

A COMPARISON OF LIVELWEIGHT GAIN AND WOOL PRODUCTION FROM POLWARTH EWE WEANERS GRAZED AT THREE STOCKING RATES ON THREE DIFFERENT PERENNIAL BASED PASTURES IN THE SOUTHERN ADELAIDE RILLS OF SOUTH AUSTRALIA

P.R. GIBSON*

Progress results from a stocking rate (Polwarth ewe weaners set stocked at 10, 14 and 18 ha⁻¹) x three pasture treatments (viz: Festuca arundinacea cv Demeter, Lolium perenne 'Mt. Alma' and Phalaris tuberosa x Phalaris arundinacea cv ~~Stimo~~ 11146 each sown with Trifolium subterraneum cvv. Mt. Barker and Woogenellup in April 1974) trial are reported.- These three pasture treatments are hereafter referred to as A, B and C respectively.

The percentage of treatment grass (percentage green overlapping cover) decreased from 100% at time of stocking and until the germination of annual legumes and grasses following late February rains to 27% (mean of all paddocks) at the last survey on the 15/9/75. The percentage contribution of subterranean clover was very similar between treatments during the experimental period and increased from 18.5% to 48% (mean of treatments) during the winter.

Weaner live weights increased from 26.8kg at allocation on 12/12/74 and reached a summer maximum at the beginning of February. The summer maximum live weight on 5/2/75, minimum live weight on 25/3/75 and final liveweight prior to shearing on 30/9/75 were higher for treatment A than either B or C. This advantage in live weight was significant ($P < 0.05$) in all cases except between A and C at the final weighing,

Treatment ranking on the basis of greasy fleece weight at shearing was A > B > C with only the difference in yield between A and C reaching significance ($P < 0.05$) (Table 1).

TABLE 1

Measurement	Unit	Date	Treat. Mean			S.R. Mean			LSD
			A	B	C	10	14	18	
Total Avail DM	kg ha ⁻¹	12/12/74	2980	3220	3140	2900	3140	3300	927
Avail Green DM	kg ha ⁻¹	8/9/75	840	730	832	646	310	246	149
Treat. Grass	% o.cov.	12/6/75	34.8	49.0	16.9	37.4	35.5	27.8	8.8
Sub. clover	% o.cov.	12/6/75	22.1	20.9	22.9	27.7	17.8	20.3	6.8
Broad leaf weed	% o.cov.	12/6/75	11.6	6.3	11.9	12.4	8.2	9.2	4.0
Nar. leaf weed	% o.cov.	12/6/75	31.5	23.8	48.3	22.5	38.5	42.7	8.1
Bare ground	%	12/6/75	15.9	13.5	19.5	10.9	18.3	19.7	11.0
Max. Summer LW	kg	5/2/75	30.2	27.7	28.6	29.9	28.5	28.3	0.95
Min L.W.	kg	25/3/75	28.3	25.3	25.4	27.6	25.6	25.1	1.6
L.W. at shearing	kg	30/9/75	41.2	36.9	37.6	45.2	36.3	34.3	4.0
Greasy Fleece Wt	kg	1/10/75	3.61	3.30	3.13	3.97	3.10	2.98	0.36

*Northfield Research Laboratories, South Australian Department of Agriculture, Box 1671 G.P.O., Adelaide, South Australia.

This project has been financially supported by the Wool Research Trust Fund,