

The living haystack worth its weight in greenfeed

Trevor (Ted) Beare and Martin Wilkinson manage and share farm Maro Creek, a mixed farm that takes in land from The Hummocks, a range of hills to the west, to the naturally salty Lake Bumbungga. It is now a decade since they started turning unprofitable cropping land over to saltbush pasture – they keep learning, but they have never looked back. Together they spoke with Bruce Munday just as harvest was about to get underway.

We crop about 2500 hectares of this property, rotating wheat and barley followed by one year of sown medic pasture. Our 2500-head merino ewe flock lamb in the hills, graze the pasture paddocks in spring and go onto the stubble in summer. We also have our ‘living haystack’ – 200 ha of saltbush and pasture that support our ewe hoggets and our wethers through much of the year and the ewes through autumn up until lambing.

The saltbush is on loamy country that we cropped up until about 1992 when we saw that yields were going down to the point where we were losing money on the job. At first we did not realise that we had a salinity problem. But when we noticed increasing bare areas with only sea barley grass and which would blow in summer, along with groundwater at 10,000 milligrams per litre coming to within about 1.5 metres of the surface, it became clear that we did indeed have a salt problem.

Key points

- Saltbush has effectively drought-proofed the sheep enterprise on this farm
- Saltbush is for maintaining condition, not for fattening
- Water tables appear unaffected by the drought
- Even tough plants need good management

Case study: Trevor (Ted) Beare and Martin Wilkinson

Location: Maro Creek, Snowtown, South Australia

Property size: 4000 ha

Mean annual rainfall: 350–400 mm

Soils: Red-brown earths

Enterprises: Cereals, wool, merino lambs, cattle fattening



Given that this was a pretty substantial piece of land, we were looking for something that would not just keep a cover on the ground but would also be productive.

In 1994 we tried about 100 saltbush plants just to ‘see how they would go’. They all established so well that we decided to plant a further 22,000 the following year, taking a week to plant the 13 ha using a single row broccoli planter. Since then we planted a further 27 ha in 1996 and 40 ha/yr for the next 4 years – all up, 200 ha – but using a contractor with a triple row planter.

The plant

We chose Old man saltbush (*atriplex nummularia*) as this had a reputation for doing well in our conditions, but since the first planting we have used the variety De Kock which has been selected for greater palatability.

Planting in July/August fits in well with our other farming operations. As with most crops, it helps to have rain just before and after planting, but we have had no real failures with establishment except on the severely waterlogged sites. The planter creates a weed-free corridor, but annual grass weeds soon move in and need to be controlled by over-spraying with 1 to 1.2 l/ha of glyphosate when the saltbush are well established.



Ted and Martin are emphatic that a saltbush pasture has added flexibility and reduced the risk to their farming system

We have set up 13 ha paddocks, each with its own fresh water supply. Mobs of sheep are normally run at about 500 head, and these rotate through the saltbush paddocks, spending anything from 4–8 weeks in each paddock depending on the amount of feed available. We have also opportunistically grazed cattle on the saltbush when we have had sufficient feed in these paddocks.

The sheep generally clean up the grasses between the rows before they seriously attack the saltbush. But when they do move on the saltbush they eventually defoliate it and it is then time to move them to the next paddock to allow the plant to recover. We count on getting at least two and sometimes three grazings from each paddock in a year.

Over the decade we have been grazing saltbush there has been no deterioration in the condition of the plants. However, to encourage bushiness we ‘pruned’ in 2002

using a slasher mounted on truck wheels. This is time consuming, one row at a time, but it has produced excellent shape and kept the foliage within reach of the sheep.

We have not monitored the groundwater under the saltbush, but we have certainly found that the area is far less boggy in winter and does not blow in summer. The overall quality of the pasture between the rows has improved dramatically, with good levels of burr medic.



Photo: R Britton

The triple row planter in action

The animal

Saltbush is not for fattening stock – it is for maintaining condition. Whilst saltbush is high in protein it is quite low in energy, so make sure we have a healthy pasture between the rows. But as this pasture tends to be eaten before the saltbush, it then becomes necessary to supplement the feed with hay or grain. We learned this the hard way one year when we lambed some cross-bred ewes in the saltbush paddocks and finished with 80 per cent lambs compared with the usual 110%.

Of course ample good water is essential. We tend to water and hand feed at opposite corners of the paddock to encourage the sheep to browse more uniformly than if they just congregated around the water.

Mustering out of saltbush can be a challenge and there is no substitute for a couple of good dogs. A motorbike is useful, but saltbush paddocks are no place for mustering from the ute.

We have seen no sign of tender wool in sheep coming off saltbush and nor do we have any extra worm problems grazing large mobs in small paddocks.

The system

The saltbush paddocks have become a very valuable part of our farming system. They make it much easier to spell our newly seeded ley paddocks until the pastures are well established and they provide green feed in autumn when it is most valuable.

This year with the exceptionally late break it was the saltbush that enabled us to carry sheep through. They certainly needed supplementary feed, but it was the saltbush that effectively drought-proofed our sheep enterprise.

The ability of saltbush to manage extended dry periods is one of its great strengths. We notice that sheep have quite marked preferences for some plants over others, perhaps due to variations in palatability. But we are not entirely convinced that cloning desirable specimens is the way to go as this seems to

make the system more vulnerable to catastrophe. However, we would certainly like to see superior plants selected for desirable qualities such as palatability, digestibility and energy. We also believe there is potential to get far more out of saltbush systems if we can work out the most appropriate supplementary feeding mixture and routine.

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The science behind the story

By Ross Britton

Ted and Martin have been pioneers, not just of saltbush but more importantly of farming system change to make the best possible use of land that was a drain on the farm business. They identified an opportunity on *Maro Creek* to change from low-profit high-risk cropping on land prone to waterlogging and dryland salinity to profitable and sustainable grazing of saltbush.

Saltbush first hit the scene billed as a wonder fodder for degraded land but it hasn't always lived up to expectations with respect to stock condition and production. Recent research and experience gained by producers confirm that saltbush can be a good feed source provided its deficiencies

are offset by other feed. Ted and Martin have managed the need for greater metabolisable energy by supplementing saltbush with inter-row pasture and hay.

Saltbush, particularly Old man, is not very palatable to sheep and experience and research appears to confirm that some plants in a stand are distinctly less palatable than others. The practice of feeding out the supplementary feed well away from the water source, combined with rotational grazing with high numbers (~14 DSE/ha in the case of *Maro Creek*) is an effective way of encouraging sheep to evenly graze the stand. All farmers in southern Australia know the benefit of green feed prior to the autumn break. Ted and Martin have planted saltbush on a sufficient scale that

they can make a real impact on this traditional feed gap. Not only do they maintain the condition of their livestock, they take pressure off bare paddocks and allow sown or volunteer pastures to get away to a good start. This in turn helps free up land more suited to cropping.

• Ross Britton is a senior consultant with Rural Solutions SA and contributes to the CRC Salinity training program as part of the SA DWLBC input to the CRC. .

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