laboratory Services Division (LSD), University of Guelph, 95 Stone Road West,  
Guelph, Ontario K1H 8J7, Canada

<sup>4</sup>Western Swine Testing Association (WSTA), R.R. 1, Box 1, Site 5,  
Lacombe, Alberta, T0C 1S0, Canada

A research project supported by Alberta Livestock Development Fund (ALIDF) was carried out for recording, evaluation and improvement of pork quality. Purebred breeders from the Western Swine Testing Association (WSTA) participating in Canadian Swine Improvement Program contributed their pigs for the project. The pigs were slaughtered at the Olymel plant in Red Deer. Loins from these pigs were removed and tested at the Lacombe Research Centre of Agriculture and Agri-Food Canada for carcass and meat quality traits.

As a result of this project, a system for recording of meat quality traits on pigs from breeders or producers farms has been developed. The pigs from these farms can now be sent routinely for meat quality evaluations through the packing plants and genetic evaluations or estimated breeding values (EBVs) can be obtained. In addition, EBVs can also be estimated on their littermates and other relatives from well connected herds. These EBVs can be used to identify the best breeding animals for a long term and permanent improvement in meat quality traits.

One of the major requirements for genetic evaluations is to have the meat quality records on individual animals, rather than for a group or lot. However, this becomes a practical problem as it is difficult to keep track of the carcass cuts of a pig when it goes through the fast processing chain of the packing plants. A DNA based tracking system was used in this project to solve the problem and match the loin samples to the pigs they came from. This system has been tested, is working well now and can be used for future tracking and genetic evaluations.