The moo factor – saltland grazing for cattle in the wheatbelt

Case study: Bart and Denella Hulls
Location: Trayning, Central Wheatbelt, Western Australia
Property size: 6920 ha
Rainfall average: 325 mm
Enterprises: Sheep grazing and wheat cropping (diversifying into cattle)

Grazing cattle on saltland could be a smart way of diversifying the farm business and making the best of varying seasons and fluctuating markets. *Bart Hulls* was keen to tell *SALT* Magazine about some of the ways in which farmers in the WA wheatbelt are trialing saltbush based pastures to diversify their farm income from purely sheep and cropping to additional enterprises.

I believe the key to making this system work is to make sure that we're combining the saltbush with some high-energy feed, such as hay, stubble or a palatable understorey. Otherwise the high ash content of the saltbush can limit intake and reduce our potential gain.

Improving production and profit from grazing saline land is important for the long-term future of our farm, which is why we've become involved in a Land, Water & Wool *Sustainable Grazing on Saline Lands (SGSL)* project.

This salinity research project is not the first time we've grown saltbush. 'Bonord' is our family property, located near Trayning in the WA wheatbelt. We first noticed salinity encroaching on our valley floors in the early 1990s.

Our land became salt-affected as groundwater levels rose and salt spread up the slopes at a rate of 10-20 metres each year. It was obvious that an increase in plant water use was essential to prevent more land from going saline, but we also wanted a plant that could be a productive component of our farming system. We decided on saltbush and in 1996 and 1998 planted two large blocks of Oldman and Rivermor saltbush. Previous to planting the saltbush, the paddocks in the valley floor were sown to wheat and barley, however the land became so unproductive that an alternative had to be found.

Now we run cattle at one steer per hectare on saltbush, supplemented with barley

Photo: courtesy Land, Water & Wool

Above: 'Bonord', Bart and Denella Hulls' family property near Trayning.

Opposite page: Dr Hayley Norman at a CRC Salinity saltbush research site.

Key points

- Saltbush helps fill the autumn feed gap for cattle
- Supplementation of saltbush is essential for animal performance

straw retained from the back of the header during harvest. The 60 ha block of Oldman saltbush has been fenced into four cells and water troughs installed in each cell.

The cattle are rotationally grazed between the cells during the autumn feed gap. They are then finished on serradella pasture before being sold at market. This is a valuable feed source for us in the late summer through to autumn.

While wheat and sheep still remain the predominant enterprises, diversifying into cattle will allow us to build a better farm business.

For the last two or three years we've diversified into cattle, buying them out of pastoral areas, running them here and selling them at market. We did start with the export types but are now running British breeds for the domestic market as a premium product because it allows more value-adding.

Denella and I firmly believe in using the saline land productively and not trying to work against it.

We are now participating in an *SGSL* project exploring other opportunities for getting the best out of cattle on saltbush.

We have established three saltbush plots on heavy red soil, one of which is our control.

Our aim is to find the best combination by comparing cattle weight gain and condition score on saltbush supplemented with barley straw with performance on saltbush alleys that have Balansa clover in the inter-row.

There is another component to this project that will consider the environmental benefits such as reduced wind and water erosion.

We will also be grazing sheep on a control plot just to compare the relative extent of soil compaction from the two enterprises.

This year we have been setting the system up, and we'll start our grazing trials in 2005 when the pastures are well established.

However, at this stage we have been disappointed with the germination from the broadcast Balansa and we are already wondering if the management requirements might be too high for our system.

Being part of the *SGSL* network has given us a fantastic opportunity to try something a bit different, and diversify our farm business in a way that can help us reduce some of the risk.

We've had great support from the *SGSL* team, Justin Hardy, John Paul Collins and Linda Vernon, the Community Landcare Coordinator.

If this project shows our system is viable and grazing cattle on saline land achieves good results, it will be of major significance to other farmers throughout the central wheatbelt.

At the moment there are few cattle grazed in this area of the wheatbelt, but if this test stands up it could open up a new area of enterprise.

It could allow other farmers to diversify their farm income from purely sheep and cropping into cattle.

Photo: CSIRO

The science behind the story

By Dr Hayley Norman

This project will allow farmers to manage excess water in the discharge zones, which helps to reduce salinity and waterlogging in these areas.

Saltbush contains 20-30 per cent salt in the biomass. Salt has no energy value – leaving only 70-80 per cent organic matter available for digestion. Although the organic matter in saltbush is fairly digestable, the salt will limit an animal's ability to eat enough saltbush to maintain weight.

It is therefore important to provide animals with low-salt feeds to complement the saltbush. Saltbush contains high crude protein and this can complement low-protein annual pasture residues, cereal hays and stubbles.

The Hull's trial is exciting as it tests principles derived from laboratory analysis and animal house trials in field situations. Complementary feeding of saltbush and understorey or saltbush and supplements is a major focus of the *SGSL* research projects in Tammin and Yearling, also in the WA wheatbelt.

Most of the saltland pasture research to date has been focused on sheep, as they are the biggest animal enterprise in the wheatbelt. It is encouraging to see such enthusiastic farmers playing an active role in developing new farming systems based on cattle for saline land.

• *Dr Hayley Norman, CSIRO Livestock Industries, leads the CRC for Plant-based Management of Dryland Salinity's SGSL project: 'Profitable and Sustainable Grazing of Saline Lands in Western Australia.'*

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