

FARMER CASE STUDY

Natural Spread

Farmer:

Phil and Nicole Chalmer

Location:

Condingup

Soil Type:

Peaty soils through to deep and non-wetting sandy ridges

Annual Rainfall:

600mm

Main Money Earner:

Beef cattle

Pastures:

Kikuyu, Rhodes Grass, Tagasaste, Serradella and Subclover



Phil and Nicole Chalmer of Condingup, east of Esperance, are turning a run-down property around with the help of perennial pastures. When they arrived 10 years ago, things were so bad one of the main “pasture” species was Flatweed! A range of perennials including Kikuyu, Rhodes Grass and Tagasaste have since been planted resulting in dramatic increases in production and profit.

Kikuyu

Phil and Nicole sowed some small patches of Kikuyu soon after they arrived. It is now rapidly spreading around the farm with some paddocks almost 50% covered – without having ever been seeded. The Kikuyu is spread by the cattle – it germinates in the cattle dung after they eat the seeds from the small established patches and spread them around when they graze the other parts of the paddock. The weed free dung pads seem to provide an ideal environment for young Kikuyu seedlings.

The Kikuyu has spread onto most soil types on the farm – from winter waterlogged peaty soils through to the deep and non-wetting sandy ridges. Perennial ground cover on the sand ridges ensures that wind erosion does not occur during the summer.

Phil says the keys to increasing carrying capacity at low cost were increasing fertiliser use and having the patient to let the kikuyu spread on its own. Capital intensive pasture renovation programs were not feasible while they were building their cow herd.

Kikuyu has also been cheaply established by throwing seed out onto winter waterlogged areas in spring when water is still lying around. When the weather warms up and the surface water dries up the Kikuyu germinates in bare ground that was previously inundated in winter.

Serradella

Ten years ago there were only a handful of yellow Pitman Serradella plants to be found on the farm. It can now be found all over the farm and continues to increase in density. And this has occurred with no reseeding – just natural spread. It has responded to increasing fertiliser and, just like Kikuyu, appears to be spreading around the farm in cattle dung.

The yellow Serradella successfully co-exists with the Kikuyu. This is a win-win with the serradella producing high quality winter and spring feed while fixing nitrogen which the Kikuyu uses to supply valuable out of season feed.

Natural Spread



Kikuyu and Seradella in cow dung

The long season nature of Serradella also means it can respond to late spring rains. This lengthens the period of high quality feed.

Serradella is tolerant of Red Legged Earth Mite (RLEM) which is important as numbers can build up in Kikuyu pastures. As there is no need to spray for RLEM, the Chalmer's have reduced their exposure to chemicals while maintaining a low cost of production.

Alley Farming

The Chalmer's established a trial Alley farming system in the spring of 2001. Rows of tagasaste were established 20 metres apart with a mixture of sub-tropical perennial grasses sown in between. The perennial grass inter-row has become predominantly Rhodes Grass with some Gatton panic. Serradella has thickened up to become the major annual species.

This paddock is used strategically each summer as a special weaner paddock. It is de-stocked from early October, when the sub-tropical grasses start growing, until weaning in early January. This allows the pasture to bulk up giving the weaners quality feed over summer. Calves are introduced straight after weaning and stay there until they have eaten the perennials right down (usually April).

A benefit of de-stocking the paddock in late spring is the serradella gets a chance to reseed annually, helping to build a large seed bank.

Rhodes and Panic were chosen as the inter-row species because Phil believes they have better Spring production than Kikuyu.

Claying

The area under Alley farming was clayed before the establishment of perennial pastures. Phil believes this has greatly improved production by reducing non-wetting and increasing the water and nutrient holding capacity of the soil. Not only did it improve the germination of the sub-tropical grasses during establishment, it continues to improve the density of annual pasture each winter.

Clay was spread at 50 to 200 ton/ha (high rates on the poorest sand) at a cost of \$1/ton so the exercise was not cheap, but Phil is convinced it provides a good return on investment. He hopes to clay the whole farm eventually, starting with the deep sand ridges and paddocks to be sown to perennials.

Composite Cattle

To reduce their cost of production and to better target markets, Phil and Nicole have developed a composite cow herd. They breed their own Gelbvieh x Angus bulls and use these across their cow herd. The Gelbvieh x Angus animal is seen to be ideal with early puberty, good fertility, moderate mature size, adequate milk and optimum fat cover.

The hybrid vigour gained from composite breeding produces cows with extra fertility and longevity. At the same time, the British x European composite produces steers that excel in the feedlot phase and are in demand from the domestic market.

The Gelbvieh x Angus bulls are created using small herds of purebred Angus and Gelbvieh cows which are reciprocally mated.