

Grazing management

Part 1

This article is the first of a series on grazing management. These articles contain information from the EverGraze Exchange - Grazing management systems explained.

In this article we will look at the different types of grazing systems and the importance of grazing management.

As explained in Christine Jones article grazing management affects pasture growth which in turn affects soil health. But there are other factors which also need consideration when determining what grazing system is right for you.

Things to look at include;

- What is profitable?
- What is best for my soils?
- Do I have erosion problems?
- Do I have weed problems?
- What meets my livestock's needs?
- What would be the most productive for me with the grass species I have on my farm?
- What ensures I will be farming sustainably into the future.

Grazing systems

There are many different grazing systems used across high rainfall areas of southern Australia. There are pluses and minuses for all systems.

First we need to look at the different types of grazing systems, which are summarised below.

Continuous grazing

Animals are grazed continuously on the one area of land and are free to choose which pasture species to consume. More palatable species can decrease while less palatable species often increase.

Set stocking

Grazing occurs continuously in most paddocks most of the time, however, some paddocks are rested seasonally (e.g. a greater area of the farm is grazed through winter and less through spring) or for various management reasons (e.g. hay production or for high quality forage for lambs to be weaned onto). Stocking rates can vary between grazing periods to match pasture growth and animal intake.

Rotational grazing

In these systems, livestock are rotated between paddocks, so that each paddock is grazed and then rested. The length of the rest period is determined by pasture growth and availability or can be a fixed period of time.

Intensive rotational grazing

Intensive rotational grazing is also called Time-controlled grazing, Cell grazing, high intensity short-duration grazing or block grazing. This is a rotational grazing system with a large number of paddocks per mob (>20 paddocks). Stocking pressure is high and animals are rotated from one paddock to the next at short intervals (1 to 7 days) to promote even utilisation of pasture.

Grazing management

Grazing management involves complex interactions between plants, soil and livestock. A basic knowledge of what plants there are in the paddock, how much fodder is present, the impact of livestock on pasture and the effect of pasture on livestock, are needed to understand how different grazing systems work. Grazing management can be used to manipulate animal performance, pasture composition and soil health depending on the intensity and frequency of grazing. The flexibility in grazing management increases as the number of paddocks per mob increases.

The timing of the grazing and rest periods is important. Grazing management should not be a rigid time-based system, rather livestock movement should target particular management issues (e.g. annual weed control, seed set of desirable species or animal requirements).

Meeting animal requirements

Grazing management can be used to manipulate the quantity and quality of available pasture for grazing animals.

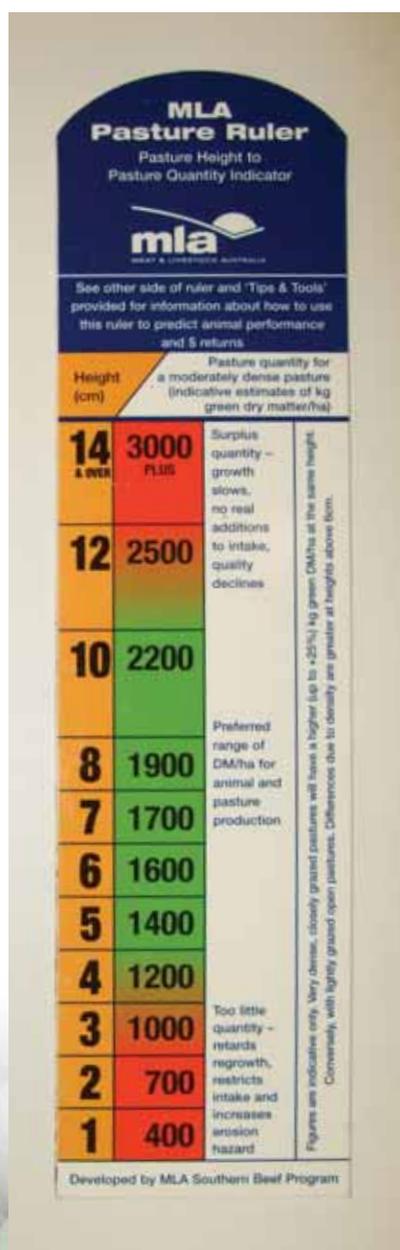
Intake (i.e. the amount of pasture animals are able to consume per day) is one of the most important factors that affect livestock production.

Once Feed On Offer (FOO) or herbage mass falls below a certain level, animals are unable to consume enough to meet their requirements.

Intake for sheep is severely limited when FOO is below 800 kg DM/ha and for cattle below 1200 kg DM/ha.

Below these thresholds, pastures are short and it is height which limits intake.

The MLA pasture ruler is a good guide for determining the amount of pasture available.



Digestibility

Pasture quality is influenced by digestibility and the proportion of legumes in the pasture. Digestibility is the proportion of the forage consumed which is used by the animal for its nutritional requirements. The higher the digestibility, the more benefit the animal gets from the forage. When digestibility is high, the feed consumed moves quickly through the rumen and intake is greater.

Digestibility is influenced by the species present and the stage of plant growth. As plants mature, from actively growing shoots to fully developed plants with seedheads and again further to dry standing feed, they decrease in quality.

Legumes are important because they have higher digestibility and protein than grasses and livestock can have a greater intake for the same level of FOO or herbage mass.

If animal requirements are high (e.g. lambing ewes, or growing lambs) then pastures with higher digestibility and FOO are required for optimal production.

For instance, dry sheep require a minimum FOO of 600 kg DM/ha at 68% digestibility whereas a twin bearing lactating ewe requires 1500 kg DM/ha at 75% digestibility.

Grazing management can be used to move animals to new paddocks before pasture drops below critical benchmarks and quality declines.

Rested pastures should have higher levels of green leaf and legume which improves the quality, making it suitable for animals with higher requirements.

If paddocks are locked up for too long then pasture becomes rank and quality declines.

Dry periods

Through dry periods rotational grazing can be used to ration green and dry feed, improve utilisation and reduce wastage provided the quality of dry feed is not too low.

Animals show strong preference for certain plants, but this selectivity decreases as stocking density increases. Animals can be forced to eat lower quality forage and if these animals have low requirements (e.g. wethers or dry cows) then production may not significantly decrease. This means animals with low requirements can be used to consume rank feed.

After a rest period, regrowth of higher quality pasture will be available for livestock with higher requirements, provided soil moisture is adequate for growth.

Animal health

Grazing management can also be used to manage animal health problems. Animals may be introduced to fresh pastures with a lower worm burden after drenching; sheep can be introduced to pastures previously grazed by cattle because the larva does not cross between species.

In contrast, high stocking densities may facilitate the spread of some diseases between animals (e.g. footrot and OJD).

Other production efficiencies can be gained from the manner in which different animal classes graze. For example, sheep and cattle may be grazed together. Cattle cannot graze pasture as low as sheep. Sheep are more selective avoiding tall rank areas or undesirable species. Sheep select a higher quality diet than cattle.

In our next article we will look at how to maintain healthy pastures and healthy soils with grazing management.