## GROWTH, DEV, MUSCLE BIOLOGY AND MEAT SCIENCE

## 114 Domestic and International Pork Demand and their Implication on Pork Production Practices. Elliott J. Dennis<sup>1</sup>, <sup>1</sup>Agricultural Economics

Domestic and international demand for pork products drives pork production. Consumers purchase pork products based on their personal tastes and preferences. These tastes and preferences have substantially changed over the last 20 years. Consumers desire to know more information about pork production practices and are willing to pay premiums at grocery stores for adoption of these practices. Producers response to changing consumer demands has important implications for the growth and profitability of the pork industry. I address the current economic understanding of domestic and international consumer demand for pork products and how this demand has and will continue to shape pork production practices.

> **Keywords:** consumers demand, production practices, tastes and preferences

## 113 Current status of marking hogs in North America and future potential for refinement. Allan P. Schinckel<sup>1</sup>, Paul Preckel<sup>2</sup>, Kenneth Foster<sup>2</sup>, Nathanel Thompson<sup>2</sup>, Francisco Cabezón<sup>3</sup>, <sup>1</sup>Purdue University, <sup>2</sup>Department of Agricultural Economics/Purdue University, <sup>3</sup>Agrícola Super Ltda

Pork processors use marketing grids in which carcasses heavier or lighter than specified carcass weights (CW) are discounted in value. In North America most processors discount pigs further from the ideal CW at an increasing rate. To reduce sort loss, most commercial producers visually evaluate the body weight (BW) of each pig and try to identify the heaviest pigs in each pen for marketing on two- to four-day marketing windows. Carcass premiums/discounts are based on a predicted "percent lean" estimated using measurements of backfat depth and loin muscle depth. Usually, the premium for leanness has a nonlinear relationship with predicted percent lean. Optimal marketing maximizes daily return above variable costs including daily feed cost. Implementation requires that producers know: feed efficiency of their pigs relative to BW, variation in growth rates and BW amongst pigs within the herd, and the relationship between carcass leanness and CW. Sorting accuracy for marketing impacts the distribution of CWs, the sort loss, and depending on CW discounts, the optimal market BW's. Thus, sorting decisions are interrelated with marketing decisions. In three large barns, percentages of pigs sold correctly for the first two marketing cuts were 56, 48, and 52%, and differences in sort loss increased to \$5.74/pig as mean CW increased. Methods have been developed to evaluate sorting accuracy. Pork processors have an optimal distribution of cut weights and sizes to maximize their daily returns above costs. Current marketing systems provide little incentive for commercial producers to reduce the variation in CW and subsequent cut weights and do not optimize the distribution of CWs. Next steps are to implement the state-of-the-art decision making on test farms, evaluate performance, refine and replicate a successful platform. To satisfy heterogeneous consumer demand at minimum cost joint optimization of farm production with wholesale marketing will be required.

**Keywords:** pork, marketing, sort loss, stochastic modeling, pork supply chain



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