

Best practice, best production

Michael Blake takes a best practice, quality management approach to everything he does on *Bally Glunin Park* and it shows in his results. As *Jo Curkpatrick* found when she visited Michael Blake, he takes a positive approach to managing dryland salinity.

We should be looking at utilising what we've got and working with it.

There are 14 research and evaluation projects operating on *Bally Glunin Park* ranging from evaluating the EM31 as a salt mapping tool, monitoring grazing to evaluate the feed value of Dundas tall wheat-grass, drench efficiency testing, through to thermal imagery plant identification.

Being involved in farm research keeps the mind stimulated, exposes our apprentices to cutting edge information and allows for fast progress in the areas we are researching. It also allows us to tap into intelligence and resources not usually available.

One of the projects on the property is aiming to control salinity on the Fern Hill Creek. We are aiming to revegetate the edges of the saline areas with salt-tolerant indigenous species and are also planting saline areas with tall wheat-grass. The area previously supported sea barley-grass and buckshorn plantain and was waterlogged in winter.

The overall objective of the project is to improve water quality in the Wannon River catchments and at the same time create a wetland to encourage bird species back, including the brogas I remember seeing on the site as a child growing up.

There are about 200 hectares involved and the problem may well have existed for a long time but escalated back in the late 1940s when a lot of trees were removed to build the airport here at Hamilton, with increased salinity a consequence. Since the '70s the salinity of the land has increased and the only thing stopping the further spread of saline land has been the elevation.

In an early trial along a recharge area that flows into the Fern Hill Creek, we fenced along class two and three lines and tried Tyrell tall wheat-grass. It did all right but became pretty tussocky over time based on management practices recommended in the early 1980s.

Case study: Michael and Cathy Blake

Location: Bally Glunin Park, near Hamilton, south-west Victoria

Property size: 1800 ha

Mean annual rainfall: 690 mm

Soils: Volcanic basalt

Enterprises: 15,000 dry sheep equivalents – prime lambs, yearling beef, superfine wool Merinos, grain and fodder



In a second stage that was developed after an EM31 survey in 2000, we realised some of our fencing was out of place and didn't truly reflect the salinity problem, but we didn't know as much then as we do now about planting out saline land. If we had I think the fences would be better aligned to managing the pastures.

There are three bores monitoring salinity and we've seen a rising water table, which is against the trend for the State.



Michael Blake has been fleece testing for many years and sells his wool to specification.

Quality assurance for excellence

Bally Glunin Park operates at the cutting edge of change and continually pushes the boundaries for excellence in product preparation, presentation and delivery to customers. The Blakes operate under a number of Quality Assurance programs including:

- Elders Clipcare and Dalgety Dalcare for wool harvesting
- Flockcare P300002 for sheep and lamb production (number two in Australia)
- Cattlecare P3000038 for cattle production (number two in Australia with dual accreditation with Cattlecare and Flockcare)
- Go Mark V 000001 for environmental management beef enterprise
- MSA Accreditation for beef meat presentation
- EU Accreditation 3GMUL000 for beef meat presentation for European markets.

More recently Michael Blake has established 8000 trees in a plantation under a project to negate fossil fuel use on the farm and make a practical contribution to greenhouse abatement.

His Merino sheep management is all about quality as well. Michael is shearing every eight months to meet the specifications of Italian spinners who are looking for a particular length. He has been analysing his clip for a number of years towards moving the fibre diameter below 18 microns and decreasing the coefficient of variation. He has also worked to improve staple strength and has found a relationship between staple strength and feed availability.

"Our pasture management program is about maintaining animal nutrition throughout the year and as a result maintaining the specifications required by the companies that buy our wool," says Michael.

Key points

- Measurement and evaluation guide improvement on this farm
- Pasture production linked to animal nutrition requirements
- Production on saline land lifted from 2.5 dry sheep equivalents to 26

In more recent times we have used Dundas tall wheat-grass, sown at 7 kg/ha through an air seeder. We sowed 30 ha of salt-affected land to Dundas, balansa and strawberry clover in 2000, 30 ha in 2001 and another 30 ha in 2003.

Our plan is to use winter-active lucerne on the higher ground to improve the pasture utilisation of the water available, starting with a 17 ha planting this autumn. The whole process incorporates a rotational

system of grazing to maintain a balanced level of nutrition for our superfine/fine wool Merino sheep enterprise.

It's really all about growing wool at a minimum of 2.5 mm a week, every week for eight months to supply to specific Italian markets with a minimum strength of 40 Newtons per kilotex.

The tall wheat-grass and lucerne combination will contribute to our pasture availability throughout the year to satisfy this requirement.

There is a disadvantage though, with increasing production on the saline land we've gone from 2.5 dry sheep equivalents (DSE) to 26 and it has been hard to keep up with our pasture improvement program on non-saline land. We are now improving a saline area with an area not affected by salt to keep the pasture improvement program in balance.



Photo: J Curkpatrick

Dundas tall wheat-grass increases productivity

I believe our saline land can be the best land on the farm now that we have a pasture species that uses the water. It gives us good green feed early in the season to wean our lambs onto and it gives us green feed well through summer and autumn.

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The science behind the story

By Luke Fitzpatrick

The Blakes' tall wheat-grass/balansa/strawberry clover was established four years ago. After a poor establishment (due to technical sowing problems) the tall wheat-grass was allowed to set seed and then crash grazed during the first summer. Subsequently the pasture stand improved significantly and has supported a stocking rate of 23 DSE/ha during the eight drier months of the year for the past three years (up from 2.5 DSE/ha prior to pasture establishment).

In modelling the benefits of a tall wheat-grass pasture we have annualised the stocking rate to 15.5 DSE/ha and made a provision for supplementary feeding on alternative pastures in winter.

The pastures are managed using a two paddock grazing rotation for a fixed interval of six weeks per paddock. Whilst this isn't recognised as optimal management as it doesn't allow for seasonal changes in pasture growth, it works sufficiently well to maintain pasture quality.

The analysis of the Blakes' investment in pasture establishment was performed on a gross margin basis for a self-replacing Merino wool flock and accounting for the extra costs of grazing management labour and fertiliser to maintain the pastures.

Modelling multi-year gross margins for a self-replacing wool flock showed that gains in carrying capacity resulted in annual increases in gross margin per hectare, up to \$162/ha by year 3.

The Blakes' tall wheat-grass pastures were analysed over 10 and 20 years to determine the net present value (NPV) and internal rate of return on investment (IRR) in pasture establishment. The results indicate that the tall wheat-grass and clover pasture may well be a highly profitable investment for unproductive saline areas, even if the pasture is only maintained for 10 years.

At this stage the model is a best first effort to evaluate the investment in tall wheat-grass pastures on saline areas. The next step will be a process of proofing and re-evaluating via consultation with the SGSL research team and other producers.

• Luke Fitzpatrick is a Farm Business Analyst with DPI at Ballarat. In 2004 he undertook an economic evaluation of tall wheat-grass establishment on saline land, as part of the SGSL program.

Project analysis for 40 hectares of tall wheat-grass pasture establishment

	10 year pasture life	20 year pasture life
NPV (10%)	\$13,240	\$30,830
IRR	21%	24%
Payback period	5 years	5 years

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