

Case Study

Kikuyu is king on Kangaroo Island

Trevor, Lyn, Colin and Keith Bolto are members of the Kangaroo Island Sheep Production group and their farm financial and production data has been collected and analysed every year for the past 10 years. Trevor has been trialling various perennials. He has found kikuyu has promise and related his experience to Tim Prance.

"We are specialist wool producers, running grazing properties in the drier, sandy part of Kangaroo Island, about 25 km south east of Kingscote. We aim to run a profitable wool production enterprise and ensure a viable family farming business, whilst still maintaining good soil health and biodiversity. We have two sons intending to make a living from sheep, so profit is a key driver.

The climate here on Kangaroo Island is mild with few frosts. Our winters tend to be wet, summers very dry and springs variable. The seasonal break is normally reliable around late April.

Lack of water on the island is a problem. The dams don't always fill, so providing water for sheep in every paddock can be tough. Paddocks with suitable summer feed can be ungrazed due to lack of water, whilst paddocks with adequate water can be overgrazed. This makes maintenance of ground cover in annual pastures over late summer/autumn, a big challenge.

We are pushing the envelope with stocking rate, running 12 DSE/ha for the last six years. The poor springs of 2006, 2007 and 2008 have greatly increased our supplementary feed costs.

Our ground water is saline and rising water tables lead to soil salinisation.

Producer: Trevor, Lyn, Colin and Keith Bolto

Location: McGillivray, Kangaroo Island

Property size: 1000 ha usable land

Soils: sand, sand over clay and sand over laterite.
500mm annual rainfall

Enterprises: Self replacing Merinos for wool production

Pastures: Annual grasses and sub clovers (70%), phalaris (20%), cocksfoot (5%) and kikuyu (5%)

farm info.



So we are looking to use more perennial pastures to reduce the supplementary feed bill, to maintain ground cover during summer and autumn on our sandy soils and to increase water use to prevent salty water tables from getting too close to the surface.

We are limited in the perennials we can grow in our conditions. Cocksfoot will grow, but needs strict rotational grazing management during summer. We have some areas of phalaris which does well where the clay is within 20cm, the pH is above 6.0 (in water) and there is no aluminium.

Kikuyu is the most promising perennial plant we have tried so far. Kikuyu is tolerant of our acid sandy soils, and provides excellent ground cover during late summer.

We have not had any animal health issues with kikuyu, whereas we have lost sheep on phalaris, so are wary of it. Kikuyu provides us with a green pick over summer, which is very beneficial for late July drop Merino weaners. We supplementary feed them grain and hay on the ground



Colin, Trevor and Lyn Bolto

key points

- Kikuyu is tolerant of acid sandy soils.
- Kikuyu reduces the need for supplementary feeding.
- It also provides excellent groundcover in summer.

during summer, which we can't do on any other pasture. The sheep don't require any protein supplements, such as lupins, as there is enough green leaf in the kikuyu despite our long dry summers.

"Kikuyu is the most promising perennial plant we have tried so far"



Weaners (late July drop) on Boltos property

We undertake regular worm egg counts (WEC), with every mob being tested at least five times per year. Our weaner lambs on kikuyu have not had WEC above 120 eggs/g and have not needed to be drenched whilst on kikuyu.

Some people are wary of kikuyu because they think it will run and spread to other paddocks. We have native scrub around our kikuyu paddocks and have not seen evidence of kikuyu movement into these scrub areas, which are not grazed by sheep.

Our aim is to increase kikuyu to about 20% of our farm, leaving 20% to phalaris and the remainder as annual based pastures.

We are also aiming to produce as much high quality hay as possible to feed in autumn and early winter, so we can reduce dependence on grain which we have to buy in.

When we have surplus feed, that can't either be grazed or made into hay for

the following autumn, we make pit silage as a long term drought reserve.

Kikuyu has a place in our future farming system. So far it is ticking all the boxes for summer productivity, reducing the need for supplements, stock health and increasing our profitability."

science behind the story

The Bolto family have provided three EverGraze focus paddocks. One is an annual pasture of barley grass, sub clover and capeweed, another was sown to rhodes grass, setaria, kikuyu and tall wheat grass, whilst the third paddock was sown to kikuyu, tall fescue, phalaris and tall wheat grass. We have been monitoring composition and livestock production for the past two years. The rhodes grass, setaria and tall fescue have disappeared, leaving mostly kikuyu and sub clover with some tall wheat grass, whilst the other paddock is mostly kikuyu and sub clover.

The kikuyu has been extremely successful for maintaining ground cover over summer, eliminating wind erosion, and improving Merino weaner survival in this Mediterranean environment.

Overall stock carrying, measured in DSE/ha, has been about 30% less on

the kikuyu based pastures compared to the annual pasture paddock. The DSE's carried in the kikuyu paddocks have been high value young animals, compared to dry ewes and wethers on the annual pasture, with significantly less hand feeding compared to animals on annual pastures. The Boltos choose to spell kikuyu paddocks during winter to enable them to carry higher stock numbers over summer.

Despite the high summer stocking pressure maintained on the kikuyu (20+ weaners/ha), close to 100% ground cover can be maintained during autumn, compared to about 30% on the annual pastures.

Very hard grazing (down to 300 to 500 kg/ha) in autumn removes the mat of kikuyu runners above the ground, enabling good sub clover content during winter. Sub clover content is further

enhanced by annual dressings of superphosphate in autumn (applying around 12 kg/ha P and 15 kg/ha S) and allowing sub clovers to set seed in late spring by applying early spring grazing pressure.

Perennial pastures are expensive to establish and the payback period is likely to be 10 years or more, given the already high stocking rate on annual pastures. Therefore, future perennial plantings will be kikuyu (due to its long term persistence), but are unlikely to exceed 20% of grazable area.

Fact sheets on kikuyu and other perennials are available at our website www.evergraze.com.au

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