

CASE STUDY - *Grant Bain, Geraldton*

At the beginning of 2006, the Bain's had 900 head of cattle. Nothing out of the ordinary with the aim of selling 600 at the end of the year.

With 40 mm of rainfall in January it looked as if it was going to be a bumper of a year. The perennials sown in September 2005 shot away liked they were a seasoned crop. They were grazed for the first time 8 weeks after this rain event. However, this was the last of the rain for quite some time. In fact the whole year then only got 176 mm, a total of 216 mm for the year.

Grant and Elyssa Bain have owned Mt Michael, a property located approx 35 km south east of Geraldton for 7 years. This property has an annual rainfall of 400 mm. The drought years of 2006 and 2007 hit hard for them like it did for most farmers in the northern agricultural region. Their perennial grasses helped them get through these years and come out at the other end with ground cover, top soil and enough food for cattle.

At the end of 2005, the Bain's had approximately 500 ha of their property under sub tropical perennial grasses. By June 2006 these paddocks had as much growth to them as bowling lawns, and with 900 head feeding on them and no rain decisions needed to be made.

First step was to move 600 cows and their calves to the station country. Grant's sister Wendy and her husband Tim Pens, own a station, 'Mt Gould' in the Upper Murchison so they went there. 'Had it not been for this we would have been slaughtered' said Grant. However, this still left them with 300 head of sale cattle which they had to get through the year (and in good condition) before they could be sold. A strategy was needed to ensure cattle and paddock survival.

In a nutshell the 300 head of cattle were all boxed together and constantly moved. At this stage the farm had approximately 20 paddocks which were in the vicinity of 80 to 100 ha in size. With constant rotations the paddocks had approximately 90 rest days between grazings. 'This was enough' said Grant.

'The moisture in the ground and the little rain that did fall allowed the perennials to grow between grazings' and provide enough food for the cattle when they were grazed again.



Grant Bain examining a Rhodes grass plant

Towards the end of the season the annual paddocks were harder grazed. With less grazing during the year Grant was able to take full advantage of what little spring flush there was. This enabled the perennials to have a greater break.

These 300 head of cattle were sold at the end of 2006. The place was not cattle free though as 400 weaners and approximately 200 station sales came down from Mt Gould station. Still with no rain and the thought of getting 600 head through the summer it was going to be difficult.

Like with the previous 300 head, these cattle were boxed together and on a very tight rotation over summer and autumn. The perennials had some bulk to them as grazing had eased towards the end of 2006. When what little rain did come (a total of 300 mm for the year) the paddock resting days were stretched out once more to 90 days as the annual paddocks started growing again and could handle more grazing pressure.

At the end of 2007 the 600 weaners and Mt Gould sales were sold and the cows all came back from the station. 2008 was the break of the drought years with the property receiving 430 mm of rain with 57 mm in February which the perennials truly appreciated.

With 300 head of cattle one year and 600 the next, one would expect that the eating of the perennials to bare minimum over the drought year would have had a negative impact on the perennials. There were no negative impacts,

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Bulls grazing a sub tropical perennial grass paddock



Sub tropical perennial grasses showing the lines which need to be filled in

only good performers and the not so good.

Green and Gatton panic were the best performing and persistent grasses over the drought years. They survived the heavy grazing and the light rainfall. Patches of lucerne were also quite productive. 'Having trialled lucerne in the grass mix prior to the drought I found that the patches that did establish remained productive during the drought' said Grant.

Rhodes grass was not particularly persistent in the drought years. 'The Pioneer Rhodes which has always been a part of my mix has all but disappeared' Grant said. 'It could be because it can not handle the grazing pressure and lack of moisture over the dry years. And it may be because this cultivar has a short lifespan. The new cultivars like Finecut Rhodes grass may have a longer lifespan' explained Grant.

So where to now for Mt Michael? Grant plans on putting 80 to 100 ha in each year until the whole farm is under perennial grasses. 'Once that has been accomplished I will go back and fill in the gaps left by trials, machinery blockage during seeding and germination problems' said Grant.

'I have a sowing rate of 4-5 kg/ha with 4 kg/ha of panic and less than 1 kg mixture of Rhodes, Giant Bermuda couch and kikuyu. Rhodes is maybe between 100 and 200 g. 'Signal grass has been dropped out of the mix as I don't believe that it gives the production like panics and can't take the pounding' said Grant. 'I like kikuyu as it is a creeper. It spreads out especially in the not so good sands unlike Rhodes grass which has a habit of retreating. However its grazing potential is still debatable, but I believe it is still worth pursuing at the moment'.

Another grass Grant is trialling presently is Giant Bermuda couch grass.

Grant also plans to break his paddocks down to below 30 ha, preferably between 20 and 25 ha. The fences will be very simple - 2 wires. The bottom wire electrified at 26 inches and the top wire the earth at 36 inches. This is enough to keep the cattle in.

Grant has also taken to spraying out the broadleaves in some of his perennial paddocks. 'Annual grasses are much better than the annual broadleaves' said Grant. By taking the broadleaves out including radish and blue lupins, Grant believes that over dry summers (like the one we have just experienced) that there is enough moisture left in the ground so the perennials perform much better.

'We are now also trialling oversowing lucerne into the earlier established less dense perennials paddocks. Getting the establishment of lucerne right is critical, but when it does establish, experience has shown that it provides good productivity and is drought tolerant' explained Grant.

Looking back on the years again Grant can surely say that there is no such thing as an early break or a nuisance rain. The perennials benefit from any rain at any time. 5 mm of rain will produce some growth. 14 mm will result in good green feed. Cyclone Claire on the 12th and 13th of January 2006 was a perfect example. It allowed Grant to get through till June with 900 head of cattle, not feeding any hay, when in fact he should have had 1/3 the number of cattle over that period.

This case study is written by Sarah Knight (Mingenew-Irwin Group) as part of the Perennial Pasture Companions Project supported by Caring for our Country.