Cell Grazing — a producer's perspective

ROBIN SPARKE
'Wirranda', Moura, Queensland, Australia

The challenge for the grazier is to manage the resources available to him/her in such a way that the land and the pastures remain healthy while at the same time the business remains healthy financially. Current thinking has tended to the use of outside energy as a quick fix to many of the symptoms that only become evident as a result of 'misuse' over time. The transition from high quality pasture to less palatable grasses and forbs will first become evident around the water points but will already be having a detrimental effect on productivity and this leads to a lower gross margin for the enterprise.

The concept of short graze periods and adequate rest for the pasture to recover is relatively new in this country. However, it has been practised in areas of similar climate such as Africa and the United States for a much longer period. There are now many examples of a reversal of degradation and a return to healthier ecosystems.

On 'Wirranda', our decision to change the way we operated was a direct result of hearing Stan Parsons speak at a one-day seminar and the later attendance at a *Ranching for Profit* course also conducted by Stan. At that stage, we were already trying to come to grips with our declining productivity and the increasing incidence of poorer types of grass especially in our older developed areas.

The early establishment of some GRASSCheck sites has allowed us to monitor the changes in pasture composition and productivity in the first cell established on 'Wirranda' and enthuse us enough to completely re-fence and re-water the whole property. I will give the following comparisons between 1994 and 1998. No doubt the seasons had a part to play.

Correspondence: R. Sparke, 'Wirranda', PO Box 77, Moura, Qld 4718, Australia.

Rainfall at 'Wirranda' has been: 1990–623 mm; 1991–465 mm; 1992–561 mm; 1993–434 mm; 1994–590 mm; 1995–716 mm; 1996–758mm; 1997–794 mm. However, I am quite certain that it has taken more than just the seasonal turn around to produce the following set of figures. Table 1 indicates the change in ground cover that has occurred.

Table 1. Changes in ground cover at 'Wirranda' from 1994–1998.

Frequency of sites with :	1994	1998
< 50% Ground cover	60	5
> 90% Ground cover	8	30

There have been significant changes in % pasture composition. Figure 1 indicates the change in species composition of the pasture. A biodiverse pasture is developing with increasing proportions of bluegrasses and legumes which were virtually non-existent 4 years earlier. These more desirable species are replacing the undesirable wiregrass.

In parallel with the improvement in desirable species, there has been a significant increase in yield and subsequent stocking rate as indicated in Table 2.

Table 2. Changes in pasture yield and stocking rate at 'Wirranda' from 1994 to 1998.

	1994	1998
Estimated yield (kg/ha)	1800	3500
Stock days per Ha removed	100	292
Stock days per Ha/100mm of rainfall	18.6	36.5

Every GRASSCheck site has shown an increase in desirable perennials and ground cover but the increases have been greater in the cells than in the continuously grazed paddocks.

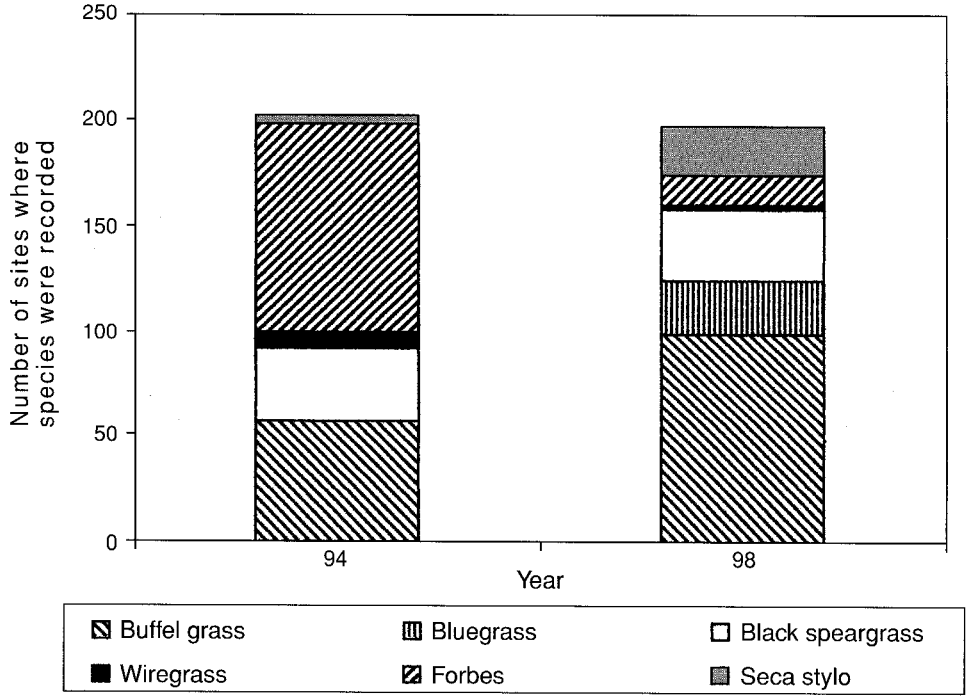

Figure 1. Changes in pasture composition at 'Wirranda' from 1994 to 1998.

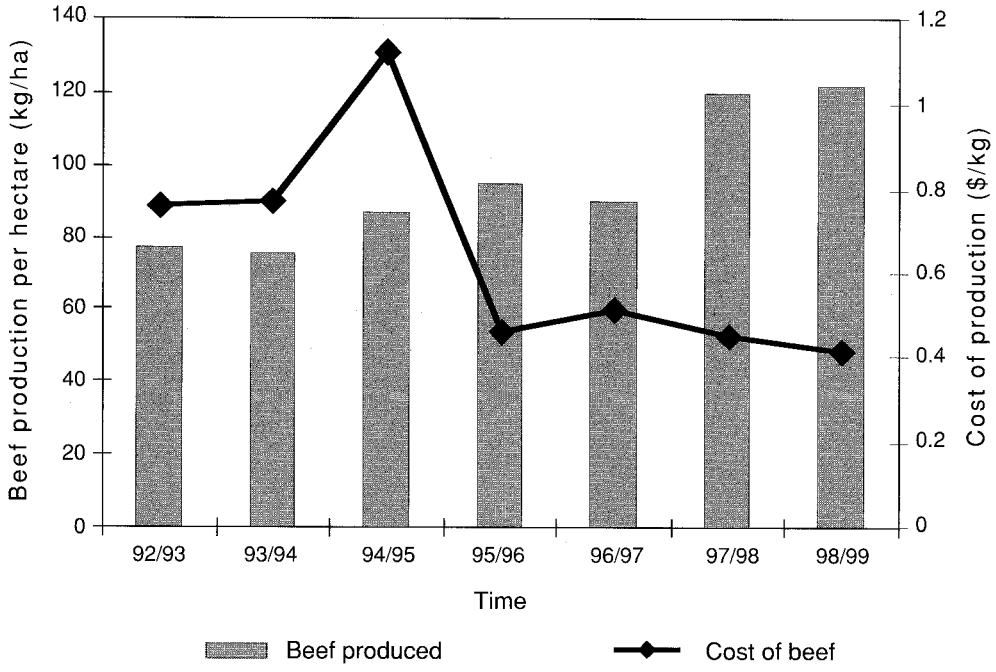

Figure 2. Beef production and cost of production on 'Wirranda'.

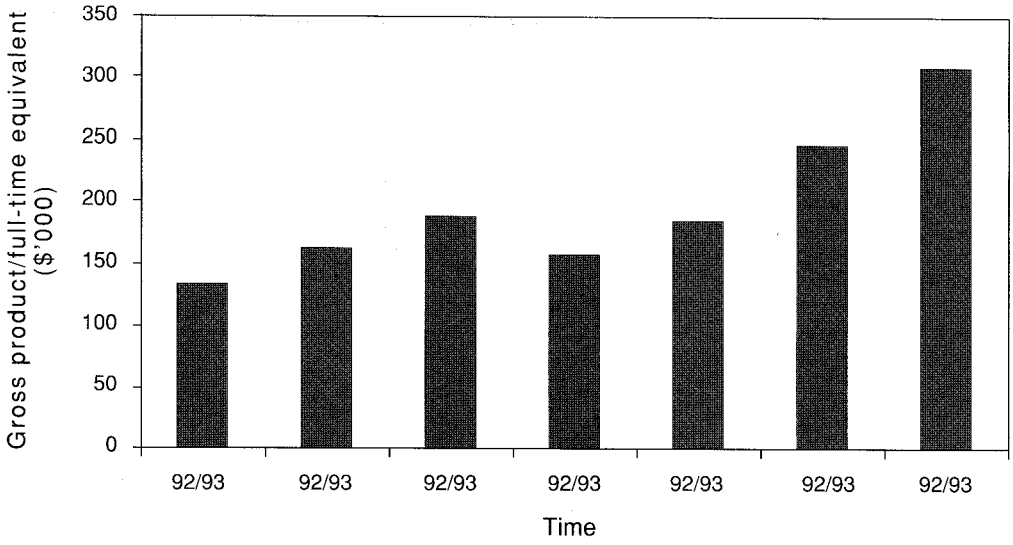

Figure 3. Gross product per full-time labour equivalent at 'Wirranda'. Production in years 1992–1995 inclusive was distorted to a greater or lesser extent by forced sales and large feedlot sales.

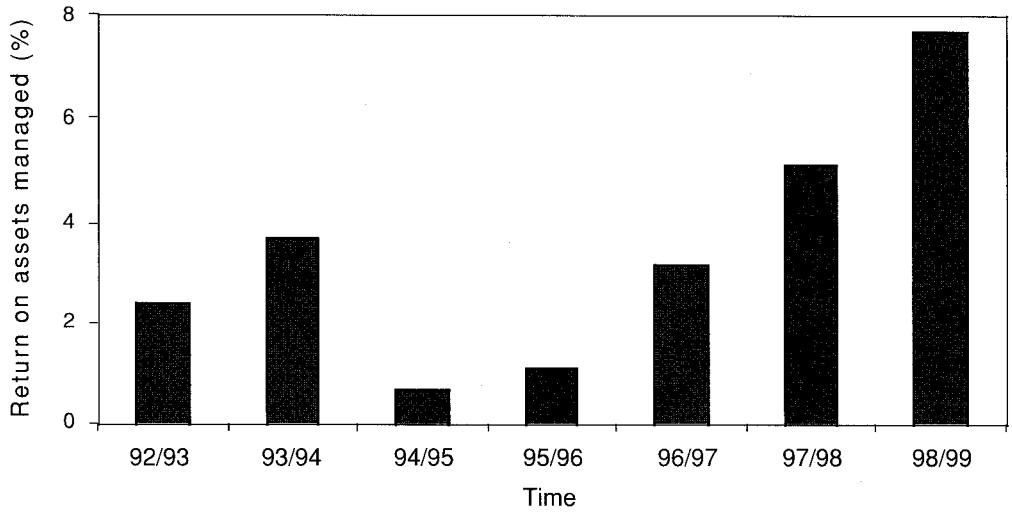

Figure 4. Return on assets managed for 'Wirranda'.

Effects of greater grass production on economic sustainability

- Firstly, greater grass production has led to increased beef production, which in turn has led to a significant fall in cost of production per kilogram of beef as shown in Figure 2.
- Through the ability to handle more livestock with similar labour, our labour efficiency measured by gross product per full-time equivalent, has increased substantially as shown in Figure 3.
- Overall management of the business has improved. The return on assets managed, *i.e.*, how well we manage our assets, has increased significantly as shown in Figure 4. Increase in beef prices in 1998/99 would have played a part in the dramatic rise, but the main driving factor was increased cattle numbers due to better seasons and higher carrying capacity generated by improved grazing management. Prior to Cell Grazing, our carrying capacity was about 28 beast days/ ha/100mm rainfall. This figure has now risen to 45 beast days/ha/100 mm and is approaching 70 beast days/ha/100 mm in some paddocks.

In conclusion, about half a million dollars has been spent on development over the last 8 years. Half of this expense was to increase water storage and distribution that the drought showed to be inadequate. The result has been extra carrying capacity, equivalent to the purchase of another million dollars worth of land. I attribute much of the increase in productivity to Cell Grazing. Cell Grazing has doubled our productivity and further increases are possible as degraded areas around old waters recover from years of misuse.