

final report

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LMY and EQ Producer Demonstration Sites – Victorian sites carcass measurement

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Abstract

This project is part of a national project to deliver proof of concept for lean meat yield (LMY), eating quality (EQ) and validation of Research Breeding Values for lean meat yield and eating quality traits within major supply chains to facilitate, empower and develop a common focus and normal trading mechanisms on these future key industry profit drivers right along the supply chain.

A total of 417 lambs from two cooperating commercial lamb producers were slaughtered and assessed for LMY and EQ characteristics. There were 221 and 196 lambs slaughtered from cooperating producers T. Fleetwood and G Gubbins, respectively.

A total of 175 lambs were assessed for eating quality, including 84 from the Fleetwood and the 91 from Gubbins sites.

These data will be aggregated with comparable data collected from other sites in the national project and reported in the national project Final Report B.SCC.0144.

Background

This project is part of a national project (B.SCC.0144: National Coordinator – Proof of Concept of Lean Meat Yield and Eating Quality Producer Demonstration Sites) to deliver proof of concept for lean meat yield (LMY), eating quality (EQ) and validation of Research Breeding Values for lean meat yield and eating quality traits within major supply chains to facilitate, empower and develop a common focus and normal trading mechanisms on these future key industry profit drivers right along the supply chain.

This project produced 417 lambs for abattoir measurement of objective carcass measurements and collected loin samples for laboratory analysis of eating quality from two Phase I Victorian LMY and EQ Producer Demonstration Sites. These measurements will be used by the national project to:

1. Determine the value of 3 new research breeding values for ram breeders, lamb producers & processors at two producer demonstration sites.
2. Develop suitable measurement technology and feedback mechanisms for these breeding values at processing; and
3. Initiate a common focus and foster the development of normal trading mechanisms on these future key industry profit drivers right along the supply chain.

Methodology

Lambs were bred and finished to slaughter on two commercial properties in Victoria (Fleetwood and Gubbins). Each site used eight sires which were selected for divergence in breeding values for intramuscular fat, shear force at five days and lean meat yield.

At slaughter the following data were collected in-plant:

- Hot carcass weight
- GR depth (knife; mm)
- cFAT, eye muscle depth and eye muscle width at the 12th rib
- pH decline
- pH ultimate
- colour (L*, a*, b*) of the loin

A sub sample of lambs (approximately 10 per sire where available) had loin samples collected which underwent laboratory analysis of intramuscular fat and shear force (5 day aged).

Results

Tables 1 and 2 summarise the slaughter details of lambs from the Gubbins and Fleetwood Producer Demonstration Sites.

Table 1: Gubbins site data summary

Sire ID	Slaughter 30/1/13	No. EQ Sampled	Slaughter 9/4/13	No. EQ Sampled	Sire Totals	EQ Sample Total
29	15	6	5	4	20	10
250	25	10	0	0	25	10
262	4	2	10	8	14	10
349	15	7	6	3	21	10
433	12	5	8	5	20	10
617	23	10	2	2	25	12
630	16	7	4	3	20	11
831	10	5	9	5	19	10
482	13	5	7	0	20	2
864	7	3	5	0	12	3
	140	60	56	30	196	88

Table 2: Fleetwood site data summary

Sire ID	Slaughter 30/1/13	No. EQ Sampled	Slaughter 14/2/13	No. EQ Sampled	Slaughter 5/3/13	No. EQ Sampled	Slaughter 9/4/13	No. EQ Sampled	Sire Totals	EQ Sample Total
29	5	3	11	4	4	3	0	0	20	10
250	3	2	9	4	6	4	3	0	21	10
262	7	4	15	6	0	0	0	0	22	10
349	13	7	8	4	0	0	0	0	21	11
433	5	2	10	3	5	4	0	0	20	9
617	4	2	3	2	9	6	4	0	20	10
630	12	6	10	4	0	0	0	0	22	10
831	14	6	13	4	0	0	0	0	27	10
707	0	0	2	1	13	0	0	0	19	1
TK	0	0	4	2	8	0	4	0	20	2
Unknown	1	0	5	1	3	0	8	0	9	1
	64	32	90	35	48	17	19	0	221	84

Conclusion

This project successfully managed production of lambs from selected sires through to slaughter. At slaughter in-plant data were collected and a subset of lambs had loin samples collected which underwent laboratory analysis for intramuscular fat and shear force (5 days aged).

These data were provided to the Nation Coordinator of the LMY & EQ Producer Demonstration Sites project (MLA Project B.SCC.0144) for analysis with data aggregated from other LMY & EQ sites.