

Case Study – Economic Strategy #1

Case Study: Eric, Wendy, Luke and Karissa Harvey**Coping with a variable climate: Making the most from every drop of rainfall****Dubbo, in Central West NSW**

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Australia's climate has always been variable, no more so than the last decade. Eric, Wendy, Luke and Karissa Harvey are key members of a four generational family farm operation near Dubbo, in Central West NSW who are adept at managing their land across a range of climatic conditions often occurring in the one year.

The Gilgai's is an aggregation of some 2800ha and holistically managed with a strong focus on soil health, replenishment of biodiversity and leading edge regenerative farming and grazing practices; profitable, regenerative for the land and also good for the people.

The family also takes immense pride in producing healthy and nutritious quality grassfed beef and lamb direct to the consumer. This is a thriving new and value added enterprise and which captures additional benefits for their Holistic approach to management. The farm is home to the growing of cereal crops, native hardwoods and eucalypt Mallee, and grazing of a 300 cow simmental beef herd and 2000 fine/superfine merino ewes.

However it is the grazing management approach taken by the family that has allowed them to both survive and prosper through the last decade of unreliable rainfall. A focus has been placed on the maintenance of ground cover, a capacity to design their production around nature and a strong focus on native pastures.

Strategic grazing management has been applied, in the form of planned recovery periods, to ensure that the desirable perennial plants obtain the required recovery between grazing. During the driest periods up to 200 days between grazing has been required in order for the desirable perennial plants to have recovered sufficiently for their next grazing. This long recovery period, coupled with a focus on improving soil biological health, has enabled the farm to retain a remarkable level of ground cover, surface mulch and improve its overall number of species evident. Good animal numbers and performance levels have been able to be maintained, even though long dry periods.



Eric Harvey, with a range of meat packs that are marketed direct to the end user across eastern Australia, a new and thriving business. (Photo courtesy of The Land newspaper)

When good rainfall has been achieved, which has often been in storm events, the soil surface has been well covered. This has had the effect of slowing water movement down and allowing it all to enter the soil where it falls. With the long recovery periods being applied, even small rainfall events have created significant paddock feed, far more than would be possible under set stocking or shorter recovery periods. During these periods of rapid plant growth, a shorter recovery has sometimes been possible for periods of time.

In order to allow this grazing management to occur large paddocks have been subdivided into smaller ones, creating significant numbers of paddocks of varying size. Small mobs have been amalgamated into one large mob, which is moved across the farm in a planned way, except for the lambing to weaning period, when set stocking occurs. Cattle and sheep are generally run together.

Animals are moved through each paddock, the time they stay is dependent on feed available, the size of each paddock and the growth rate of the plants. One eye is kept on the period the plants will need to recover before their next grazing, and the paddocks ahead of the mob examined to make sure they will provide sufficient feed for the stock when their time for grazing arrives.

In this way greater control has been gained over paddock feed supply, and the capacity to budget the feed ahead on the main mob has been gained.

Over the last 10 years fencing and water developments have been significant, however funding from the Central West CMA and use of low electric fencing has kept costs down.

It has been the stretching out of these recovery periods to up to 200 days in very dry periods that has allowed perennial plants to be able to grow, develop significant leaf mass and also for the important below ground root mass to expand.

A further consequence of this form of grazing is that:

Regeneration of native grasses has been measured, even during drought. The ground is always covered and significant mulch covers the soil surface all year round, shading the soil surface from extreme heat and also capturing every drop of rain that falls. It is an ideal seed bed. Studies have identified more than 130 varieties of native grasses, forbs and shrubs on the Gilgai's, along with a range of bird species and native animals.



Mulch covers the soil surface at the Gilgais

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Feed ahead can be planned and budgeted for in "days". In 2009 when it became apparent that plants were not growing fast enough to have recovered in their allotted recovery period between grazing, weaners were sold in early December. This allowed the remaining feed to be stretched out longer, a far more economic approach than commencing feeding.

Paddock feed that is not grazed is trampled, allowing for nutrients to be returned to the soil and a new layer of mulch to be established. This pulse of nutrients has also many soil health benefits and a very biologically active soil is evident on the Gilgai's.

The last decade has seen a large variation in climatic extremes on The Gilgai's. The longer recovery based grazing management techniques being practiced has allowed for a significant improvement in land health to be measured. It has also allowed for stock numbers to be maintained, through dry periods with no feeding and has allowed the Harvey Family to maintain their direct meat marketing business, capturing significant value adding from their management.



The main mob recently grazing on the Gilgai's, after a terrific 2010 season

For further information: www.gilgaifarms.com.au

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