

**Pastures for Prosperity —  
Proceedings of Dairy Forum:**

**Pastures are the basis of a  
competitive dairy industry**

## Pastures for prosperity — Dairy forum.

### 1. Development of a low-cost temperate pasture system

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This paper has been written to illustrate how important utilisation of pastures is to the Dairy Industry's long-term profitability. Although we do not directly refer to tropical pastures in this paper they are an important component of our system. We use temperate pastures to complement the low-cost tropical pasture system.

#### Farm statistics

Dellas and I are the fourth generation to farm at Chambers Flat. We own 144 ha, but only 100 ha is used directly for milkers, dry stock and heifers.

About 50 ha is used for irrigation and cultivation, which is irrigated from the Logan River. The remaining areas are kikuyu or rhodes grass which are dryland. It should be noted here that our irrigated area is not good lucerne country.

Dellas and I are assisted by my daughter, Linda, and another labour unit, called Robert. Each of us has direct responsibility for different aspects of the farming operation. This system works well.

#### The change in attitude

In 1992, Linda and I attended a seminar on ryegrass and clover, run by QUF Milk Supply. We were interested in what we heard but I thought we better check it out first hand. An opportunity arose where I was able to go to Victoria and, while I was there, I attended a farm discussion group and walked a couple of farms. This allowed me to see first hand the grazing at the

3-leaf stage in practice. On returning to Queensland, I was convinced that I needed to alter my pasture management of temperate pastures.

Additionally, I was concerned how static my income was, despite increasing milk production. If ryegrass costs me \$900/ha, the following must be true.

Pasture consumption (t/ha)	Cost (c/kgDM)
5	18.0
8.5	10.5
12.0	7.5
15.5	5.8

Based on the above figures, the message was simple. **Utilise as much ryegrass as I possibly could!** The following gives some background to the system prior to the change in attitude toward grazing management.

#### The system prior to Winter 1992

We started planting ryegrass on March 20. All paddocks were cultivated, which extended the planting period, resulting in some paddocks being planted as late as June.

Our milk production dipped significantly during autumn due to an extended feed pinch and consequently herd reproductive efficiency suffered.

I planted 39ha and the first grazings did not start until mid-May. The milkers' diet at this time would be kikuyu and rhodes grass for 12 h and ryegrass for 12 h. This system would continue until mid-June, when the milkers would graze ryegrass for 24 h.

With different stages of ryegrass planting, most of the early planted paddocks were rank at the first grazing and the cows tended to waste them. Additionally, I was very inflexible as I tended to stick on a 20-day rotation despite the conditions.

**Table 1.** Achievements since 1991 and our target for 1995.

Period	Milk production April 1–Oct 31	Pasture consumption	No of cows milked	Grain fed to milkers	Area irrigated	Silage cut
	(l)	(kg/ha DM)		(t)	(ha)	(t DM)
Winter 91	341 473	—	130	—	—	—
Winter 92	393 289	8 300	135	111	39	63
Winter 93	562 280	14 300	135	167	32	97
Winter 94	523 860	11 700	140	180	32	48
Winter 95	630 000 <sup>1</sup>	16 800	150	135 <sup>1</sup>	36	112 <sup>1</sup>

<sup>1</sup> Targeted figures for 1995.

By mid-spring, I had a lot of pasture on hand. Milk production increased to 22 l/cow/d. This was very pleasing. However, this had a cost. We had to slash after most grazings to maintain feed quality. That kept us all very busy!

### Description of the system today

We now plant on March 20, just like before, but instead I use a direct drill to sow the ryegrass. We cover 30 ha in 5 weeks. We plant either straight Concord or a Concord-white clover mixture.

I start the first grazing on May 1, even if the first few paddocks are not quite at the 3-leaf stage. If you do not start early enough, it gets long and rank before you catch up with the milkers. The grazing rotation is likely to be 20–25 d during winter. By early spring, the rotation is sped up to 18 d and by mid-spring it has increased to 12 d. By mid-spring, the ryegrass system is producing more feed than the cows can eat. Options available are cutting silage, or following with heifers and dry stock.

Table 1 sets out our achievements since 1991 and our target figures for 1995.

Milk production increased significantly from Winter 1991 to Winter 1993 due to a change in grazing management strategy.

The pasture consumption (utilisation) increase of 72% was due to a number of factors. The major ones were a decrease in the amount of irrigated area with a corresponding increase in stocking rate, and the beginning of silage making from spring surpluses.

Grain inputs were increased but not to the detriment of pasture utilisation. I was more flexible with grain usage, in that I used it as a tool to extend the rotation in mid-winter and reduced it to 2 kg/cow/d when pasture surpluses occurred.

Pasture consumption and milk production were slightly down in 1994. Several factors contributed:

- We got distracted building a new hayshed in March. This delayed planting by 2 weeks which lost me a lot of potential DM production and consequently reduced milk production; and
- Restricted water particularly in spring 1994 meant we could not irrigate as frequently as needed. This reduced the amount of silage cut.

### Management practices required to achieve high pasture utilisation

We have found that the following management practices are needed if a high level of pasture utilisation is to be achieved:

- plant reasonably early;
- plant using minimum cultivation;
- plant quickly (within 5 weeks); and
- feed silage to bridge the autumn gap.

The above will enable you to grow more DM/ha.

- plant extended-life biennials with high rust resistance (Concord is ideal);
- start the first grazing sooner rather than later;
- be flexible with your rotation lengths; monitor the growth rates and adjust accordingly; and
- be flexible with your management of resources. Options include silage making, use of dry stock and heifers and reduction in grain inputs. The silage round baler has been a major factor in allowing us to increase pasture consumption.

Other major factors are:

- irrigation frequency is vital to extending the life of ryegrass into spring;
- train your cows to eat grass;
- recognise substitution; and

- give the correct allocation of feed by strip grazing and scoring pastures.

#### **Situations to avoid**

- Mulching ryegrass to maintain quality results in a worn out mower, tractor and farmer.
- Believing that higher production per cow can be achieved by growing a large bulk of feed is incorrect. A cow can eat only so much dry matter in a day; therefore, offer quality not a huge quantity.
- Do not go to the other extreme. If you keep ryegrass too short and adopt extremely fast rotations, it can be absolutely disastrous. Use the principles of how ryegrass and clover grow as a guide to your grazing management decisions.

#### **Conclusion**

Grazing ryegrass at the 3-leaf stage has been adopted by a number of farmers in northern New South Wales and south-east Queensland.

An increase in utilisation from 5 t/ha DM to 14 t/ha DM represents a reduction of 3 c/l on input costs. On my farm, this represents an extra \$16 500 profit per year for really little more effort.

The ryegrass and clover system requires 3 basic things: flexibility in management decisions; monitoring of what is going on with regular farm walks; and access to a round baler for silage, which allows you to transfer surpluses of ryegrass and clover from spring to the autumn gap, and to ensure a smooth transition from tropicals to temperates.