

IMPROVED PASTURES FOR BEEF CATTLE

John Brooker
"Futter Park"
Harden. NSW

INTRODUCTION

"Futter Park" is a property of 5000 ha situated in the South West Slopes region of NSW. Rainfall is predominantly winter and spring with an annual average of 612.5 mm. The country is mostly grey and red granite, undulating to hilly, lightly timbered with grey box, gum and kurrajong trees.

The property is carrying 10 DSE/ha and 600 ha is cultivated for annual crops. The livestock enterprise is made up of two thirds merino sheep and one third beef shorthorn cattle while the farming comprises 300 ha grazing oats, 150 ha grain only oats and 150 ha of lupins.

THE BEEF CATTLE ENTERPRISE

The "Futter Park" herd is a purebred commercial shorthorn herd comprising 1250 breeding cows which includes 250 two year old maiden heifers, that are performance tested on their first calf, and 100 top bull-breeding cows that are also performance tested. Calving is in July-August and steers and surplus heifers are sold at 12 to 15 months of age.

To run this number of cattle in this area, which is very likely to have dry autumns and hard winters, fodder conservation must play a major role in the overall system. Ideally we plan to put away 1000 tonnes of silage annually, hopefully for long term storage, as well as 1500 or more large round bales for short term requirements. To run an efficient beef cattle enterprise I consider it is of the utmost importance to be able to feed the breeders and replacement heifers through any dry time and keep them at home rather than sending them on agistment. The short term monetary advantage in sending cattle away is generally more than outweighed by the many problems incurred, especially calving percentages which can drop by up to 50%.

The steers are generally fattened on grazing oats, with grain also being available through self-feeders. We have the facility to feed 500 head in a feed-lot if necessary but would only use this in a bad year. The yearling bulls and herd bulls are generally hand fed through winter using hammermilled hay, oats, lupins and concentrates.

PROPERTY - HISTORY AND LAND TYPES

The property is well improved having had 2.5 to 3 t/ha of superphosphate spread over it since 1953. It has also had good pastures sown down using various methods as described below.

Although the topic of this paper relates to pastures for beef cattle, the pastures we have sown are dual purpose catering also for sheep.

Three different types of country make up the total area:

1. Arable (2000 ha) - Best farming country where over 80% of a paddock can be cultivated.

2. Marginally Arable (1000 ha) - Country with some rocky outcrops, steep slopes and gullies; in some cases only 60% of the paddock can be cultivated.
3. Non Arable (2000 ha) - Hill country that cannot be cultivated by conventional means.

THE PASTURE PROGRAMME

1. Arable - The farming operation on this land has changed considerably during the past five years. Since the 1982-83 drought our stock numbers have increased and consequently so has the feed requirement. Once wheat played a major role in the system. Now it is not grown at all. Our change to meet the needs for grazing and feed grain coincided with the downturn in wheat returns. This made the decision to turn to extra dual purpose crops a more attractive proposition.

The rotation now used is:

3 to 5 years lucerne & subclover pasture
 2 years oats
 1 years lupins
 2 years oats
 Back to lucerne & subclover.

With our cows calving in late winter, we are looking for good autumn and winter feed the following year on which to wean the calves. We do this in two ways - firstly, country coming out of the pasture phase, which is chemically fallowed in late spring, and the country coming out of lupins are sown to Cooba oats as soon as weather permits (i.e. from the middle of February on). Secondly, the area sown to oats the previous year is locked up as soon as it rains after harvest. We get good self sown feed from this while waiting for the new oats to establish. This country is then sprayed with a knockdown herbicide in May and sown with a grain oat, such as Echidna, or prepared for sowing of pasture in early spring.

A lucerne and subclover mixture is now sown on this better country leaving the perennial grasses to other areas. As the main feed shortage in this region occurs during winter we are tending to sow a more winter-active lucerne such as CUF 101 to help cover this deficiency. Although this type has a shorter lifespan than others it lasts long enough to fit into our programme.

2. Marginally Arable - Most of the paddocks in this category have been sown to pasture for more than ten years and are very well established. The main mixture in these paddocks is Woogenellup subterranean clover, Australian phalaris, Currie cocksfoot and Victorian perennial ryegrass. Hunter River lucerne was sown also but has been eaten out by stock and aphids. Haifa white clover has also been tried; it is easy to establish but will not persist.

We find the mixed pastures in these paddocks are ideal for running the breeding herd. Where possible we rotate them ahead of the sheep to give them the necessary bulk.

Some of the longer established paddocks have become dominated by phalaris and have had to be resown. The system we use is to take two crops of oats off then sow them down. A similar pasture mix to the original is used except Sirolan phalaris and June or Seaton Park subclover are added. Hunterfield lucerne, or a similar cultivar, is sown, which gives a good balance to the pasture for the first few years until the rest of the species become more established.

3. Non Arable - Although we are unable to cultivate this country by conventional means we have successfully established pastures comprising the same mixture as the group above. Some paddocks that have been sown for a number of years are even more productive than the conventionally improved lower country.

This type of country covers a large portion of the property and having it well improved has made a big difference to the overall production of the enterprise. We are able to use this area for all aspects of the beef production system, including fattening of steers etc. The method used to establish pasture on this hill country has previously been documented (Brooker, 1987)

GENERAL MANAGEMENT

The basic principle we use in managing the pasture system for the marginally arable and non-arable country is to try and keep them well balanced between perennial grasses and legumes. Areas that have become dominated by phalaris and cocksfoot do not produce as well, and accentuate the risk of grass tetany. Although we are not worried with bloat in our shorthorn herd, clover dominant pastures will not produce enough bulk of feed to carry cattle through the drier months.

Soil testing is carried out periodically to monitor fertilizer requirements and pH levels. As a general rule 125 kg/ha of single superphosphate is spread by air every second year; 0.04% Mo super is used every fourth year.

The better country that is under grazing oats or sown to lucerne is our main fattening area. Weaner steers are run on grazing oats until the end of August, when the paddocks are shut up for grain. They are moved onto lucerne to be topped off and sold by the end of November.

An area of lucerne is set aside each year for silage and hay production. We try to get a first cut of silage in early October, then we generally get a good second cut of hay in late November. Most years we are able to make good pasture hay from our clover and phalaris paddocks as well.

CONCLUSION

The profitability of a beef cattle enterprise is only as good as the pasture on which it runs.

REFERENCE

Brooker J.R. (1987). From weeds of high fertility to productive pastures. Proceedings 2nd Annual Conference, Grassland Society of NSW, Orange, pp. 75-78.