

# THE COOLALEE AS A PRIME LAMB SIRE

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## INTRODUCTION

Lambs with carcass weights in excess of 20 kg are sought by processors for export to the U.S. and Europe. However, carcasses from heavy lambs often have to be trimmed of excess fat during processing. The Coolalee breed of sheep is being developed (Ryan 1984) to cater for the increased demand for heavy lean lambs. Lollback and O'Halloran (1988) showed that in trials in N.S.W. Coolalee sired lambs grew faster than Dorset sired lambs to weaning and subsequent slaughter but there was no clear advantage in reduction of fatness at carcass weights ranging from 15 to 21 kg.

In the South East of South Australia one meat exporter has specialised in exports of lambs to the U.S. and Europe and two trials were carried out to assess the Coolalee as a prime lamb sire in this environment.

## MATERIALS AND METHODS

### Trial 1

In December 1986 five Coolalee rams were joined in a group to 211 3.5 year old Border Leicester Merino cross ewes in fat condition on a private property. A similar number of Dorset rams were joined with a matching number of ewes from the same flock. Ewes were branded and run separately during mating but were alternated between the mating paddocks. In March 1987 ewes were scanned to determine the number of singles and multiples present. At marking lambs were earmarked and run together thereafter until slaughter. Prior to slaughter the heaviest lambs were selected such that the preslaughter weights of both groups were the same. Carcass weight, fat depth (G.R.) and carcass length were measured. The lambs were killed in a meatworks which specialises in exports to the U.S. and Europe. Managers were asked to comment on factors which may affect acceptance of carcasses.

### Trial 1 results

#### 1. Ultrasound scan results for Border Leicester Merino ewes mated to Coolalee or Dorset sires

	Ewes scanned	Multiple bearing	Single bearing	Dry
Coolalee sired	211	125	82	4
Dorset sired	211	103	103	4

2. Preslaughter weight of lambs from Border Leicester x Merino ewes mated to Coolalee or Dorset sires

	No weighed	Wt in kg
Coolalee sired	232	33.21
Dorset sired	280	33.25

3. Slaughter details of selected lambs from Border Leicester x Merino ewes mated to Coolalee or Dorset sires

	No	Preslaughter wt	Carcass wt (kg)	GR Fat (mm)	Carcass length (mm)
Coolalee sired	78	41.09	18.4	10.03	1016
Dorset sired	92	41.22	19.8	10.05	1002

Preslaughter weights were similar for both sire groups.

At similar carcass weights, Coolalee sired lambs were significantly longer than Dorset sired lambs but there were no significant differences in fatness.

Trial 2

In 1988, the same Coolalee rams as those used in 1987 but different Dorset rams were mated to 5 year old Merino ewes on Struan Research Centre. Lambs were grazed on irrigated pasture during summer to achieve the slaughter weights required. In this year, slaughter data was collected on all lambs.

Trial 2 Results

1. Ultrasound scan results for Merino ewes mated to Coolalee or Dorset sires

	Ewes scanned	Multiple bearing	Single bearing	Dry	Marking %
Coolalee sired	204	86	91	27	94
Dorset sired	203	69	107	27	88

As with the previous year the Coolalee sires resulted in a greater number of multiple foetuses.

## 2. Slaughter details of lambs from Merino ewes mated to Coolalee or Dorset sires

	No	Preslaughter wt	Carcass wt (kg)	G.R. Fat (mm)	Carcass length (mm)
Coolalee sired	186	53	24.0	15.3	1102
Dorset sired	169	51	23.7	15.0	1070

No significant differences in carcass weight or fat thickness were noted. Coolalee sired carcasses were longer than Dorset sired carcasses.

### DISCUSSION

In both years there was evidence of increased numbers of multiple pregnancies associated with the Coolalee sires which may be due to paternal hybrid vigour as noted by Chang and Atkins (1982).

This effect was also noted by Lollback (personal communication) in a small trial on a property at Tamworth but not in their later trial (Lollback and O'Halloran 1988).

There was no difference noted between sire breeds in lamb liveweights, carcass weight or fat thickness in either year which is consistent with results of Lollback and O'Halloran (1988). However, heavier carcasses with less fat were achieved with the Struan Merino ewes in 1988 compared to the 1987 Border Leicester crosses. This would result from a combination of environmental and genetic factors. The Coolalee had significantly longer carcasses. There was no price discrimination against the longer carcasses and this may be an advantage in some U.S. markets. On the domestic market, the preference is for a compact carcass.

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