FACT SHEET

The MSA prediction model has been considerably expanded and improved

KEY POINTS

- The MSA prediction model estimates the eating quality of individual red meat cuts
- A considerable amount of new data has been added to the upgraded MSA prediction model
- Data for new cooking methods and cut x cook combinations have been included.

Cattle that adhere to Meat Standards Australia (MSA) standards produce beef that consistently meets consumer expectations. These standards are supported by the MSA model, which predicts the eating quality of, and consumer preference for, different cuts of meat using on-farm, carcase, processing and cooking information to predict eating quality outcomes. The ability to accurately predict consumer satisfaction to different cuts of meat that have been cooked in different ways is a powerful tool for the red meat industry, however, there is a need to continuously expand the functionality of the model and improve its accuracy.

DATA WAS COLLECTED FOR SEVERAL NEW CUT X COOK COMBINATIONS

The aim of this research was to expand the MSA prediction model with new cut x cook combinations using the cooking methods that already exist in the model (such as slow cook, stir fry and roasting), and to also create new combinations by adding new cooking methods (such as Sous-vide, Osso Bucco and combi oven moist heat roasting). Additionally, the research aimed to improve the accuracy of the model if only limited information was available for a meat cut and/or cook method. Ultimately, the objective of this research was to improve the data in the MSA prediction model.

Using MSA protocols and sensory testing, 11,100 consumers tested 7,770 cut x cook combinations. Consumers rated each sample against several eating quality criteria, including tenderness, juiciness, flavour and overall liking.

THE NUMBER OF AVAILABLE CUT X COOK COMBINATIONS HAS DOUBLED

This research has contributed to the doubling of the number of available cut x cook combinations to over 300 and has introduced new cooking methods into the prediction model. This has expanded the prediction accuracy and capability of the MSA model and represents a substantial step toward enabling the prediction of consumer satisfaction for any beef carcase portion cooked using a large variety of methods.

A NEW VERSION OF THE MSA PREDICTION MODEL IS NOW AVAILABLE

The data collected during this research has resulted in the development of a new version of the MSA prediction model. To maintain the new model, research should continue to encourage and facilitate the collection of national and international data to further empower consumer preference prediction accuracy.

Related reports and resources

1. Final report: https://www.mla.com.au/research-and-development/search-rd-reports/final-report-details/Consumer-sensory-evaluation-of-stored-product/4291