

## LIFETIME WOOL. 2. PASTURE GROWTH, UTILISATION AND EWE STOCKING RATE

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On-farm benchmarking analyses indicate that stocking rates and wool production/ha are key drivers of farm profitability. The utilisation of pastures by sheep in southern Australia is typically only 25-35%, and economic analyses estimate that increasing pasture utilisation by less than 20% could double farm profit. This paper reports preliminary data on pasture growth rates (PGR), pasture utilisation (PU) and ewe stocking rates (SR) for pastures maintained at different levels of feed on offer (FOO) during the pasture growing season. The data are derived from the Lifetime Wool project (Thompson and Oldham 2004). The Victorian site typically consisted of 20-50% perennial ryegrass/phalaris with <20% subterranean clover, whereas the Western Australian site was subterranean clover-dominant (50-70%) with annual grasses and capeweed. The FOO was assessed using the visual calibration method described by Thompson *et al.* (1994). It was maintained near target amounts by weekly adjustments to SR based on FOO assessments, anticipated PGR and estimates of pasture intake. The PGR was measured 3-4 weekly in 1m x 1m exclosures (n=5-10/plot). The PU was calculated from total pasture production (PGR x days) minus residual FOO at the end of spring/total pasture production x 100.

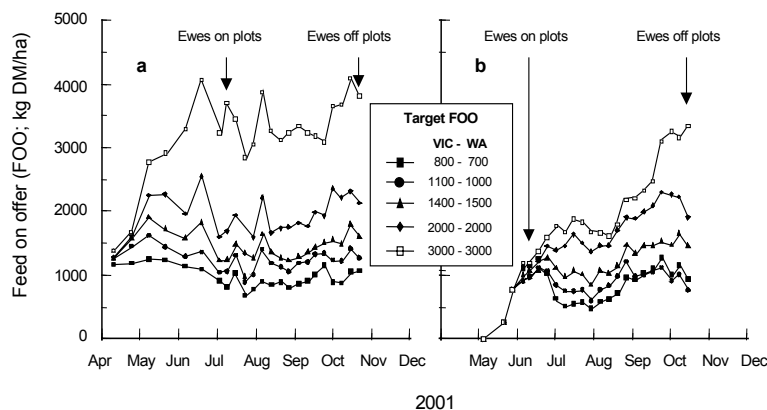


Figure 1. Feed on offer profiles for a) Victorian and b) Western Australian sites in 2001.

Table 1. Mean feed on offer (FOO, kg DM/ha), total production (kg DM/ha), pasture growing season stocking rate (dse/ha) and pasture utilisation (%) at the Victorian and Western Australian sites in 2001.

Victoria					Western Australia				
Target FOO	Actual FOO	Total DM production	Stocking rate	Pasture utilisation	Target FOO	Actual FOO	Total DM production	Stocking rate	Pasture utilisation
800	930	8480	44	88	700	850	6830	58	86
1100	1210	10180	39	88	1000	910	6550	48	88
1400	1410	10870	34	87	1500	1260	6330	33	77
2000	1930	11780	32	79	2000	1740	7510	27	75
3000	3460	11150	27	63	3000	2220	8910	19	62

The actual FOO was successfully managed to targets at the Victorian site, and for the lower FOO treatments at the Western Australian site (Figure 1). The high FOO targets were difficult to achieve at the WA site in 2001 due to a late break of season (5<sup>th</sup> May) and slower PGR through winter. Intensive grazing treatments reduced ( $P < 0.05$ ) total DM production at both sites, especially when FOO was maintained at less than 1000 kg DM/ha, but SR and PU increased with decreasing target FOO treatment (Table 1). The short-term (weekly) SR ranged from 14-31 dse/ha on the higher treatments, to 28-105 dse/ha on the lowest target FOO treatments. This work will further define the potential for increased production and optimum grazing strategies for professional wool producers.

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THOMPSON, A.N., DOYLE, P.T. and GRIMM, M. (1994). *Aust. J. Agric. Res.* **45**, 367-389.

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