

3A-105: *Verification of eating quality pathways to produce consistently high quality pork*

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Aims and Objectives

Improving the positioning of Australian pork through differentiation is required for the development of new export and domestic market opportunities, particularly with the increasing threat of fresh pork imports into Australia. The approach taken in this study was to undertake a simulation study involving Australian pigs, using feed ingredients typically used in US and Danish diets and slaughtering animals at heavier average liveweights than Australian pigs and comparing pork and eating quality attributes with that of typical Australian pork. The hypothesis of this study was that the effect of increased age at slaughter would result in increased intramuscular fat of pork and together with ageing of pork for 28 d, rather than 7d, will reduce the fail rate of pork to less than 10%.

Key Findings

- Loin and silversides were prepared into steaks and roasts, respectively, with ageing treatment of 7 or 28 d post-slaughter allocated within muscle. Steaks were cooked to achieve an endpoint temperature of 70°C and roasts were cooked to a 75°C internal temperature and evaluated by a consumer panel.
- Dietary treatment/age at slaughter did not influence sensory attributes of pork. This suggests that relatively small differences in pork sensory quality due to slaughter weight/dietary treatment do not necessarily discount the inclusion of heavier carcasses in an eating quality system for Australian pork.
- Extended ageing for 28 d did not result in additional improvements in pork sensory quality compared with ageing for 7 d for both the loin and silverside.
- The overall fail rate (quality grade score) of pork loin steaks was 11.5% - almost meeting the target cut off of <10%. In contrast, the fail rate of the silverside was 22.6% for quality grade score.
- Further research to reduce the fail rate of the silverside primal to less than 10% is required as an average fail rate of 22.6% for quality grade.
- Intramuscular fat levels were very low in the loin muscle, averaging 0.47±0.31% and 2.03±1.23% for the silverside.
- Overall liking of pork was influenced, in order, by flavour, juiciness and tenderness

Application to Industry

Outcomes of this study are being used to develop a non-prescriptive eating quality system for pork. This system, once implemented, will allow industry to improve consumer perceptions of pork as a quality meat and lead to a process of continuous improvement in pork eating quality.