AIMS

Grazing Management Fact Sheet 2

Managing plants to increase pasture growth rate

Why

Pasture growth is one of the main factors that influences livestock productivity and potential stocking rate.

The ability to measure pasture growth rate allows you to identify and manage areas of the farm that differ in productivity, prioritise areas for inputs, evaluate the response to inputs, and plan appropriate stocking rates and grazing periods.

What

Grazing management is the process of controlling the interaction between plants and livestock. By controlling the time plants are exposed to animals and then rested, pasture growth can be increased.

One of the keys to achieving maximum pasture growth is managing the grazing process to ensure that overgrazing of desirable pasture plants is minimised.

How

Maintaining pastures with herbage mass between 1,500 kg (4-5 cm) and 4,000 kg (15-20 cm) DM/ha will optimise potential regrowth and ensure the maintenance of healthy perennial grasses with vigorous root systems.

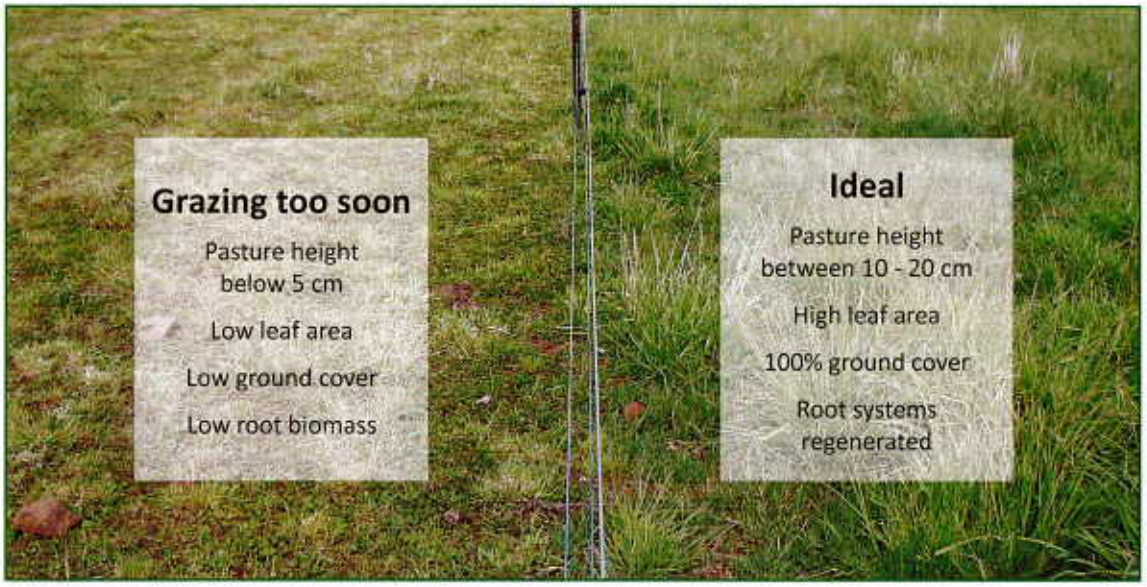
This is the second in a series of four fact sheets designed to provide a guide to increase pasture production and potential carrying capacity and at the same time improve the health of your land resource.

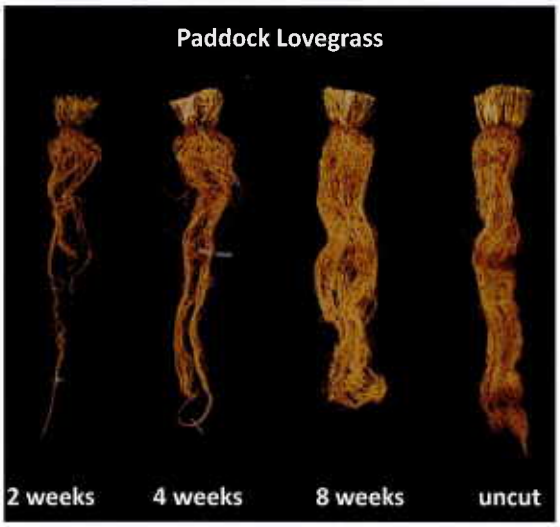
The effects of having pastures grazed below 1,000 kg DM/ha or allowed to grow to more than 4,000 kg DM/ha are listed in the diagram below.

Change in pastures is continuous and occurs one plant at a time. Maintaining the health and vigour of those desirable plants in the pasture by controlling the grazing is critical to enhancing the production of the pasture and livestock.

Allowing sufficient time between grazing events for the most palatable plants in the pasture to regenerate leaf area and root biomass, is essential to maintain these plants in the pasture and maximise the herbage produced.

When the most palatable pasture plants are frequently grazed below 5 cm, their root biomass is reduced, the plants are weakened, and over time, numbers are reduced. The pasture is then susceptible to less desirable species increasing their presence because they are largely ignored by grazing animals.





The other key to managing plants for increased pasture growth is allowing perennial grasses, in particular the desirable species, adequate time to regrow to the ideal herbage mass target of 1,500 – 4,000 kg DM/ha.

With perennial grasses, what you see in leaf material above the ground is reflected in the root biomass below the ground. The frequency of grazing has a significant impact on the root biomass of perennial grasses. The paddock lovegrass plants (left) were cut to 3 cm height every 2, 4 and 8 weeks for a period of 12 months and the plant on the right was uncut. Cutting plants every 2 weeks reduced the root biomass by half compared to cutting every 4 weeks, which was half of those cut every 8 weeks. Uncut plants had about 30% more root biomass than plants cut every 8 weeks.

Allowing sufficient time for perennial grasses to regenerate leaf area and root biomass is critical to achieve the productive potential of pastures.

During periods of high pasture growth, leaving at least 4-5 cm (approximately 1500 kg DM/ha) of green leaf will allow grass plants to regrow using energy from photosynthesis and will result in more rapid pasture growth. In this scenario recovery periods of around 30-45 days should be adequate during periods of fast growth in most circumstances in Northern Tablelands pastures.

Plants grazed below 5 cm height will need to draw on root reserves to drive regrowth of leaves. This process requires a relatively longer time period for leaves to regrow but more importantly for the plant roots to regrow.

Above: Cattle about to move onto a well recovered pasture leaving an ideal amount of residual herbage.

Tools to assist in measuring herbage mass, calculating pasture growth rate and developing a grazing plan are available for download from www.aimsag.com.au and navigating to software.

AIMS

Northern Rivers
CATCHMENT MANAGEMENT AUTHORITY

Authors

Lewis Kahn & Judi Earl

Contact

Judi Earl
T 0409 151 969
E judi@aimsag.com.au

Design by Kàren Zirkler.