

MSA Dairy Beef Eating Quality project

Promising findings reveal dairy beef's high carcass quality potential

Currently, a significant proportion of male dairy calves are euthanised or sold into low value markets as the beef from these calves is perceived to be poor quality. MSA's Dairy Beef Eating Quality project aimed to question this assumption and investigate whether substantial value could be added to male dairy calves by looking at the impact of breed, nutrition (pasture and feedlot) and management on the performance and eating quality of beef from dairy cattle. This included validating the accuracy of the MSA model to predict eating quality of dairy breeds and exploring a new MSA pathway for veal.

Three potential feed-based supply chains were investigated, comparing beef cattle to dairy cattle and other breeds to determine their potential eating quality:

- Holstein
- Jersey
- Holstein x Jersey
- Euro x British breeds.

These included combinations of pasture and/or feedlot pathways as well as an accelerated growth pathway designed to finish a 300kg carcass at 12 months of age.

Results

- At an equivalent hot standard carcass weight (HSCW), dairy steers in the project typically had similar marbling and ossification, lower P8 and rib fat, and proportionally smaller eye muscle area (EMA) than the beef breed steers.
- When managed to best practice, beef from dairy steers had equivalent eating quality to beef breeds.
- For dairy breeds, the highest eating quality and MSA compliance was achieved through an accelerated growth high carbohydrate ration fed from weaning – this produced 300kg carcasses at 14 months.
- The project demonstrated the current MSA model adequately predicts the eating quality of all groups in this trial, which included Holstein, Jersey, Jersey x Holstein and beef breeds.



Conclusions/Outcomes

- There is an opportunity to produce comparable eating quality beef from dairy breeds when compared to beef breeds, when appropriate management and pathways are implemented.
- This will provide potential value opportunities for dairy systems as well as potential solutions for the social license challenges related particularly to male dairy calves.
- The project also included the development of new MSA cooking protocols for Schnitzel (SNZ). Additional consumer sensory testing was conducted on recently developed MSA cooking protocols for Texas BBQ (TBQ). These cooking methods produced superior eating quality outcomes compared to existing grill and slow cook methods.

The project also aimed to scope the potential for an MSA veal pathway, however, while the dairy veal calves achieved acceptable eating quality, they were non-compliant with existing MSA screening criteria for rib fat and ultimate pH. In addition, they were potentially compromised by cold shortening which reduced their eating quality potential. To create a commercially viable MSA veal model, novel screening criterion in association with alternative chilling regimes may be required, which requires further research.



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Dairy Beef Report



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MLA acknowledges the matching funds provided by the Australian Government to support the research and development detailed in this publication.

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