



Tactics for Tight Times

Managing ryegrass pastures

During these tight times manage your pastures so you can get the most out of them.

- ✓ **Continue to monitor and adjust rotation length to the current growing conditions.**
- ✓ **Aim to graze pastures after the 2 leaf stage, and as close to the to 3 leaf stage or at canopy closure – whichever comes first (approximately 2500kgDM/ha)**
- ✓ **Aim for grazing residuals of 4–6 cm between the clumps (1400–1600kgDM/ha).**
- ✓ **Combining both will allow you to grow the most pasture possible given the tight times**

Maximizing home grown feed consumption is well proven to improve farm profit and cash flow by reducing supplementary feed costs and/or increasing milk production. Two key techniques to assist in reducing feed costs are managing ryegrass and establishing a feed wedge. If implemented well these management techniques can increase the amount of pasture grown now and into the winter ultimately reducing supplementary feeding costs.

This fact sheet highlights ryegrass management through the winter. Establishing a feed wedge is covered in the [Building a feed wedge](#) fact sheet.

Ryegrass management

There are two key concepts for ryegrass management.

1. Aim to graze pastures after the two leaf stage, and as close to the to three leaf stage as practical, or at canopy closure – whichever comes first.
2. Aim to keep post grazing residuals to 4–6 cm height (1400–1600kgDM/ha/ha) in between clumps. If clumps build up (>30% of paddock area) consider mechanically removing.

Aim to graze ryegrass pastures at canopy closure or as close to the three leaf stage as possible.

This maximises the potential growth of the pasture. Leaves are solar panels – harvesting the free sunlight and turning it into valuable feed. After a grazing event the ryegrass regrowth starts slowly, but as it produces more leaf the growth rate steadily increases. Research demonstrates that the third leaf on a ryegrass plant is up to 40% heavier than the second leaf yet it takes the same number of days to grow – so getting out towards the three leaf stage is a key to optimising pasture growth (and reducing expensive supplement requirement). A dense healthy pasture at the three leaf stage is often about 2500kgDM/ha in late autumn/early winter.

If grazing occurs after the three leaf stage or beyond canopy closure, the bottom leaves decay and die and the pasture in the base of the sward will become stemmy and less palatable. Future pasture density and yield may be compromised as lower amounts of light reach the base of the ryegrass plant, reducing the production of the daughter tillers required to build pasture density.

Canopy closure is the point at which you can no longer see any soil through the pasture sward. At this point the pasture is capturing maximum sunlight so there is no gain in delaying grazing. Other signs of canopy closure include yellowing in the base, stem elongation and eventually production of

non-viable aerial tillers (leading to pasture thinning). Also, at canopy closure pasture quality will start to decline as a result of both older leaves dying (being shaded out) and the base of the plant becoming stemmy. Canopy closure can also lead to greater wastage and post grazing residuals being above desired target levels. With new ryegrass cultivars and nitrogen use, pasture can often reach canopy closure prior to the three leaf stage.

Continue to monitor and adjust rotation length to the current growing conditions to achieve maximum growth rates without compromising pasture quality.

Rotation lengths can be established using the leaf emergence rate (days for one leaf to regrow) for the time of the year. Leaf emergence rates are highly influenced by temperature.

The following table provides a guide to the leaf emergence rates and the applicable rotation length.

Month	Leaf emergence rate (LER) days to 1 leaf	Rotation length (days) to achieve 3 leaves
May	13–15	39–45
June	15–18	45–50
July	18–20	50–60

With a late autumn break every effort should be made to allow pastures to reach a minimum of two leaves prior to grazing with a slow rotation (40–50 days) in place so that pasture cover is building towards three leaves. It is tempting to graze earlier but waiting for a minimum of two leaves will lead to higher pasture growth and reduced supplement requirement.

As the days shorten and the weather cools off the rotation length will need to be extended. If you can push out towards a 50–60 day rotation it will get you to the end of July. From late July, depending on growing conditions, you can come in to a 30–35 day rotation to get you to early September. From this point a clear improvement in pasture growth rates should be seen.

Extending to a 50 day rotation will create some short term feed deficits and this will provide a challenge where feed reserves are low and cash flow is tight...however every attempt should be made to lengthen the rotation. Nothing grows grass like grass. You must have grass to intercept light and convert this light energy into pasture biomass.

Balance your grazing rotation with seasonal conditions and your calving pattern. If you dry off all or most cows and destock the farm for a period in winter, you may be able adopt a more aggressive grazing strategy now. If you milk cows through winter make sure to plan for the feed demand from pasture in winter.

Keep post-grazing residuals to 4–6 cm height (1400–1600kgDM/ha) in between clumps. This maximises pasture regrowth and plant persistence.

Over grazing (grazing pastures to below 4 cm) significantly affects pasture regrowth. The plant draws on the energy reserve stored in the bottom 4–6 cm to kick-start the regrowth after the leaves (solar panels) have been removed during a grazing event. If overgrazed, a smaller first leaf is produced. This flows on to cause smaller subsequent leaves and less dry matter for the next grazing event. Overgrazing also encourages weed invasion and reduces pasture persistence.

Avoid back-grazing as this also reduces regrowth. If cows are allowed to eat the small leaf that is emerging after the initial grazing event, energy stores are depleted and regrowth slows. A portable strip-fence is the best method to minimise back grazing. When growth is slow in winter cows should only be allowed to graze the same area (paddock) for about 2–3 days and one day only in spring.



Figure 2. Ryegrass post-grazing residual height (Second knuckle height or 5 cm).



Figure 3. Overgrazed pasture – residual less than 3 cm

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