

A perennial alternative to the annual “Use it or lose it”

Peter & Allana Smith, “Minvalara”, Bremer Bay, Ph: (08) 9837 1014.



Peter and Allana Smith of Bremer Bay think that if farmers north of Perth can grow perennial pastures so can they. Especially so given the likelihood of summer rain along the south coast. Historical rainfall records show they get at least 75 mm of summer rain (Nov to Feb) in 3 out of every 4 years, and 100 mm of summer rain in 3 out of every 5 years. An opportunity not to be missed!

This summer rainfall is hugely detrimental to standing dry feed. Department of Agriculture trials on Peter and Allana’s farm showed that on average 3 tonnes per hectare of standing dry feed is lost to decay by the end of January without even any grazing. The slogan “use it or lose it” was termed to encourage farmers to utilise the spring flush before it decayed before their eyes in summer. Unfortunately this is easier said than done, unless considerable hay and silage is conserved or there is access to large amounts of crop stubble.

Peter thought that perennial pastures had a big role to play turning a negative (summer rain) into a positive. He comments that historically, dry summers were usually good stock years as the dry feed remained high in quality. It was the wet summers that caused problems with the rapid decline in the quality and quantity of dry feed. With perennials in the system, the loss of dry feed in a wet summer can easily be compensated for with perennial growth.

Peter thinks perennials bring a few other significant benefits to his farming system including (a) their extra water use that will help to control rising water tables and salinity, (b) the extra ground cover that prevents wind erosion esp. during winter storms, and (c) the reduced need for extra machinery and/or land due to the higher productivity and lower inputs of perennials.

The Smith’s have now sown 4 paddocks to perennial pastures. 3 paddocks were sown in 2003 to a mix of mainly sub-tropical

grasses including Whittet kikuyu, Callide and Katambora rhodes, Bambatsi panic, Gatton panic, Splenda setaria, millet and lucerne. One paddock was scarified and then seeded in late September following a knockdown of Glyphosate and Ally in early September. This paddock received 70 mm of rain on the 30th of September which helped to firm the seedbed and produce an excellent germination. Another paddock was sprayed in early October and then seeded in the 3rd week of October using a no-till combine fitted with coulters, Walker double disc openers and press wheels. Given the conserved moisture from the heavy late September rain and the minimal disturbance another excellent germination resulted.

Both paddocks now contain an excellent density of perennial grasses. Kikuyu is gradually taking over, although the other grasses have also performed very well. The lucerne was killed by a herbicide used to control melons in the establishment year. However, Peter is not concerned about the loss of the lucerne as the sub clover component of these paddocks is excellent - fixing plenty of nitrogen for the perennial grasses.

To illustrate the productivity of these paddocks, Peter purchased a line of 127 ex-Pastoral steers in March 2005 and placed them into a paddock of perennials. The steers stayed a whole 12 months before being live exported. During that time the paddock produced an impressive 366 kg of live weight gain per hectare. Peter predicts the Gross Margin was approximately \$315/ha which compares very favourably with cropping.

Another paddock sown in 2003 was a deep sandy rise that was always prone to erosion. It did however support a good blue lupin stand. The perennials have performed exceptionally well, helping to stabilise the fragile sand and provide out of season feed. Not surprisingly the perennials look the best where the



Lush green kikuyu responding to the increased nitrogen supply under blue lupins. Photo 1 December 2005.

blue lupins are thickest. Their incredible nitrogen fixation is significantly enhancing both the growth and quality of the perennial grasses.

With a good year in 2005, the Smith's decided to sow another paddock to perennials. Given the ability of kikuyu to spread around the farm on its own, and to choke out other perennials, they decided to remove kikuyu from the mix this time. A mixture of Rhodes, Gatton panic, Strickland Finger grass and Phalaris was sown with ~1 kg/ha of each species used. Given the excellent seasonal conditions, the vigorous sub clover proved very difficult to kill, even with 2 knockdown sprays. Seeding was delayed until just after a 21 mm rainfall event in late November when the sub clover had finally died. Again the no-till combine was used to conserve moisture.

Some of the perennials germinated immediately from the ample stored soil moisture but another major germination occurred in January after heavy rain associated with two ex-cyclones. By early April the paddock had almost complete perennial ground cover and all species had established well. The successful establishment of phalaris at this time of year is somewhat of a surprise but shows what is possible with a full profile of moisture and a wet summer.

Peter is keen to include a combination of both winter and summer active perennials in future sowings to provide

insurance against winter droughts. The Gairdner area can have the odd tough winter with cool and dry conditions. He believes a temperate perennial grass that is highly winter active would provide an advantage compared with emerging annual pastures in these years, especially in early winter. He is thinking of using winter active Tall Fescue and Phalaris.

On part of that paddock Peter mixed the perennial seed with some oats to act as a cover crop. He reflects that the sowing rate of oats at 10 to 15 kg/ha was too high as there was obvious competition between the oats and the perennial grasses. In future he would either leave out the oats or drop the rate to around 5 kg/ha.

Peter concludes that perennials are a great tool in managing climate risk. Harvest rain, once despised, is now not all bad news given that the area sown to perennials is similar in size to the cropping program. And even though he suspects the productivity of a purely annual system would be superior to perennials in an above average growing season, most farmers never have enough stock to capitalise on this. But in a poor growing season, the productivity of the perennials will be superior to the annuals, reducing the need for de-stocking and/or expensive supplementary feeding. A more resilient and sustainable farming system with less risk has got to make sense.



Ex-pastoral steers profitably turning perennial pastures into 366 kg/ha of live weight gain. Photo 1 December 2005.