



# Have a yarn

talking salt with Brad & Natalie Tonkin

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## “Transforming saltland country”

*Over 15 years, the Tonkin family from Coomberdale have transformed their salt country along the Goonderoo River, near Moora.*

Kenilworth, the home farm, has been in the family since 1930 and for as long as the Tonkins can remember, the Goonderoo creek system on their property has been salt-affected.

Brad and Natalie Tonkin and Brad's parents, Arthur and Rhonda have long recognised the potential of this salt-affected country in filling the autumn feed gap – allowing them to defer grazing pasture on their property.

The family run a mixed farming operation on 4,800 arable hectares about 20km north of Moora.

The split between cropping and livestock is fairly even, with 4,000 ewes mated annually.

Lambing takes place in June and July with 2,500 ewes mated to Merino sires and a further 1,500 ewes crossed to terminal sires.

Annual average rainfall is 400mm and soil types across Kenilworth are variable.

Some 200ha of salt affected country has now been revegetated, fenced into areas of 30ha or less and set up with watering points.

Brad says the motivation to reclaim these salt affected areas was largely economic.

*“Once the saltbush was established, we were able to graze areas that in the past had been wasted land,” he says.*

Much has been learnt over the past 15 years and Brad opted to host a Sustainable Grazing on Saline Lands trial site more as a demonstration site than anything else.

The 30ha SGSL site was sown to saltbush seed in 2002, but it was a dry year and germination was patchy.





## *“Once the soil has been ripped up, the salt tends to leach when it rains.”*

The trial site was reseeded using a niche seeder in 2004 but again the germination was not uniform.

In years gone by, Brad and Arthur have mounded country and used seeding gear to establish saltbush.

But the mounds made mustering difficult and have proven to be unnecessary.

Their blocks of saltbush and bluebush withstood inundation for days during the heavy rains of 1999 and survived.

Nowadays, Brad has a relatively simple, but tried and tested formula for establishing saltbush, which costs him just \$100/ha.

*“The country to be treated varies in its condition and may be covered in barley grass, samphire or bluebush,”* he says.

*“The soil is clay or a clay loam.*

*“I use a knock down herbicide in July or August and once the vegetation is dead, I cultivate the area.*

*“Once the soil has been ripped up, the salt tends to leach when it rains.”*

Rivermor saltbush and bluebush make up the bulk of the seed mix, along with Old man saltbush, wavy leaf saltbush and creeping saltbush.

Some of the seed is collected and the remainder is bought in.

In mid August, the seed is simply spread by hand, from the back of the ute.

*“We will usually get one or two rains to get it going and it is grazed lightly for the first time at the end of the following summer,”* Brad says.

*“Setting up water for the stock is quite simple as the water supply runs through this saltland.”*

Some of the Tonkin’s earlier saltbush was planted in alleys on 4m spacings, but according to Brad, the clover pasture in the narrow inter-row is difficult to manage for insects.

He prefers to establish his saltbush in dense blocks and says his most successful and productive site involves a 20ha block of saltbush, alongside a less salty 20ha arable paddock, sown to cereals.

The sheep have access to both of these paddocks.

Saltbush on Kenilworth is ordinarily reserved for ewes and ewe hoggets from March until the season breaks, allowing pastures elsewhere to get away.

Sheep are rotationally grazed through the paddocks of saltbush at a stocking rate of about 30 ewes per hectare for anything up to two months.

Expectant ewes are supplementary fed lupins late in pregnancy to boost colostrum levels.

The saltland pastures have become a reliable source of fodder when feed supplies are otherwise tight on Kenilworth.

Cyclonic summer rain in January 2006 provided an added bonus and gave Brad the confidence to turn his sheep into the saltland pastures earlier than normal.

## **“Setting up water for the stock is quite simple as the water supply runs through this saltland.”**

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## QUICK FACTS



**Location:** 20km north of Moora

**Rainfall average:** 400mm

**Trial size:** 30ha

**Trial aim:** Demonstrate an establishment technique with saltbush shrub seed

**Saltland Pasture mix:** Bluebush; Rivermor, old man, Quail brush saltbush

**Enterpris mix:** 2000ha crops; 4000 ewes mated to merino and terminals

**Original vegetation type:** Samphire and Casuarinas

**Paddock clover before the trial started:** Samphire and bare soil

**Soil type:** clay and clay/loam

**Water table:** 2m

**Water Salinity:** Half seawater (3200 mSm)

**Water pH:** 6.8

**Clearing date:** 1930

## A word from the gate...

This is a very interesting case study with some powerful messages about saltbush establishment and utilisation.

There is no question that the keys to good establishment are good site choice and site preparation. I suspect that part of the reason for the poor establishment success of the SGSL demonstration in 2002 and 2004 was choice of site. Saltbushes tend not to establish well on clayey sites with a cover of samphire.

I believe that we need to back off from the idea that saltbush is a revegetation solution suited to all saltland. This is simply not the case. As a rule of thumb, I would say that if the site wants to grow samphire then let it!

Samphire sites grow poor saltbush and anyway, samphire is a terrible feed for sheep; if samphire is part of the feed on offer sheep will perform poorer than with saltbush alone.

On the very positive side, the Tonkin's approach to site preparation is great. Weeds are fierce competitors against tiny emerging saltbush seedlings. Excellent site hygiene is essential – before establishing saltbush we should knock



**Ed Barret-Lennard**

down those weeds and then knock them down again!

On the question of the utilisation of saltbushes, the Tonkin example is terrific. We now know that saltbush leaves are a fair source of crude protein and a great source of key nutrients like Vitamin E.

However, the feed has the two great disadvantages of having a low energy concentration and a high salt concentration. How can we tackle these two problems? Easy! Feed off the saltbush with stubbles from adjacent paddocks so the sheep have a more balanced diet – just like the Tonkins – and give the animals good quality water to drink – just like the Tonkins'.

The Tonkin case study shows that if we get the animal feed issues right, good profits inevitably flow from saltland pastures.

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*Ed Barrett-Lennard is a Senior Research Officer with the Department of Agriculture and Food WA. He is recognised nationally as an authority on saltland agronomy. He recently produced a second edition of **Saltland Pastures of Australia***

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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](http://www.landwaterwool.gov.au)

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