



Lamb Lean Meat Yield & Eating Quality Trial

Tasmanian Trial Sites: January 2014 Update

Background:

The latest industry research, from the Sheep CRC and the Sheep Genomics Projects, has developed new Australian Sheep Breeding Values (ASBVs) that will enable faster improvement in lean meat yield (LMY), while at the same time ensuring eating quality (EQ) of Australian lamb is maintained or improved.

Lean Meat Yield is the amount of meat on the carcass, relative to “waste” such as bone and fat.

Eating quality is determined by assessment of intramuscular fat (IMF) and tenderness. IMF is associated with juiciness, flavour and tenderness, and can only be measured in the laboratory. Tenderness is assessed by measuring shear force in the lab after five days aging (SF5).

There is a negative association between lean meat yield and eating quality (ie as lean meat yield increases, eating quality decreases). Therefore to improve the quality (and consistency) of Australian lamb, we must be able to measure both traits so we can manage them.

The **aim** of the Lean Meat Yield and Eating Quality Trial is to demonstrate the value of ASBVs for the hard-to-measure traits of LMY and EQ by evaluating the progeny of specific rams with known ASBVs for these traits. MLA is currently funding 20 trial sites across Australia, of which three are located in Tasmania:

Summary of Tasmanian trial sites			
Wesley Dale	Greg Sheather	Chudleigh	maternal ewe flock - Kelso
Nosswick	Scott Colvin	Blackwood Creek	maternal ewe flock - Coopworth
Dungrove	Emma Boon	Bothwell	Cormo ewe base (Merino x Corriedale)



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Results to date:

300 ewes at each property were artificially inseminated (AI) in April 2013. Pregnancy scanning was conducted 60-70 days after AI to identify ewes carrying single, twins or triplets.

Results from AI at each trial site										
Property	Scanning results							Lambs on the ground		
	No. ewes	1	2	3	Dry	% wet	No. lambs predicted	No. lambs marked	No. lambs at weaning	% survival joining - weaning
Wesley Dale	300	92	132	17	59	80	408	306	289	96%
Dungrove	300	129	83	0*	88	71	294	223	205	68%
Nosswick	300	62	179	NA#	61	80	420	356	347	115%

* no triples recorded at Dungrove
triples were not assessed at Nosswick

Before lambing, ewes were split into single bearing and multiple bearing mobs. At marking, blood samples were collected from all lambs for DNA testing to determine sires. Sex and birth type (twin or single) were also recorded.

Lambs were weaned at Nosswick and Wesley Dale in early December. Dungrove lambs were weaned mid-January. Lambs were weighed at weaning and then every 4 weeks.

Property	No. lambs	Average weight at weaning, early Dec 2013 (kg)	Average weight 4 wks post-weaning, early Jan 2014 (kg)	Average daily weight gain (kg)
Wesley Dale	289	32.5	39.5	0.281
	Top 100	37.0	43.2	0.250
Nosswick	347	31.4	38.3	0.249
	Top 100	36.4	44.0	0.271

Note: at time of writing no weight data available for Dungrove

Lambs at Nosswick were weaned onto Pacer on 7 December 2013. On 7 January 2014 they were moved onto irrigated clover. Lambs at Wesley Dale were weaned onto Pacer on 9 December 2013. At weaning, the top 134 lambs were separated from the mob and were rotationally grazed, while the remainder of the mob were set-stocked.

Weight gains since weaning at both Nosswick and Wesley Dale have been very pleasing. There is also an even distribution of sire, sex and birth type (twin vs single) across the range of lamb weights.



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What's next?

200 lambs from each trial site will be assessed at slaughter for lean meat yield, pH and fresh colour. Samples will be taken for analysis of eating quality (intramuscular fat and tenderness). Lambs from Nosswick and Wesley Dale will be slaughtered during the first two weeks of February at JBS Longford and Devonport City Abattoir.

An update on this work will be provided when slaughter data is available, later in 2014.

For further information about the trial please contact Tasmanian LMY&EQ trial co-ordinator Leanne Sherriff (Macquarie Franklin) on 0429 329 349 or email lsheff@macfrank.com.au



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The Tasmanian trials are sponsored by Allflex Australia (electronic tags) and Gallagher (tag reader), which was arranged by Peter Blackwood from TP Jones. Provision of this equipment has enabled quick and efficient weighing of lambs, with data downloaded and analysed quickly and easily. It has made life for the host farmers and trial coordinator a lot easier.

