Grazing management
Part 2

This article is the second in our series on grazing management. These articles contain information from 'EverGraze Exchange - Grazing management systems explained' www.evergraze.com.au

In our last issue we discussed the types of grazing systems; continuous grazing, set stocking, rotational grazing and intensive rotational grazing. There are pro's and con's for each system.

In this article we will look at tactical grazing management with examples from NSW, Orange Reseach site.

To use grazing management in a tactical way, it is necessary to understand the growth and development of different pasture species, so the desirable species can be promoted and undesirable species can be reduced.

For example, improving a degraded cocksfoot pasture was best achieved with summer and autumn rests in the NSW Central Tablelands.

The benefit comes from allowing the plant to replenish carbohydrate reserves, to set seed and for seedlings to germinate and grow.

It is important to watch and manage the plants in your pasture as the timing may change from area to area and from season to season.

In fertilised native pastures on the NSW Tablelands, competition from annual grasses and clovers can be high through early spring. Heavy grazing at this time can increase the persistence of the native grasses.

Livestock systems that have increased demands in spring (e.g. spring lambing) can help to achieve increased grazing pressure at this time.

Grazing management can be used to maintain a healthy pasture primarily from resting pastures, but also from exerting grazing pressure at key times. Resting or reducing grazing pressure at appropriate times will:

- maintain ground cover that reduces erosion, improves moisture infiltration, increases root growth and encourages the persistence of perennials;
- maintain higher minimum Food On Offer (FOO) (e.g. 1000 to 1500 kg DM/ha) that improves the regrowth of perennial grasses by maintaining them in Stage II;
- allow desirable perennial and annual species an opportunity to set seed (e.g. late spring) and recruit new plants (e.g. seedlings germinate after suitable rain through summer or autumn).

At other times heavy grazing may be required:

- to open up the pasture to allow sub clover to establish and improve flowering; or
- to reduce the dominance of less palatable species.

Grazing systems with high levels of subdivision may reduce nutrient transfer to sheep camps and uneven or patch grazing. Although, patch grazing is detrimental in the over-utilised areas, it can be beneficial as it also provides under utilised areas that allow species that are less tolerant to grazing but have high biodiversity value (e.g. native forbs).

For grazing management to successfully improve pasture composition:

- there needs to be an adequate level of the desirable species present;
- the fertility of the paddock needs to be suitable for the species that is being encouraged; and
- the correct seasonal conditions are needed.

Change in pastures and nutrient transfer will generally take several years to occur.

Matching feed demand to forage supply

Optimising stocking rate is essential for a profitable grazing business as stocking rate is related to the production of meat or wool per ha, which in turn is related to profit per hectare.

Feed budgeting can be used to plan forage supply and match it to livestock demands.

Feed budgeting involves assessing the amount of feed in the paddock (kg DM/ha), potential pasture growth and livestock demands for a defined period.

Livestock demands are related to the type of animal, their size and physiological state. For instance, a dry ewe requires 600 kg green DM/ha whereas lactating ewes require 1000 kg green DM/ha with a single lamb and 1600 kg green DM/ha with a twin lamb.

Pasture production varies throughout the year and animal demands or numbers can be adjusted to match feed supply.

Different pasture types (e.g. introduced temperate perennial, fertilised native and unfertilised native) vary in production (Fig 1). Unfertilised native pastures have a longer period of lower growth through winter, due to a lack of annuals species, and it is this period which most limits carrying capacity.

Animal production systems should have peak demands or numbers during spring to utilise as much of this forage as possible (e.g. ewes lambing in early September with lambs sold as weaners before pasture production and quality declines in summer, Figure 2).

In this example with 5 ewes/ha, pasture growth was not sufficient to meet the animal intake in late winter, but generally enough feed was grown in autumn to cover this gap. Supplementary grain feeding occurred when pasture availability was low, which generally corresponded with several months of below average rainfall and /or with low temperature during winter.

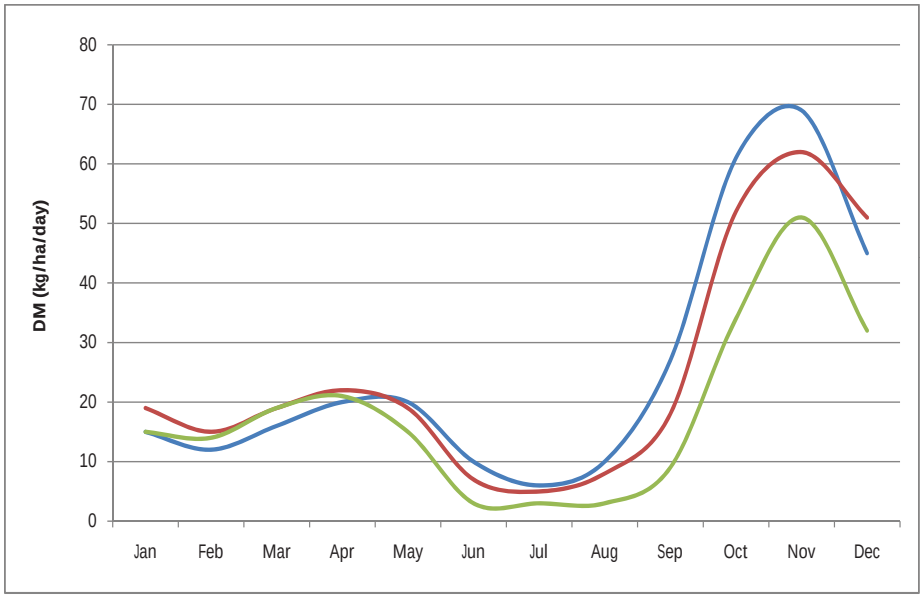

Figure 1. The growth curve for an introduced temperate pasture (blue line), a fertilised microlaena, wallaby grass, sub clover pasture (red line) and microlaena, wallaby grass pasture (green line) on the Central Tablelands of NSW.

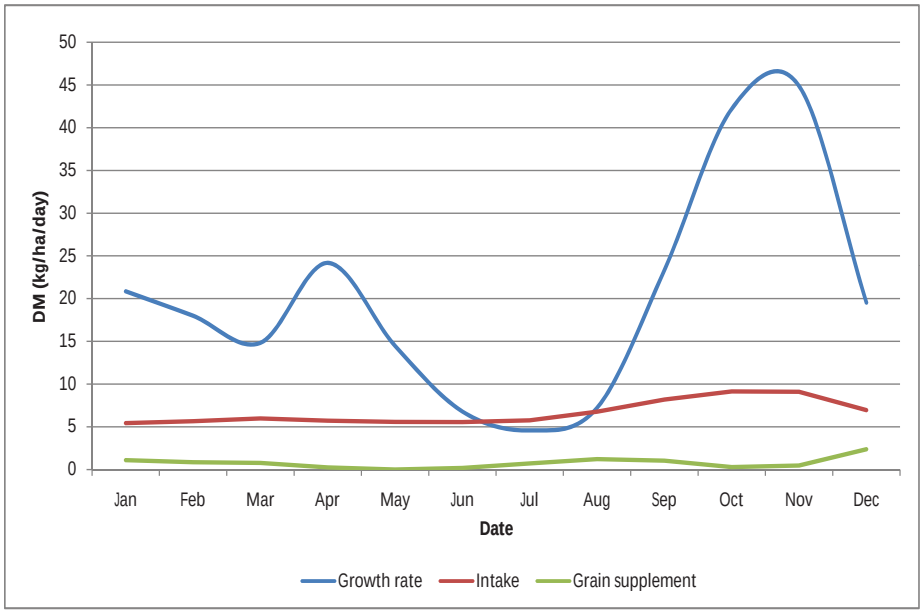

Figure 2. Average pasture growth, animal intake and grain supplemented for an August lambing Merino ewe x terminal sire system run at 5 ewes/ha on a fertilised native pasture at Panuara on the Central Tablelands of NSW.