SURVIVAL AND GROWTH RATES OF TWIN BORN LAMBS FOLLOWING LUPIN SUPPLEMENTATION OF CROSSBRED EWES IN LATE PREGNANCY

C.R. EARL* and R.H. MALE*

The survival of twin lambs is much lower than single lambs in both Merino and crossbred flocks (Mullaney 1969; Holst 1987). Differences in survival between twin and single lambs has been largely attributed to the lower birth weight of lambs born as twins (Hinch et al, 1985). Hosking B., Egan A.R. and Hall D. (unpublished) found that giving lupins to Merino ewes (400gms/hd/day) for 9 days prelambing did not increase ewe live-weight but did increase lamb birth weight and survival of twin lambs in pen experiments. These results suggest that it is not necessary to increase ewe live-weight to improve lamb birth weight and that supplementation with lupins need only begin two weeks prior to the commencement of lambing.

In this experiment the effect of giving lupin (400gms/hd/day) to twin-bearing crossbred ewes in late pregnancy was investigated under field conditions. Two hundred and twenty twin-bearing crossbred ewes (Border Leicester x Merino mated to Dorset rams) were allocated to 4 equal groups on the basis of liveweight. Two groups were fed lupins in troughs commencing on 21st April 1987, two weeks prior to lambing and continuing for six weeks. There was sufficient troughs so that all ewes could eat the supplement when offered and little was wasted. During this period all ewes were fed good quality pasture hay (2000kcal/kg) ad libitum, as paddock feed was minimal.

TABLE 1 Ewe live-weights pre-lambing, lamb birth weights, survival and growth rates after lupin feeding of twin-bearing ewes in late pregnancy (+ standard deviations)

<table>
<thead>
<tr>
<th></th>
<th>Ewe live weight (kg)</th>
<th>Birth weight (kg)</th>
<th>Lambs born</th>
<th>Survival %</th>
<th>Growth rate (g/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lupin fed</td>
<td>68.9 (9.62)</td>
<td>4.4 (.60)</td>
<td>200</td>
<td>88</td>
<td>290 (.16)</td>
</tr>
<tr>
<td>Control</td>
<td>67.7 (0.64)</td>
<td>4.2 (.60)</td>
<td>198</td>
<td>81</td>
<td>260 (.11)</td>
</tr>
</tbody>
</table>

Sig. of diff. N.S. P<.01 N.S. P<.10 P<.01

There was no interaction between sex of lamb and treatment and so the values for male and female lambs were pooled. The data were analysed using a general statistics package using birth day and birth weight as covariates (Rothamshed Experimental Station).

Lupin feeding of crossbred ewes in late pregnancy increased lamb birth weights and lamb growth rates (Table 1). Lamb survival also tended to be higher in the lupin fed groups even though unsupplemented ewes weighed 67.7kg prior to lambing.

These results indicate that significant benefit can be achieved by lupin feeding even when ewes are in extremely good body condition and that feeding need only commence two weeks prior to lambing rather than the six weeks normally recommended. It is possible that much greater benefits could be achieved when ewes are in poorer condition.

HINCH G.M., CROSSBIE S.F., KELLY R.W., OWENS J.L., DAVIS G.H. 1111
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* Struan Research Centre, Box 618, Naracoorte, S.A. 5271