Understanding pork quality and the effect of moisture infusion

Project Participants: Kantar Australia

Background

There has been limited research done in the past on pork eating quality, particularly looking at the impact of moisture infusion on different cuts. APL and the Pork CRC developed the predictive eating quality model for pork, the Pork Quality Score in 2018. To ensure the continued accuracy of the Pork Quality Score, APL enlisted Kantar Australia to conduct consumer-based research to verify the model. Understanding consumer discernable differences in the quality of different cooked pork cuts is critical to future improvements in eating quality and consumer demand and perception.

Consumers distinguished quality improvements in samples with moisture infusion

Project

Utilising a panel of regular and irregular pork consumers, the project assessed consumer responses to cooked pork samples of four different Pork Quality Scores (PQS), PQS1 – PQS4 with the samples of PQS4 being moisture infused. The project focused on identifying discernable differences in eating quality of the PQS levels, understanding the drivers of consumer appeal, and evaluating the current PQS prediction model.

Value for Industry

The increased understanding of consumer perceptions and preferences derived from this study provides valuable insights for refining product development and marketing strategies within the pork industry. Future research and innovation can leverage these findings to enhance the quality of pork products and better meet consumer expectations.

Outcomes

The project showed positive results and overall supported the PQS model, with the highest PQS steak scoring the highest in consumer testing. There was however, a less defined quality difference between the three lower PQS steaks when rated by the consumers, this implies that the consumers were unable to make clear differentiation between the three lower PQS score steaks. A key outcome of this project was that consumers distinguished a quality difference between samples that underwent moisture infusion and those that did not. This suggests that moisture infusion has a significant impact on pork sensory properties. The influence of pH and core cooking temperature on pork eating quality appeared to be less pronounced when assessed by consumers. Notably, moisture infusion substantially impacted sensory properties, while pH may have some influence on textural properties. Surprisingly, overcooking by 5°C did not appear to affect sensory properties. To validate these findings and explore interactions between factors, further research to explore the effects of varying pH levels and cooking temperatures could enhance understanding of these relationships.

More information

For a copy of the report, contact the APL Extension Team via **extension@australianpork.com.au**
For technical information, contact Vaibhav Gole via **vaibhav.gole@australianpork.com.au**