

## IMPROVED LAMB GROWTH RATES FROM WINTER CLEANING OF PASTURES

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The quality of pastures has declined due to factors such as inappropriate grazing, soil and fertiliser management and an inability or reluctance by graziers to resow degraded paddocks. Winter cleaning of pastures is a method that is used to improve the botanical composition of pasture. This study investigated the effect of pasture winter cleaning on the growth rates of lambs.

The mixed annual grass and subterranean clover pasture, at Rutherglen, was sprayed with 300 mL/ha of Fusilade 212 ® (Fluazifop-p-butyl 212 g/L) in late August 1995. One hundred and sixty, five month old Poll Dorset x (Border Leicester x Merino) cryptorchid and ewe lambs were randomly allocated to one of two pasture treatments (sprayed vs unsprayed) each with eight plots of one hectare in size (stocking rate of 10 lambs/ha). Ewe lambs were grazed separately from the cryptorchid lambs. Pasture composition and total herbage biomass were measured every four weeks. All lambs were grazed on either the sprayed or unsprayed pasture for a period of two months between October and December 1995. Lambs were removed from the pasture treatments in early December and slaughtered. Liveweight, hot carcass weight and tissue depth at the GR site (11 cm from the spinal midline on the 12th rib) were measured on each lamb carcass.

During the grazing period the unsprayed pasture contained 80% annual grasses [annual ryegrass (*Lolium rigidum*), barley grass (*Hordeum* spp.) and silver grass (*Vulpia* spp)], 3% subterranean clover and 17% broad leaf weeds. The amount of available feed ranged from 2800 kg dry matter (DM)/ha in October 1995, to 2600 kg DM/ha in December 1995. Subterranean clover content increased after spraying from 3% to 30% and annual grasses decreased from 80% to 50%. The amount of available feed ranged from 2600 kg DM/ha (October, 1995) to 1900 kg DM/ha (December 1995). The amount of green feed on offer in October 1995 for both treatment groups was about 75% of total available feed. By December 1995 the amount was reduced to 5 % and 15% for the unsprayed and sprayed pasture respectively.

At the commencement of the grazing period there was no significant difference between the liveweight of the lambs in each treatment group. Lambs grazing the sprayed pasture had a significantly higher ( $P<0.001$ ) growth rates than those grazing the unsprayed pasture (Table 1). The lambs on the sprayed pasture had significantly heavier carcasses ( $P<0.001$ ), and a significantly greater ( $P<0.001$ ) tissue depth at the GR site than lambs grazing the unsprayed pasture (Table 1).

**Table 1. Effect of unsprayed and sprayed pasture on lamb liveweight, growth rate, hot standard carcass weight and tissue depth at the GR site measurement**

	Unsprayed	Sprayed	s.e.d.
Initial liveweight (kg)	34.3	34.6	0.18
Final liveweight (kg)	43.8 <sup>b</sup>	47.9 <sup>a</sup>	0.47
Growth rate (g/day)	142.1 <sup>b</sup>	197.1 <sup>a</sup>	8.23
Hot standard carcass weight (kg)	19.5 <sup>b</sup>	21.4 <sup>a</sup>	0.19
GR (mm)	11.5 <sup>b</sup>	13.9 <sup>a</sup>	0.46

a,b,c Different letters within rows indicate significantly different ( $P<0.001$ ) values

Pasture manipulation, through the use of Fusilade 212 resulted in an increase in subterranean clover content which supported higher growth rates compared with unsprayed pasture. Further investigation with alternative herbicides and the time of application may provide other means of manipulating pasture to improve nutritive value of the pasture and increase potential lamb growth rates.