



Pig Improver

A Day with PIC's Pork Quality Team

AN INSIDER'S LOOK

Environmental factors account for the large majority – approximately 60-to-70 percent – of variation in pork quality. These factors include animal handling from the farm through transport and slaughter, as well as carcass handling after slaughter. We reviewed these factors previously in our April 2018 *PIC Pork Quality Blueprint* article.

Guided by the Pork Quality Blueprint, PIC offers a system review service for its customers. This review service aims to help customers improve environmental factors that impact pork quality. The PIC Pork Quality team travels to PIC customers' plants around the world, conducting up to 40 system reviews per year. What is involved in these reviews?

See below a Q&A with Neal Matthews and Brandon Fields, co-leaders of the PIC Pork Quality Blueprint team:

Q: Can you describe what a Pork Quality System Review is?

Matthews and Fields: "PIC pork quality reviews involve an analysis of all plant processes, identification of areas of improvement and recommendations on how those improvements can be practically implemented. It is an important way we help PIC customers realize the genetic potential of our pigs. We visit about 40 plants a year across North and South America, Europe and Asia. This experience allows us to provide solutions and advice related to many issues impacting pork quality."

Q: How does the system review work?

Matthews and Fields: "This type of system review usually lasts for several days. Typically, we meet with plant managers and supervisors immediately afterwards to summarize results and derive key conclusions and recommendations. We send a full report containing scientific and technological justification of the recommendations along with benchmarking data. Many times, we also summarize the potential economic impact of the recommended improvements to help prioritize where the biggest opportunities might be."

Our team assesses procedures in large numbers of plants with a variety of set ups. This broad view on industry practices enables us to identify specific carcass and pork quality issues that plant operators may not view as significant problems. We can be a fresh set of expert eyes that we believe is important to offer to our customers. A lot of times, we will get called back afterwards to discuss other issues unrelated to the first audit because our customers view us as a valuable resource.”

Q: What are the most common issues identified in these system reviews?

Matthews and Fields: “We typically see two main issues. The first issue that also has the biggest impact on pork quality, is how animals are handled immediately prior to slaughter. There is a large difference in how animals are inherently managed in plants with electrical stunning compared to CO2 stunning. With electrical stunning, the animals must be handled under single file movement and that is stressful to the animals even under the best management practices. With CO2 stunning however, the plant crew manages group movement, five or six pigs at a time, and this practice is less stressful. This positively affects pork quality and ensures proper pig welfare at the same time.”

Q: What is the other common issue?

Matthews and Fields: “The other commonly-identified issue is carcass chilling rate. Slow chilling negatively impacts pork quality, specifically the ultimate pH and water holding capacity. Measuring the rate of chilling involves collecting temperature decline data from entry of the carcass in the chilling system until cutting, every minute until complete cooling is reached (from 16 to 24 hours post-mortem). We then compare that against benchmark measurements.”

Q: Do you usually find one or two larger issues or many small issues?

Matthews and Fields: “From time to time, we identify minor issues in every area of the ‘Blueprint,’ but sometimes we might identify one major issue and several minor ones. Each plant is different, and when we identify operational practices that can be improved, production and/or quality assurance managers see this as a very valuable contribution to their system.”

Q: How are the results of the system review implemented?

Matthews and Fields: “That depends on the customer and their specific goals. Typically, we explain that quality issues lower the value of the carcass by anywhere from a few cents to over \$1.00, and that our recommended improvements can result in quick payback. Having said that, solutions are not ‘cookie cutter’ and if one option does not present a good practical fit in a particular plant, we will look together with the customer at other possibilities. In many cases there are some recommended changes that might cost very little or even nothing at all. This might include lighting changes or changing how workers move the pigs. Things like refrigeration upgrades and switching from electrical to CO2 stunning are obviously bigger changes and may cost significantly more. Some processing industry managers choose to make the required improvements immediately and some optimize their systems over time. However, animal welfare is always the highest priority and should never be compromised.”



Q: In your own words, how would you summarize the value of PIC pork quality system reviews?

Matthews and Fields: “With the ‘Blueprint,’ we would like to highlight that there are multiple factors that impact pork quality and overall carcass value. We believe that PIC customers should be aware of optimizing all of them. And it is important to emphasize that Pork Quality reviews often help our customers to identify further improvement opportunities for animal welfare, as many aspects of correct pre-slaughter handling are common for improving both pig welfare and pork quality. We believe our system reviews are unique and add value to our customers. Contact us. Our team of experts can help.”

Q: Who can access these system reviews and what do they cost?

Matthews and Fields: “System reviews are free for PIC customers.”

This is the sixth Pig Improver article in a series about Pork Quality. For more information, reach out to your key account manager.