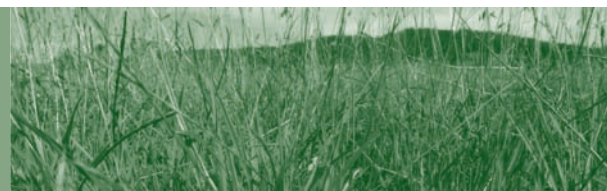


tips & tools

NATURAL RESOURCE MANAGEMENT



Intensive rotational grazing

Intensive rotational grazing systems involve livestock being moved frequently through a large number of paddocks, based on either a fixed time rotation or pasture growth.

Stock are moved frequently (every 1–3 days) through a large number of paddocks (up to 20 or 30) in intensive rotational grazing systems. Common names for intensive rotational grazing systems include high density grazing, short duration grazing, block and strip grazing, planned grazing and cell grazing.

Tactics

Plant growth based rotations generally capture the most benefits of rotational grazing. Getting the correct rest period (length) for the particular pasture mix, livestock enterprise, grazing objectives or targets is important. Rotations should be planned around the growth patterns of the most desirable species in the pasture, considering that some grow more actively in different seasons.

Slow pasture growth (winter and summer)

When pasture growth is slow, increase the rest period (ie slow down the rotation) to maximise leaf area for pasture regrowth. Feed should also be rationed in periods of slow growth. To optimise animal production, it is better to have a relatively consistent feed supply throughout the dry season (even if at a reduced level), than for animals to have an early excess followed by dramatic feed restrictions. Avoid the temptation to speed up the rotation (by reducing grazing and rest periods).

Rapid pasture growth (in spring or after an early break)

When pasture growth is rapid, reduce the grazing period by speeding up the rotation, to maintain pasture at a relatively constant amount and high quality (leafy with high legume content). Rest periods should be 14–21 days during active spring growth. Drop paddocks out of the rotation if grazing pressure is not sufficient to keep pasture mass below 3,000kg DM/ha. These paddocks

Key benefits

- Implementing rotational grazing based on pasture growth can maximise pasture and animal productivity.
- Flexible rotational grazing based on plant growth can boost pasture utilisation.

can be made into silage, hay, or left as 'standing hay' for either grazing during summer or as a source of litter to help build soil organic matter.

Grazing method facts

Grazing method has the potential for a 20% increase in total pasture growth. More flexible rotational grazing that is based on plant growth criteria is better able to increase pasture growth than simple time-based rotations, with the biggest benefit from a boost to pasture utilisation.

In general, rotational grazing favours perennial species; continuous grazing favours annual species, including clovers.

Rotational grazing generally provides a less consistent animal intake than set stocking. This can reduce the performance of individual young animals. Intake is highest when the stock first enter each new paddock. Selective grazing is dramatically reduced under intensive rotational grazing systems.

There are three types of rotational grazing, based on stock movement decisions:

Time (calendar) – uses fixed time intervals for stock movement. The number of paddocks usually dictates the grazing and rest periods.

Plant growth – aims to keep pastures in the most active growth stage by manipulating graze and rest times based on the feed on offer, pasture regrowth phase or leaf stage.

Animal intake – provides a calculated amount of feed per animal per day. Pasture feed on offer can be either ‘rationed’ over periods of restricted pasture growth, or maximised to enable optimal livestock performance.

Overgrazing

Overgrazing occurs when perennial plants are grazed while using stored energy to grow, resulting in plants that are unable to grow to their potential and will not persist, especially when moisture stressed.

Overgrazing can occur in two ways:

- **Graze period too long** – when animals are allowed to graze re-growing plant leaves within three days during fast growth periods
- **Rest period too short** – when plants are not allowed to recover fully from the previous grazing before leaves are eaten and stored energy reserves are replenished

Management tips

Cattle numbers

Supplying additional livestock is often the biggest cost when more intensive grazing systems are developed. An alternative to purchasing is agistment or contract growing.

Number of paddocks

In principle, the more paddocks the better – the grazing period becomes shorter and more intensive, while the rest period can be longer, improving management flexibility. In general, the more paddocks, the higher the stock density. While this can be beneficial for pasture utilisation, the potential for overgrazing may be greater, particularly when plant growth is slow or restricted.

Grazing large mobs on small areas promotes more even grazing and reduces selective grazing, stock tracks and camps. Following rest, the whole pasture sward consists of fresh growth, with minimal rank and/or dead material.

Skills and labour

Producers who have implemented rotational grazing report reduced labour requirements and an increase in livestock supervision. Stock can be trained so it can take around 10 minutes to move flocks and herds and check the livestock and water system.

A high intensity rotation requires well developed pasture and livestock monitoring skills. The system can to

degrade rapidly at high stocking rates, particularly if rest periods are not well matched to plant needs.

Key decisions in rotational grazing systems

In planning and operating rotational grazing, managers make decisions on four key areas:

Rest period – the re-growth and recovery time between grazing.

Rest enables pastures to grow and restore energy reserves before the next grazing. When pasture growth is slow, the rest period needs to be longer. When pasture growth is fast, the rest period can be shorter, but generally not less than three weeks.

Graze period – the animal grazing time (hours or days) before moving to the next paddock.

Shorter graze periods are best for consistent animal performance, reduced species selectivity and to prevent animals grazing plant regrowth.

Grazing intensity – the number of animals per hectare in the paddock being grazed.

Rotational systems have a high grazing intensity that improves pasture utilisation. However, too much intensity affects animal performance, pasture re-growth and ground cover goals, and makes monitoring more critical to prevent pasture damage.

Rotation length – the number of days it takes stock to move around all paddocks in the system.

Rotation length is determined by the number of paddocks multiplied by the graze period of each. In effect, for high intensity rotational systems with many paddocks, the rotation length and the rest period are very similar. The relative importance of each component depends on the grazing management objectives – maximising animal performance or increasing perennial grass persistence. Rest and graze periods need to be flexible and varied throughout the year, based on changes in pasture growth and livestock requirements.

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Further information

For further assistance contact your local pasture or livestock advisor, or go to www.mla.com.au/publications to search for other MLA publications on grazing and pasture management.



Level 1, 165 Walker Street
North Sydney NSW 2060
Ph: 02 9463 9333
Fax: 02 9463 9393
www.mla.com.au