

EverGraze: more perennials, better livestock, healthier catchments

Background

Leading producers, researchers, consultants and environmental agencies across the high rainfall zone of southern Australia, have identified potential farming systems that increase profits and improve the environment. Using this information, EverGraze has established six research (proof) sites from NSW to Victoria and WA where these new systems are being tested. Proof sites use high genetic merit sheep and cattle grazing a range of native and introduced pastures (lucerne, perennial ryegrass, phalaris, tall fescue, chicory, kikuyu).

EverGraze grazing systems respond to limited summer rainfall, and so reduce the need for supplements. Pasture species and management practices are used to increase forage quality over summer to finish lambs or boost the live-weight of ewes prior to mating. Summer growing perennials use more water than annuals or temperate perennials and provide higher ground cover, reducing the risk of soil salinity and erosion.

What was done

EverGraze has over 50 demonstration (supporting) sites on farms that allow producer groups to trial new grazing systems in their local environment at a commercial scale. Supporting sites are managed in collaboration with catchment management authorities, state agricultural agencies and consultancy groups. Courses, workshops and fact sheets are also under development with full details available on the EverGraze website.

A Kangaroo Island supporting site has been established on the property of Lyn, Trevor and Colin Bolto: Cowell's block. This is an area of sand over clay to deep acid sand soils, and has been sown to rhodes grass, kikuyu, tall wheat grass and tall fescue. There is a control paddock of annual weedy grasses and sub clover.

Livestock (sheep) performance and grazing days are being measured, along with observations of the possible impact of perennial pastures such as kikuyu on adjacent native vegetation.

TABLE 1

Description of three paddocks that have been monitored since January 2008

Paddock name	North Bates kikuyu paddock	North Suzie Wong rhodes grass paddock	South Bates barley grass paddock
Species	Kikuyu 58% Tall wheat grass 4% Phalaris 2% Strawberry clover 1% Annuals 35%	Kikuyu 18% Tall wheat grass 19% Rhodes grass 5% Annuals 58%	Perennials 0% Annuals 100%
pH_{CaCl2}	4.8	4.9	4.9
Phosphorus ppm	44	72	36
Sulphur ppm	8.1	10.1	29
Potassium ppm	217	169	192
Organic carbon %	3.1	3.4	3.7

Results

The annual pasture carries mostly dry ewes and wethers during summer, whilst the kikuyu based pastures have provided high quality weaner feed over summer. This has enabled high summer stocking rates (20 + dse/ha) of weaners to be carried in the paddock with minimal supplementary feed, whilst still maintaining groundcover in autumn. Minimal weaner drenching also appears feasible, as weaner WEC on kikuyu are consistently <120 eggs/g.

Kikuyu pasture carried 14.8 dse/ha in 2009 winter compared with 29 dse/ha on the annual pasture, so there is a winter feed penalty with kikuyu despite the presence of sub clovers.

Overall, the stocking rates on the kikuyu and kikuyu/rhodes based pastures have been lower than the annual pastures (11.3 and 11.7 dse/ha during 2008 and 2009 compared to 16.8 dse/ha from the annual pasture). Over the summer months, the kikuyu based pastures have carried younger stock and enabled them to gain weight. Kikuyu should not be viewed as a pasture that will enable you to increase stocking rates but as a pasture that provides valuable green feed over summer and thus may reduce supplementary feeding costs.

Kikuyu movement outside paddock

The kikuyu paddock was established in 2002 and has an area of scrub along the western boundary, along with shelter belts on the eastern side. There is no evidence of the kikuyu moving outside the paddock.

Take home messages

The advantages of kikuyu are

- Weaners can be fed in the paddock
- Sheep can be set stocked for long periods
- Ground cover is maintained
- The kikuyu has carried weaners over summer, whereas the annual pasture is carrying wethers
- There is no evidence of kikuyu movement out of the paddock into adjacent areas of native vegetation.

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