

High-performance pasture systems to increase lamb production in southwest Victoria

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Sustainable increases in production efficiency and the production of a specified product in a timely manner and at agreed quantities are critical to improving the profitability of pasture-based lamb production systems. Seasonal and geographical variations in pasture growth rates and quality are significant impediments to production efficiency and quality control. Future increases in productivity require the development of management strategies that can improve the utilisation and feeding value of existing and new pastures that can extend the pasture-growing season and provide high-quality feed in winter, late spring, and summer.

High-performance pastures (HPPs) are a mixture of various species that aim to increase growth rates during winter and early summer. HPPs generally consist of Italian and hybrid ryegrasses combined with annual legumes for winter production and/or tall fescue, chicory, and red clover for summer production. HPPs have been used in the New England and southwest

slopes areas of New South Wales to significantly increase lamb and beef production. The 'Morelamb Quality Pastures' project aims to demonstrate the potential for these pastures to increase lamb production in southwest Victoria. At each of the five demonstration sites on commercial properties across southwest Victoria, three different pasture systems were established in June/July 2002 (10 to 25 ha per system). The pasture systems are Control (perennial ryegrass, subterranean clover, and white clover), Stamina (tall fescue, subterranean clover, white clover, and red clover), and Kilomax (perennial ryegrass, Italian ryegrass, subterranean clover, balansa clover, red clover, white clover, and chicory). The sites were grazed from August 2002. Preliminary data on sheep carrying capacity and pasture composition across the five sites is presented in Figure 1.

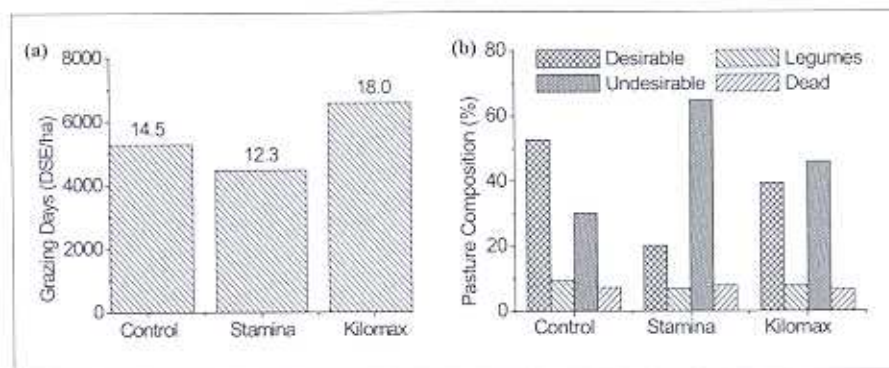


Figure 1. (a) Sheep grazing days (average DSE/ha/yr displayed above bars) between August and December and (b) pasture composition at the end of spring 2002 for three different pasture systems at five sites in southwest Victoria.

The carrying capacity of the Stamina system (12 DSE/ha) was less than that for the Control (14 DSE/ha; +18%) and the Kilomax (18 DSE/ha; +46%) (Figure 1a). The differences in performance could be attributed to the ability of the ryegrass varieties in both the Control and Kilomax systems to establish rapidly, outcompete undesirable species, and provide greater dry matter yield in the year of establishment. The lower production of the fescue varieties in the Stamina

system and less than ideal grazing pressure enabled undesirable pasture weeds to dominate (Figure 1b).

Grazing intensity is critical in the management of establishing high-performance pastures, with ryegrass-based systems providing greater productivity than fescue-based systems in the establishment year. The costs and benefits of the different systems will be evaluated over the next two pasture growing seasons.