Lamb lean meat yield and eating quality workshop - A supported learning program

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With consumer demand growing for lean meat that is more versatile, has larger cuts, and is of optimal eating quality, the Sheep Cooperative Research Centre (CRC), Meat & Livestock Australia (MLA), supply chains and collaborative partners, and recently, Advanced Livestock Measurement Technologies (ALMTech) are developing and commercialising new objective carcase measurement (OCM) technologies and feedback systems to better describe carcase yield and quality. These technologies include dual energy x-ray absorptiometry (DEXA) for lean meat yield (LMY) prediction, and intramuscular probes and cut surface imaging systems for intramuscular fat (IMF), with IMF being a strong predictor of eating quality. DEXA LMY technology is currently being installed in several lamb processing plants, and suppliers will soon be able to receive accurate and precise feedback on carcase lean meat yield. This data can then be linked back to the live animal and used to make informed genetics, nutrition, and management decisions. However, whilst the tools to predict eating quality remain under research evaluation (Jacob and Calnan 2018), feedback on carcase eating quality remains elusive for processors and producers.

To underpin the development of the skills and capacity of lamb producers to have a balanced approach to the selection and management of lambs for both lean meat yield and eating quality traits, a lamb lean meat yield and eating quality workshop was developed under Meat and Livestock Australia's Profitable Grazing Systems. The workshop series builds on the learnings, resources and networks developed by MLA and partner programs, but has a greater focus on improving business performance through skill development and evidence-based decision making using the supported learning (SLP) approach (Weatherley *et al*. 2016). It is delivered through existing supply chains with access to OCM systems such as DEXA. In the future, these supply chains may also have hook tracking and objective assessment of eating quality. Engaging the processor within the SLP encourages a 'value-chain' culture, through the building of relationships and a shared understanding of the various production and processing issues from paddock to plate. Using facilitated adult / experiential learning processes that are assisted by both small group and hands-on learning and coaching, the SLP consists of 3 on-farm and on-site workshop sessions, on-farm coaching, out of session exercises, webinars, and videos. SLP's embed a culture of monitoring, measuring, and managing, with producers financially valuing extension services.

Session content includes customer requirements, live animal assessment, understanding of LMY and EQ and its objective measurement, analysing feedback through platforms such as Livestock Data Link, and identifying practical solutions to meet customer specifications, including increased use of genetic selection and the influence of nutrition, growth pathway, maturity and time of turnoff on LMY & EQ. This SLP gives producers the skills to realise and identify that two carcases of the same weight can have the same amount of bone but have different amounts of fat and lean. The producers are coached through various skills, and in the use of industry tools to manage lamb carcases to meet supply chain specifications.

In 2019, this SLP was successfully piloted with 3 supplier groups within the JBS Australia and Gundagai Meat Processors lamb supply chains and involved more than 30 producers/farms, livestock agents, and consultants (as observers). The development included a continual improvement program consisting of a detailed verbal and written participant exit evaluation, along with post event review sessions with the delivery team and selected producers. A pre and post self-assessment KASA evaluation was developed to cover of knowledge and skills (12 questions), confidence (8 questions) and practices (22 questions). The pre KASA indicates that they had room to improve from participating in this SLP with "low to moderate" knowledge and skill levels, "moderate to high" confidence to actually do a skill or task, and with best practice mostly performed "sometimes". On average, producers evaluated the technical sessions at 8/10 (range 6-10), the coordination, delivery, and venue 9/10 (range 8-10). Producers liked the hands-on activities to reinforce or learn the steps to take and tools to use, as well as valuing the opportunities to learn from the processor and other producers within a facilitated small group setting. Finally, 100% of participants were committed to making on-farm changes to underpin the future value of Australian lamb. Changes listed included the increased use of Livestock Data Link to analyse their current compliance to a grid based on LMY and carcase weight, benchmarking their ram flock in RAMSelect, fine-tuning their breeding objectives to include LMY and EQ traits, and re-assessing their time of marketing. Producers also commented they had a greater understanding of customer requirements and of the tools they could use on-farm to prepare for compliance to future grids, which may be reflective of carcase weight, LMY and EQ.

References

Jacob R and Calnan H (2018) *Improving Lamb Lean Meat Yield - Technical Guide*. MLA, Sydney.
Weatherley JM, Jeffrey R, Sobotta I, Wightman J and Empson M. (2016) *Animal Production in Australia*. **1297**.

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