

The “Planned Grazing” Approach

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Gatton Panic has been a standout performer on deep well drained sandy soils. Photo 17 may 2007.

Rob and Tasma Harper of Dandaragan believe their sub-tropical perennial pastures have at least twice the carrying capacity of standard annual pastures. They suspect that if the whole farm had been planted to perennials they wouldn't have had to reduce stock numbers at all during the extremely tough 2006 growing season.

The Harpers farm the 5,000 hectare “Velyere” in conjunction with “Carnegie”, a 400,000 cattle station 300 km east of Wiluna.

They first sowed sub-tropical perennial pastures in the spring of 2003. Two 25 hectare paddocks of Evergreen Mix were established in a conventional manner using 2 knockdown sprays before sowing in early September using a combine fitted with knife points and press wheels. The establishment was excellent given the mild spring and some summer rainfall.

Rob is keen to expand the area under perennial pasture but believes “conventional” establishment techniques are too expensive. He thinks the 12 months lost production while the perennials establish is a huge hidden cost that many people underestimate. This comes on top of seed and spray costs.

Instead, he is mixing seed with a mineral lick he gives to his cattle in the hope they will spread it around in their dung. The results so far from only one 25 kg bag of seed have been most encouraging with a lot of new perennial plants popping up around the farm. They appear to be mainly Gatton Panic.

On the strength of this he has added more seed to his current mineral lick so that it now makes up 10% of the lick. A range of species have been added including sub-tropical grasses, lucerne and chicory. The seed component of the lick cost \$2,500 and enough of the lick has been made to ensure perennial seeds will be distributed to every paddock on the

farm. It will be interesting to see how effective this method of perennial pasture establishment is over time.

The lick is the Coleby Mix which contains Dolomite, Copper Sulphate, yellow dusting Sulphur and Seaweed meal. The lick is always available to stock but Rob says mature cows don't eat much (except when in certain paddocks) while young cattle love it.

Traditional cattle breeding and finishing has been replaced with a backgrounding enterprise since the purchase of Carnegie Station in 2006. Young pastoral weaners will be trucked down to “Velyere” for growing out before being sold to either the live export or feedlot sector. The summer calving pattern at Carnegie fits neatly with the winter / spring grow out phase at Dandaragan. Calves will be weaned and trucked down to the farm after mustering at Carnegie during June. The calves will be approximately 6 months old.

Rob uses what he calls “Planned Grazing” to manage all his pastures. This involves very big mobs, short graze periods and long rest periods. Rob has run 1,500 cows with their calves in



The planned grazing system also encourages other perennial species such as Evening Primrose. Photo 17 May 2007.

one mob, and regularly has 500 to 1,000 young cattle running together. Paddocks are grazed for 3 to 5 days at a time and then rested for a minimum of 120 days. A paddock is therefore grazed at most only 3 times a year.

These very long rest periods should be very conducive to seedling recruitment of perennials. The 4 month rest period should give the plants that germinate from seed in the cow dung enough time to establish before being grazed. Once established, the long rest period will also allow these plants to regularly flower and set seed. This seed has the potential to produce new plants around the existing plant. Based on observations during the wet 2006 summer, Gatton Panic is the species most likely to multiply in this manner.

Extra fencing and water infrastructure is required to make “planned grazing” work. Rob uses 2 wire electric fences that radiate out from central watering hubs, allowing one water trough to supply up to 8 paddocks. Rather than investing



Recruitment of new seedlings around an existing Gatton Panic plant. Photo 17 May 2007.



Across the fence - annuals vs perennials. Photo 17 May 2007.

heavily in extra water tanks, Rob purchased bigger pumps and pipes, believing this to be a more economic way of getting water to such large mobs. New water troughs will have two 50mm inlets to ensure they fill rapidly and stock never run out of water.

Rob hasn’t used fertiliser for a number of years and is, instead, trying to increase soil organic matter and nutrient recycling to maintain soil fertility. He aims to have the cattle eat one third of the available pasture, trample a third, and leave the remaining third. By trampling some of the pasture in to the ground, the build up of soil organic matter and the rate of nutrient recycling is enhanced. The very large mob sizes are critical in achieving the trample effect but Rob also says cows are much more effective trampers than young cattle. Young cattle are more selective in their grazing habit than cows and he suspects they trample very little of the pasture. This may have long term implications for soil fertility. For this reason, a

cow herd may be re-introduced to “Velyere” in the near future to breed bulls for use at Carnegie Station.

The Harpers have noticed a few other positive changes in and around their existing perennial pasture paddocks. There appears to be less run-off, less waterlogging and a lower water table on one of the perennial paddocks which they assume is a result of increased water use by the perennials. There is always more ground cover and a firmer soil surface in the perennial paddocks. Interestingly, they have observed more bird and insect life in the perennial paddocks, hopefully the sign of a healthy ecosystem.

As an overall goal the Harpers want to add as many perennial species and as much diversity to their system as possible. Rob is pleased to see Evening Primrose thriving in one of the perennial paddocks, is excited about trying the native fodder shrub Rhagodia, and would use native perennial grasses if the seed was available. He likes to think they are developing a “regenerative” agricultural system where perennial pastures and soils thrive and are constantly improving. It’s a worthy goal and it appears they are well on their way to achieving it.



Across the fence - annuals vs perennials on deep sandy soils. Photo 17 May 2007.