

### **Key Points**

- *Quality feed in summer*
- *Save six weeks of supplementary feeding*
- *Spell other paddocks at the break*
- *Increased carrying capacity*
- *Enterprise diversification*

## **Green Feed In Dry Times**

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- *Location: Victoria Valley, Dunkeld, Victoria*
- *Area: 545 hectares*
- *Mean annual rainfall: 650 mm, winter dominant*
- *Enterprises: Wool, growing out weaner beef heifers*
- *Landform and Soil types: Flat valley, sandy loam over clay and loamy clay on saltland*

### **The Farm**

Our home farm lies in a flat valley of the Wannon River catchment and is surrounded on three sides by the rugged vista of the Grampians Range. Our two enterprises are a self-replacing merino flock of 3300 head, producing 20 micron wool and sixty-six weaner beef heifers that are purchased, grown out and sold. The property, made up of two separated blocks runs sheep on the home place and cattle on the other and today we carry around eight dry sheep equivalents per hectare.

### **The Salty Part**

When we bought the home farm, sixty- five hectares of lower floodplain was waterlogged and salinised and grew virtually nothing. Significantly this was about twenty percent of the home farm and nearly twelve percent overall. We really needed to make the saltland productive so twelve years ago we embarked on a program of improvement.

The land was seasonally waterlogged, with a shallow saline watertable of 18000ppm at 900mm depth and soil salinity between 7.2 and 12.4 dS/m. This meant that the land varied from totally bare to patchy areas of salt tolerant species like sea barley grass, buckshorn plantain and yellow button.

## **Establishing the Saltland System**

Establishing saltland pasture is doubly risky when waterlogging and salinity sit together. If the land isn't saturated, it's crusty and structureless. Our approach was to manage the waterlogging first. We created lines of parallel surface drains by disc ploughing in lands in the direction of the drainage and prepared a 50mm deep seedbed.

Initially we were unsure about the capability of salt tolerant pasture species to establish so we sowed a seven hectare test site of Tyrell Tall Wheat Grass. We allowed this test site to grow through two summers ungrazed, in the belief that this was needed to achieve establishment. Although this effort resulted in an excellent stand and gave us confidence to tackle the main area, what we achieved was an excellent establishment of rank and hardly palatable tall wheat grass. We learnt that tall wheat grass is more robust than expected.

For the main site of thirty-five hectares, we chose a mix of Tyrell Tall Wheat Grass, Paradana Balansa Clover, Kyambro Persian Clover and Demeter Fescue which was Autumn sown. The tall wheat grass, Balansa and Persian established very well but there was little sign of the Demeter.

Provided that tall wheat grass plants' roots are firmly anchored they will handle light grazing in the first season. We now aim to keep the young plants grazed to a height of 100mm with light grazing in late Summer and Autumn. That's the tall wheat grass - a perennial. For the annual clovers, both Balansa and Persian, it is essential to allow strong flowering and seed set for future viability. As soon as flowering starts the stock are removed until seed set has occurred.

Post establishment, the saltland paddocks are rotationally grazed for up to eight months in the average season. The grazing schedule is May and June with wethers, a winter break from grazing, ewes in October and November, a December grazing break allows for seed set and January to April grazing with ewes brings the pasture down to a height of 100mm. This allows the clovers the opportunity to get a good start from the opening rains and winter grazing break.

It is important to note that we don't graze young growing sheep on the saltland as the water quality of the dams in this area becomes too salty for weaners and hoggets. Mature sheep have a much higher tolerance to salt concentration in drinking water.

## **Lessons Learnt**

The lessons that come to mind are related to fencing, fertilising, species choice, water supply and grazing.

Fencing is the greatest cost in saltland improvement, it is important to go wide to encompass the saline area and allow for some spread. Keeping out of the salt also maximises the life of the fence.

Our fertiliser applications were too light, the paddocks were highly deficient in phosphorus and potassium, not having been fertilised for twenty years. We now use super and potash at 100kg per hectare to maximise production, particularly from the clovers.

Demeter Fescue established poorly and did not persist in the pasture, I would not include it again.

Matching the quality of the water supply to the class of stock is essential on saltland pastures. The adult sheep are able to handle the dam supply without ill effect. However our experience of weaner sheep rapidly losing condition on the saltland pastures was due to their intolerance to the same level of salinity in their drinking water.

The important observations about changed grazing practices to maximise the use of saltland pastures include rotational grazing and managing the grazing of Tall Wheat Grass to a leafy and nutritious 100mm in height for most of the year. The second is the opportunity to defer grazing on the wider farm at the autumn break.

### **Production and Financial Opportunities Realised in the Farming System**

The “out of season” feed from saltland is more valuable than conventional supplementary feeding, as it has enabled changes in grazing systems, particularly paddock spelling and deferred grazing at the seasonal break. From January to April pregnant ewes graze the saltland pasture with very little supplementary feeding.

Due to the contribution of the saltland pasture, we have increased our stock numbers by enlarging the beef heifer enterprise by 25 heifers per year.

Fencing and pasture establishment has been expensive, but with twelve percent of the farm salt affected, the potential value of sixty-five hectares of saltland pasture could not be ignored and we're very satisfied with the results of our investment.