



Have a yarn

talking salt with Ted & Tony Altham

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“Getting a better idea about saltland”



It was the late 1980s when the Altham family noticed the first signs of salinity emerging on parts of their previously salt-free farm at Pingrup.

“We just about lay down and cried,” Ted Altham said.

“It went very, very quickly ... some of our most productive land became worthless.”

But today, the Althams have proved that salt-affected land can be made productive for at least five or six months of the year.

The family has achieved positive results through its participation in the Sustainable Grazing on Saline Lands (SGSL) project.

Ted, wife Jenny and son Tony produce sheep and crops in a 350mm rainfall zone 20km south-east of Pingrup.

They took part in the SGSL project from 2002 to 2005 with the aim of establishing and grazing saltbush, tall wheat grass, puccinellia and lucerne on a 20ha paddock ranging from slight through to extreme salinity.

Originally covered by mallees and some broombush, the paddock was cleared in the early 1970s, before the Althams bought the farm.





They stopped cropping the small paddock from the early 1990s when its calcareous loamy soil started becoming waterlogged.

The family took part in the SGSL trial aiming to get a better idea of the value of saltbush, after experiencing limited success with planting trees on other parts of the farm.

"In previous years, as soon as we

found a patch going salty, the first thing we did was put trees on it ... but down the track all the trees started dying," Mr Altham said.

Prior to participating in the trial, they had experimented with saltbush on sections of the property, but had not used it to best effect.

"We now have learnt how to handle it," Mr Altham said.

The trial plot had proved valuable for grazing sheep and there had been a significant reduction in waterlogging at the site.

"We have seen a huge improvement in the valley floor," Mr Altham said.

He believed the success of the site, including the reduction in waterlogging, had a lot to do with the impressive growth of lucerne on the upper slopes.

Using a home-made planter, lucerne was sown on about 8ha of the site's better land in June 2003, with the aim of helping to dry out the plot.

Saltland pastures were seeded in September the same year, with the site having previously been scarified and sprayed for weeds.

Except for creeping saltbush seed, which they bought, the Althams used saltbush seed sourced from their own farm, with species including old man and wavy leaf saltbush.

The saltbush was seeded into mounded rows, and tall wheat grass and puccinellia were sown between the rows.

During the wet conditions of 2003, the lucerne and pastures originally did not emerge well.

"But then the next year we had summer rains and it all miraculously appeared," Mr Altham said.

The lucerne had performed particularly well.

"That's been very, very productive," Mr Altham said.

"I can't believe how good it is."

"I can't believe how good it is."

Saltbush and tall wheat grass had also performed well, although Mr Altham says he would never again plant creeping saltbush, which he believes is a potential weed.

Puccinellia had not established as well as the other species and was not as palatable to sheep.

In 2004, the site was grazed by 230 sheep for 27 days from the end of February.

Measurements were taken from a sample of 21 sheep which showed the stock grew at 0.31kg per head, per day, and improved in condition score by 1.

The trial paddock had also proved valuable during dry conditions which followed a wet start to the year in 2006.

"Because we had such a wet summer, the lucerne grew like crazy," Mr Altham said.

The lucerne had proved most productive when stocked heavily, with about four to six weeks rest between grazing.



From the end of the 2005 harvest until spring 2006, the trial paddock had hosted at least four grazing cycles, with 300 to 400 mainly young wethers put on it at a time.

Mr Altham believed the sheep did well on the paddock because of the variety of feed available to them.

The Altham family intends to plant more of their land to saltbush, lucerne and tall wheat grass.

They had already planted a further 50ha of land to saltbush in alleys, with tall wheat grass planted between the rows.

Mr Altham's advice to other farmers was not to be afraid of planting pastures on saltland.

"Don't get hung up on your saltland," he said.

"You have just got to do it cheaply, so that you can try again if need be."

Mr Altham had also learned that it was best to plant saltbush in alleys, which allowed for better grazing management and the ability to use the inter-rows.

He said that putting hay out for the stock was a must, as the lucerne was very rich and the sheep needed the roughage.

Department of Agriculture and Food Hydrologist Arjen Ryder said the trial was notable for its good design in that it also

treated the better land above the salt-affected area.

"By including lucerne on the upper slopes, the whole package has come up to be quite favourable," he said.

"He has not only treated the worst land, but the fresh country around it."

"The chances of containing salinity have been greatly improved."

Mr Ryder said the whole SGSL project had demonstrated that farmers treating moderately saline areas received good returns on their investment.

"If you are treating a really salty area, you might only just get your money back," he said.

Mr Ryder also said it was an economically viable decision to choose lucerne to treat the better country at the trial site.

"By having a good density, good stand and good growth, its production has been shown to be better than annual pasture," he said.

"Because we had such a wet summer, the lucerne grew like crazy."

QUICK FACTS



Location: 20km south-east of Pingrup Range Catchment Rd

Rainfall average: 358mm

Enterprise mix: Sheep and cropping.

Trial size: 20ha

Trial aim: Investigate the benefits of grazing on various saltland pastures over summer (and drought conditions). Reduce the frequency of hand feeding during summer/drought conditions and establishing ground cover to reduce erosion and lower watertables.

Saltland pasture mix: Perennial/annual mix including lucerne, puccinellia, tall wheat grass, old man, wavy leaf, river and creeping saltbush.

Original vegetation: Mallees and some broombush.

Paddock cover before trial started: 75% barley grass.

Soil type: Calcareous loam

Soil pH: 4.6

Watertable: -1.1m

Water salinity: 5950mS/m (seawater level)

Water pH: 3.2 (very acid)

Clearing date: 1970s



A word from the gate...

The broad saline valley floors of the south eastern wheatbelt can provide fantastic opportunities for productive saltland management. This has certainly been the case on the Althams' property. By using a mixture of saltbush and perennials, the Althams have created a productive grazing system that provides them with valuable out of season feed. The addition of lucerne on the fresher areas has certainly increased the grazing potential of the site, by providing a low salt, high energy feed source that will complement the saltbush.

Often high establishment costs are what deters farmers from adopting saltland pastures, particularly after first-time failures. Ted, Tony and Jenny have reduced their establishment costs by collecting most of their own seed, and direct-seeding it onto mounds themselves.

Taking paddocks out of production at the earliest signs of salinity is the key to having the most productive saltland pastures. The saltbush can then be used to dry the soil profile enough for salts to leach through, and more salt sensitive grasses and clover can be sown in the inter-row.



Sally Phelan

Often block planting with saltbush is the best strategy when revegetating moderate to highly saline sites, however the Althams have proven that adding some of the more salt-tolerant grasses to the system can make a valuable addition to the variety of feed available.

Using indicator species (what is already growing on the site) can help you to decide what species to plant. Sea barley grass is one of the better indicators, so if you have barley grass, or patchy barley grass, you know the site is suitable to grow saltbush. If annual ryegrass is still in the system, you may be able to add annual legumes to the mix.

Sowing a mixture based on your indicator species, such as the Althams' tall wheat grass and puccinellia mix ensures that you hedge your bets, with different species growing well in their individual niche environments. However make sure that your mixtures are compatible with each other, in that they share the same grazing requirements.

Sally Phelan currently works as the Project Officer for the Saltland Pastures Association and has worked in research for DAFWA.

"The Sustainable Grazing on Saline Lands program (SGSL) aims to support sheepmeat producers and woolgrowers profitably manage by dryland salinity on their farms.

SGSL involves building a network for testing and exchanging information, providing farmers with useful, timely and relevant information and conducting on-farm research into saltland production options.

The program operates in WA as a producer network of regional farmer groups undertaking individual sustainable grazing projects on local salt-affected farms as well as a Research & Development project through the CRC Salinity of which CSIRO and DAFWA are principal contributors.

The SGSL is a National program initiated and funded by Australian Wool Innovation, MLA and the Federal Government's Land, Water and Wool agency. In WA the project is co-funded, administered and delivered by the Department of Agriculture and Food WA, in conjunction with the CRC Salinity and CSIRO."

Further products in this series available at www.landwaterwool.gov.au

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