

Grid variation

A project is studying the impacts of pork carcass variability on revenue

By Lilian Schaer



University of Guelph meat scientist Dr. Ben Bohrer is studying the impacts of variability in pork carcasses on farm revenue. (Photo courtesy of Ontario Pork)

HOG FARMERS IN CANADA are paid for their animals based on a marketing grid that includes carcass weight and leanness. Premiums and deductions are applied based on how precisely pigs meet those specific parameters – and variability can have impacts across the supply chain, starting right on the farm.

Dr. Benjamin Bohrer, meat scientist and assistant professor in the University of Guelph's Department of Food Science, is tackling this problem through a

multi-phase research project supported by Ontario Pork and Conestoga Meats.

“What we hope to do with this work is define the amount of variation that is apparent right now in the industry, look at the parameters being measured at the processing level, and how these parameters affect producer revenue,” explains Bohrer, adding that the ultimate goal is to also evaluate the impact of variation on pork quality and consumer eating experience.

The work began with a simulation model to look at the relationship between variability and revenues, and whether or not more consistent targeting of the grid made a difference in how often premiums were hit. Many finishing barns follow an “all in, all out” schedule while others strategically market pigs in groups of common weight and/or leanness.

According to Bohrer, the answer is a clear yes – producer revenues are higher

if pigs are selected for market specifically by weight and/or leanness instead of just marketed in a single group at a certain time.

“We used marketing cut or selection as a way of improving variation and looked at the difference in premiums producers could have received in one marketing compared to six,” he says. “On a per-pig-basis, one marketing cut resulted in a \$4 premium per pig in an ideal situation, but if you do six cuts, you could reach a premium of \$14 to \$15 per pig.”

In a finishing barn of 4,800 pigs, hitting those premiums more consistently added up to an extra \$50,000 in revenue for farmers. The model did not, however, consider labour or transportation costs or differences in production costs as those can vary from farm to farm.

Another aspect of the project involves looking at variability through the lean-to-fat ratio; Bohrer says its currently unknown how consistent carcasses are coming into processing. There’s been a steady increase in hog

weights in the last three decades, rising from an average hot carcass weight of 81.2 kg in 1989 to 96.8 kg in 2019.

Data from more than 850,000 pigs processed at Conestoga Meats between October 2017 and September 2018 were collected and analyzed.

What Bohrer found is that although pigs are getting heavier, they’re not yet reaching points where they’re showing excess fat. This means future carcass weight increases should not change assumptions of lean yield prediction.

“The highlight here is that carcass weight is relatively uncorrelated with leanness parameters,” he says. “As we make pigs heavier, which has been the theme of pork industry in the last decade, we haven’t lost the carcass leanness. Pigs are getting heavier, but not fatter.”

This information will be shared with producers and used to look at ways in which variability amongst pigs coming into the plant could be addressed. Subsequent phases of the project involve meat lab cut out testing, full pork qual-

ity assessments and consumer sensory panels; currently all of this work is on hold due to the coronavirus pandemic.

Although some meat and livestock research is continuing at the University of Guelph despite the pandemic, Bohrer says this project is not considered essential and has been paused for the time being.

“When we can start up again, we hope to be able to tie all the findings together with what the consumer is presented with when they consume that pork,” Bohrer says.

The project was originally slated to wrap up in 2021, but that may be extended due to the coronavirus shutdown. Funding from Conestoga Meats and Ontario Pork was supplemented by a Natural Sciences and Engineering Research Council collaborative research and development grant.

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Strep Suis re-emerges as threat to pigs

STREP SUIS IS EMERGING again as a serious threat to pigs, raising questions about whether there are new strains at large.

Dr. Connie Gebhart, a professor in the Department of Veterinary and Biomedical Sciences at the University of Minnesota, heads a team that is delving into genetic codes to determine exactly what’s going on.

“When we dug into Strep suis a little deeper, we found that even though it’s been around for a long time, there hasn’t been a lot of research on it in the United States in the last 10 years.

“It’s been increasing in prevalence and in per-

sistence, and seems to be affecting even pre-wean pigs,” Gebhart said.

“Veterinarians are having a harder time controlling it...and now it’s emerging as one of the top 10 bacterial diseases of concern in the U.S.”

“It’s not going to be a simple answer,” Gebhart said. “I think the pig might be changing, or the pig’s immune response might be changing.

“It could be the environment or the way we’re raising pigs. It could be the bacterium itself that is becoming more virulent. My area of research is to look at the bacterium first.” **H**