THE INFLUENCE OF THE QUANTITY AND FREQUENCY OF FEEDING A LUPIN GRAIN SUPPLEMENT TO GRAZING LAMBS

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Lambs grazing dry pasture can be fattened by supplementing them with lupin grain ad libitum (Suter and Croker 1980). Feed costs might be reduced by restricting the grain intake of the lambs, but the effects on liveweight gains, and the influence of feeding schedules, are then unknown.

The aim of this experiment was to see if the liveweight gains of grazing lambs are influenced by the quantity and frequency of feeding lupin grain.

Six groups of Merino lambs, each comprising 7 lambs of fasted liveweight 29.0±2.3kg (mean±SD), were fed the various rations of lupin grain (cv Illyarrie) from October 25, 1982. The treatment groups grazed at 25 lambs/ha and were rotated weekly around 6 paddocks. Supplements fed for 49 days were; nil; ad libitum; and rationed weekly totals of 3.15kg whole lupins per head split into either daily, thrice-weekly, twice-weekly or once-weekly feedings. Available pasture was always less than 15mm in height and comprised mainly dry annual grasses, capeweed, geranium and subterraneum clover.

TABLE 1 Liveweight gain and grain consumption of grazing lambs fed lupin grain either ad libitum or rationed at various feeding frequencies

<table>
<thead>
<tr>
<th></th>
<th>Nil supplement</th>
<th>Ration once weekly</th>
<th>Ration twice weekly</th>
<th>Ration three weekly</th>
<th>Ration daily</th>
<th>ad lib</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liveweight gain (g/day)</td>
<td>62c*</td>
<td>115ab</td>
<td>102b</td>
<td>124ab</td>
<td>114ab</td>
<td>144a</td>
</tr>
<tr>
<td>Total grain eaten (kg)</td>
<td>nil</td>
<td>22.0</td>
<td>22.0</td>
<td>22.0</td>
<td>22.0</td>
<td>46.5</td>
</tr>
</tbody>
</table>

* means in same row with different subscripts differ (p<0.05)
+ standard deviation of mean

The frequency of feeding 3.15kg of whole lupin grain per head per week had no significant (p>0.05) effect on lamb liveweight gains. Rationing the grain quantity did not significantly (p>0.05) reduce liveweight gains compared with feeding ad libitum, presumably because extra pasture was consumed to substitute for the reduced amounts of grain fed.

The practical relevance of these results is that, provided some reliance is placed on the contribution of the pasture, then supplementary feeding costs can be reduced by feeding less than ad libitum amounts of lupin grain. Determining the rate of grain to feed will be a concern though, since the quantity and quality of the pasture available can be expected to have some influence. The frequency of feeding the grain ration will be of no concern.


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