# Changing our farm enterprise and management for a profitable and sustainable future 

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Thankyou for inviting me to the NSW Grasslands Conference for 2010 to tell you about our property "Illogan" at Cassilis and some of the changes we've made in fencing according to pasture types. Twenty years ago our property was in a declining state. We had native pastures that were not performing and a severe soil structural decline on our farming country. We had to make some changes to survive both economically and environmentally. Our goal was to become environmentally sustainable and to be able to hand on the farm to future generations in a better state than it was at that point.

In 1990 we had a property plan done by the Soil Conservation Service that highlighted our problems and the things we had to address. During the following 10 years we concentrated on our farming practices, moving to no-till cropping and started a tree planting program, as tree decline was another problem that we needed to address. Today I will concentrate on our native pastures and the changes that have occurred by changing our management over the last ten years.
Our property has north, south, east and western slopes. Our soils vary from sandy clay loam through to red and black basalt. With the wide variety of soils and aspect, there are also many varieties of native grasses. The property was set stocked, so there was very little plant recruitment happening. We had problems with thistles and overgrazed pastures. About 10 years ago we had a visit from a representative of Greening Australia. Their expertise, knowledge and advice were invaluable. They helped us to recognise the value of the native grasses we had.

In 2003 our property was chosen as 1 of 20 in the state to be involved in the Environmental Services Scheme (ESS) which was a Department of Infrastructure, Planning \& Natural Resources
project. The project was later taken over by the Hunter Central Rivers Catchment Management Authority. We signed a contract that would last for 5 years. The contract stated that we were to make certain changes on our farm like fencing of riparian areas, planting 10,000 trees, planting saltbush in saline areas and shifting to rotational grazing. We had 5 years to implement the changes.

We constructed many kilometres of fences with a large amount of it being single wire electric fences. This fencing has tripled our carrying capacity on the most recently purchased property. Fences are designed to control where stock graze and camp. By fencing cells to land classification and grass type you get a more even spread of manure through the paddocks. For our water supply system, we have been able to minimize the amount of pipe laid and troughs installed by using lane ways where possible and having one trough to service multiple cells. However, it is important that stock travel no more than 800 metres to a watering point, the main reason being that it helps to maintain condition. Lane ways are generally along ridges that lead to the water trough, which helps to minimise erosion.

There are a lot of grasses that are very tough and others that are very soft. The soft grasses were becoming overgrazed while the tough grasses were not being touched; hence the tough grasses became overgrown and dominant. My suggestion to everyone is to put stock into a paddock and watch where they graze first. This area instantly becomes your first cell, and it will probably have your softer grasses in it, so it needs to be treated with care.

By the strategic fencing of our valleys, slopes, plateaus and waterways we have been able to control stock movement; reducing the movement of nutrients into stock camps and
enabling better utilisation of the tougher grasses while looking after the softer more palatable grasses. Fencing according to varieties of grasses means our cells are not in the traditional wagon wheel. By fencing this way, grazing time in each cell varies depending on the dominant species, allowing the desired grasses to set seed.
If you are planning to start a fencing program, get someone to identify the grasses that are in your district, and more importantly on your farm, before you start, so you can make informed decisions about where to place your fences. I strongly recommend you fence your water courses and rivers, not to exclude stock, but to enable better stock management in these areas. By fencing the water courses it also maintains green feed with better digestibility in the drought. Our water courses still had $100 \%$ ground cover throughout the drought, even after grazing.
We have had to change the class and type of stock to suit the pasture and the livestock. We now run sheep on improved pasture while cattle that have cut 2 teeth graze the tougher grasses. It was said to me when we purchased our Borambil block that, "you will never do any good there boy, that's all red grass". This statement was correct - we could only run 25 steers on 200 acres and they lay in the shade and put on very little weight. By fencing and changing to cows (that have already cut their 2 teeth), and calves, we more than doubled the numbers and improved the quality of the pasture they were grazing. It also removed the stock camps and weeds like horse nettle, thistles, horehound and Bathurst burr. Manure was spread out through the paddocks, making the extra nutrients available to grow better grasses. Lush green patches in a paddock are a good indication that manure is being spread over the paddock. Stock were no longer allowed to walk up and down slopes, causing erosion.
Stock becomes easier to handle with smaller cells. We call our cows and they are eager to move to a new cell. We don't need dogs or horses; we handle our cattle on foot or quad bikes. It is rare for cattle to jump an electric fence, but a single electric wire allows calves that have escaped to come back under the wire. Electric fences are
good in high kangaroo areas and easy to repair when necessary. Often there is enough material in an old fence that can be salvaged and sold to build a single wire electric fence with wide spaced iron posts. Spacing of around 20 metres between posts is quite acceptable.

Our natives have kept us going through the drought, we were able to keep our stock numbers up and still had a good calving percentage but had to utilise our tough grasses by using a molasses/urea mix.
By changing our livestock, fencing according to aspect, soils and types of grasses we have been able to lift our carrying capacity, improve the quantity and quality of our native pastures, protect our waterways and survive the recent drought. These changes have been a big step towards our goal to become environmentally sustainable and to be able to hand on the farm to future generations in a better state than it was.

