How do you manage to maintain grass quality?
Grass naturally wants to get out of the vegetative growth stage, produce a stem, a seed head and reproduce, so it is difficult to maintain ME levels as the season progresses.

The aim: Keep the plant in vegetative growth stage, prevent build up of stem and dead material in the sward.

Set stocking vs. rotational grazing
To achieve good managed grazing we need to have control of the pasture and therefore be able to adjust grazing pressure to suit pasture growth rate.

Potential benefits include:
• Increased grass production
• Extended grazing season
• Increased stocking rates
• Reduced input costs (fertiliser and supplementary feed)
• Increased growth rates
• Increase resilience of pasture allowing it to cope with drier and wetter conditions
• Gain the ability to ration grass to stock during periods of slow growth

Grazing terminology
Kg DM / Ha
The weight of dry feed per hectare of land which is available for stock to graze
Sward measuring stick
Tool which converts quantity of grass in sward into Kg DM / Ha
Grass covers
Measure of grass quantity on field, typically quoted figures are 1500 – 3000 Kg DM / Ha
Average farm cover (AFC)
An estimation of average grass covers across the farm in Kg DM / Ha
Residual
Quantity of grass left behind in sward after stock have moved onto next paddock, typically approx. 1500 Kg DM / Ha
Rest period
Time period between grazings, this will vary throughout season depending on grass growth rates but typically 21 to 28 days
Rotation length
Rotation length is determined by the rest period plus the time taken to graze one paddock

The Solution
Rotational grazing is a method of controlled grazing where stock are allowed to graze an area for a set amount of time before being moved into fresh grass. By having multiple areas or paddocks to graze, the stock will get a continual supply of high quality grass before returning to the first paddock.
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Grass naturally wants to get out of the vegetative growth stage, produce a stem, a seed head and reproduce, so it is difficult to maintain ME levels as the season progresses.

What is pasture quality?
Pasture quality describes its nutritional value. This is a combination of the portion of the diet that can be digested (digestibility) and is directly related to the energy that can then be used by the animal (Metabolisable Energy ME). High quality pasture contains more usable energy per unit of Dry Matter, and because it passes through the rumen quicker, livestock can eat more of it.

Pasture quality is determined by the proportion of leaf, stem and dead material in a sward. Young leaves have the highest nutritive value, followed by stem, with dead material having the lowest energy value.

Plant growth stages and % digestibility

<table>
<thead>
<tr>
<th>Growth Stage</th>
<th>% Digestibility</th>
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<tbody>
<tr>
<td>Mature leaf</td>
<td>75%</td>
</tr>
<tr>
<td>Mature stem</td>
<td>60%</td>
</tr>
<tr>
<td>Dead material</td>
<td>45%</td>
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Why does grass quality matter?
Nutrition is a strong driver of productivity, and therefore profitability. To help keep costs low, there is a need to minimize the consumption of costly feeds, such as silage and concentrates.

Metabolisable Energy (ME) is the amount of energy in a feed available for use by an animal.
- Higher ME of grass = more energy available for animal performance
- More grass the animal can eat

A Twofold Benefit
Example of lamb growth rates on pasture of 3 different energy levels:
- Increasing ME by 2 points increases growth rates by 180%
- Livestock performance and nutrition is driven by Kg dry matter intake
- Stock don’t eat centimetres of grass they eat Kg of dry matter

The aim: Keep the plant in vegetative growth stage, prevent build up of stem and dead material in the sward.

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Field 1
- 9 ME grass
- 30kg Lamb DLWT gain
- 100g/day

Field 2
- 10 ME grass
- 30kg Lamb DLWT gain
- 185g/day

Field 3
- 11 ME grass
- 30kg Lamb DLWT gain
- 280g/day

Field 1: 10 ME grass Field 2: 10 ME grass Field 3: 11 ME grass
Weaning Principles Actions

Match grass supply with nutritional demand of stock throughout grazing season by adjusting allocation.

Rotational Grazing – Key Principles, Actions and Targets to help you grow and utilise high quality grass.

**Understand**

**Optimum Grazing Zone**

- Use QMS pastures to find grazing zones that best suit your farm's conditions.

**Plate meter to get an understanding of**

- Use a QMS sward measuring stick or QMS ewe and cow timelines to understand point in cycle and requirement for breeding stock (extract below).

**Use QMS ewe and cow timelines to understand point in cycle and requirement for breeding stock**

- Most ewes tupped by day 25.
- Golden 20 days.
- Lambing – Replacements.
- Mid or late lactation ewes.
- Finishing cattle.
- Late lactation cows.
- Mid-pregnancy ewes or cows.
- Growing lambs.
- Flushing ewes or cows.
- Early lactation ewes.
- Growing cattle.
- Lactating ewes and cows need up to 15% of liveweight in water per day.
- Cross wires create 8 divisions and can be opened at either end.

**Cross wires create 8 divisions and can be opened at either end**

- Ensuring there is a supply of high quality grass and drive animal performance:
  - An 8 paddock system gives a 3 day rotation.
  - This allows the grass 21 days rest between grazings.

**Fencing suggestions**

- Ewes and lambs require 3 wires.
- Cows and calves require 2 wires.
- Young cattle require 1 wire.

**Maintain quality throughout summer by reducing the grazing area.**

- During times of high grass growth rates shut up high performing paddocks and cut for silage.
- The will reduce the rotation length and ensure stock are grazing within the optimum zones.

**Continuity of Feed Supply Throughout Grazing Season**

- Make sure to monitor your farm's grass supply and silage availability regularly.

**Temporary Electric Fencing**

- Blue plastic water pipes laid across the surface following the fence lines is an easy temporary solution.

**Water pipe laid along central fence line and is connected to 2 large troughs which supply all 8 paddocks.**

**Maintenance**

- Always leave a 4cm residual.
- Use QMS ewe and cow timelines to understand point in cycle and requirement for breeding stock.

**Use QMS ewe and cow timelines to understand point in cycle and requirement for breeding stock**

- These will reduce the rotation length and ensure stock are grazing within the optimum zones.

**Cross wires create 8 divisions and can be opened at either end**

- Hydrant style fittings in pipe allow for quick connection.

**Always leave a 4cm residual**

- Large centrally positioned troughs can supply multiple paddocks for the season.

**Small water troughs can be moved with stock from paddock to paddock**

- Under feeding in last 35 days will cap essential to feed to maintain BCS.

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