EVALUATION OF THREE PERENNIAL GRASSES UNDER GRAZING IN THE ADELAIDE HILLS OF SOUTH AUSTRALIA

P.R. GIBSON*

In the higher rainfall (>700mm) regions of the Adelaide Hills of South Australia, the pastures are commonly comprised of introduced temperate perennial grasses and yet there have been no reported experiments comparing any of the different perennial species in terms of animal production.

Replicated pasture treatments comprised of either Festuca arundinacea cv. Demeter, Lolium perenne 'Mt. Alma' and Phalaris tuberosa x Phalaris arundinacea cv. Siro 1146, each sown with Trifolium subterraneum cvv. Mt. Barker and Woogenellup, were grazed by Polwarth weaners for c. three years at three stocking rates (10, 14 and 18 ha⁻¹ in 1975 and 1976 and 8, 11.2 and 14.4 ha⁻¹ in 1977) at Inman Valley, South Australia.

The summer maximum and autumn minimum live weights were significantly (P < 0.05) highest in the Demeter treatment in 1975 and 1977 and the advantage gained in live weight in this treatment during the summer-autumn period was maintained throughout the growing season.

Hilder (1965) concluded from studies at Armidale, N.S.W., that Demeter fescue was not particularly suited to Mediterranean-type environments due to its lack of summer dormancy and its inability to survive prolonged periods of drought. In this relatively short-term experiment in this environment, there was little indication of a marked lack of persistence by Demeter at moderate stocking rates and the superior performance of the sheep grazing this species in two of the three years was due to the ability of Demeter to respond to out of season rainfall and hence effectively increase the length of the growing season.


*Northfield Research Laboratories, South Australian Department of Agriculture and Fisheries, Box 1671, G.P.O. Adelaide. S.A. 5001.