

The Second Grazing Rotation – The Art of Successful Compromise!

By Mary Kinston

Maximising milk production this season and setting the farm up for a good mating season within a grass based system is reliant on achieving a good second rotation. This is important because the second rotation will determine the quality of pasture on offer for subsequent grazing rotations and also coincides with the delay in a cow achieving her maximum intake (2-3months post calving). This is longer than the delay in reaching peak milk yield and results in a loss of body condition score in early lactation. For most, the second round of grazing will generally start sometime in early April. The aim of grazing management during the 2nd rotation is to obtain a “balance” where the cows are adequately fed with a rising plane of nutrition, yet the swards are well grazed in order to maintain a high level of pasture quality. In essence, this balance (otherwise described as good grass management) is far from easy, and ‘an art of successful compromise’ between several conflicting requirements of the pastures and the animals. Essentially one eye must concentrate on the pasture whilst the other eye focuses on the cow. Achieving a correct balance is often your greatest challenge so that pasture isn’t wasted and quality lost by focusing solely on the cow, or by becoming over-zealous about low post-grazing residuals so that intake and performance of the cow is substantially compromised. Pasture is a variable feed i.e. feed quality, so the use of feed wedge and target pre and post grazing yields needs to be applied for the second rotation. Using these tools to their greatest effect will result in swards with a high leaf ratio and ultimately feed quality. Fundamentally we are dealing with two important principles at this time. 1. Maintaining high quality pasture by achieving post-grazing residual levels of 3.5-4.5cm and no higher than 5cm. The importance of pasture quality has been published by Moorepark researchers on numerous occasions.

Essentially a 5.5% increase in leaf content increases digestibility by 1-unit. A 1-unit increase in organic matter digestibility (OMD), increases intake by 0.2kg and in turn milk yield by 0.24kg milk per cow per day. This is significant if you consider how a small increase in sward quality e.g. a sward with a OMD of 83% against a sward of 78%, potentially will increase intake per cow by 1kgDM and milk yield by 1.2kg. So managing grass for quality has its benefits for the cow. Fundamentally this is important because this practice maximises the total amount of nutrients ingested (total kilos and nutrient content of every kilo).

2. Optimising the quantity of pasture on offer using suitable pre- and postgrazing yields. Target pregrazing yield is calculated using the following equation; $\text{Stocking Rate} \times \text{Grass intake per cow} \times \text{Rotation Length} + \text{Residual}$ e.g. $(3.5 \text{ cows/ha} \times 17 \text{ kg DM/cow/day} \times 20 \text{ days}) + 50 \text{ kg DM/ha residual} = 1240 \text{ kg DM/Ha}$. Using this tool alongside the feed wedge allows you to fully feed stock on pasture by preventing the sward from becoming too short (<3cm) and limiting dry matter intake and milk production. It’s important to note that intake per cow can be reduced by;

- Offering a low pasture mass of below 8cm of sward height.
- Rapid defoliation of grass to a critical level by a large number of stock due to a low pasture allowance per day e.g. not enough grass plus supplementary feed offered, or a small area on offer e.g. paddocks which are too small

So practically what management practices need to be implemented to maximise cow performance during second rotation?

Pasture Focus + Cow Focus

- Weekly farm walk, calculating average pasture cover, using feed wedge with target pre-grazing yield
- Maintain grazing residuals to 3.5-4.5cm and no higher than 5cm. Monitor with plate meter or sward height after grazing



- Achieve an average pasture cover of 350-500kgDM/ha at the beginning of the second rotation to maximise pasture quality
- Don’t let average pasture cover fall below 300kgDM/ha available, to avoid penalties on pasture growth
- Aim for rotation lengths of 18-21days from mid/late-April onwards unless pasture cover is low and feed deficit prominent
- Offer swards of leafy pasture with low stem and dead material proportions. If cover is greater than 2000kgDM/ha cut it for silage
- Take note of paddocks where residual levels have risen >5cm, and target for silage or topping to reestablish pasture quality
- Avoid grazing cows on pregrazing covers of < 8cm or grazing to residuals of < 3cm to avoid penalties in grass intake. Increase supplementation if grass cover is low
- Cows with body condition scores of <2.75 or with compromised intakes e.g. lame, to be preferentially fed or milked Once A Day
- Increase paddock size if expansion in herd size is now limiting grass intake

