

UNIT : THE GROWING ANIMAL – GRASSLAND MANAGEMENT

INTRODUCTION

Grass is potentially the cheapest feed available – a key issue in store cattle systems where keeping feed costs down is one of the main keys to profitability and a major consideration for finishing cattle if feed prices continue to rise. The availability and quality of grazed grass can vary widely and good management is essential in order to capitalise fully on its potential, especially if it is to form a significant part of the finishing animal's diet.

THE POTENTIAL OF GRASS

Grassland can easily meet the nutritional requirements of store cattle growing at up to 0.75kg / day but, with very good grazing management in well maintained and reseeded grassland, weight gains of well over 1kg / day and enough gain in body condition to finish animals without supplementing their diet are a realistic target.

Only in the mildest parts of the country and with careful management during the late summer to spring months can grazed grass alone suffice for store cattle even, but in collaboration with an effective silage or hay making system the needs of growing and finishing cattle could be met all year round. An eye needs to be kept on costs, particularly silage making however, and alternative feeds and forages considered where appropriate.

Target Liveweight Gains at Grass

| Breed / Type | Sex | In their first season (kg/day) | In their second season (kg/day) |
|-------------------|---------|--------------------------------|---------------------------------|
| Suckled calves | Heifers | 0.95 | 0.85 |
| | Steers | 1.10 | 0.90 |
| Dairy bred calves | Heifers | 0.75 | 0.85 |
| | Steers | 0.85 | 0.90 |

PASTURE TYPES

Grasses – for the highest levels of grass productivity and good animal performance, ryegrass pastures maintained by tight grazing in summer and reseeded as necessary should form the basis of the animal's diet.

Legumes – white clover has a huge role to play in growing and finishing cattle systems, supplying the higher quality diet required and the nitrogen that will boost the yields of grass and save on fertiliser bills.

| | Perennial ryegrass | White clover | 'Weed' grasses |
|---------------------------|--------------------|--------------|----------------|
| D Value (Digestibility) % | 65-75 | 75-82 | 60-70 |
| Crude Protein % | 15-20 | 25-30 | 10-15 |
| Relative intake | 100 | 130 | 80 |

PASTURE MAINTENANCE AND IMPROVEMENT

Finishing cattle pastures, in particular, need a great deal of care and good management if they are to remain productive as achieving the best animal intakes and performance from grass can often mean that the grass is under-grazed in summer as farmers have been wary of losing growth by making the animals graze harder.

Reseeding – provides opportunities to

- Capitalise on the attributes of improved varieties
- Improve grassland quality and palatability
- Reduce fertiliser use through introducing clover

Improved management - in most grassland, attention to

- Drainage and soil compaction – particularly in the autumn months before housing
- Soil fertility
- Grazing pressure, frequency and seasonality

can play a major role in maintaining grassland productivity.

FERTILISER AND MANURE

Manures – best possible use must be made of manure or slurry produced on the holding and the Code of Good Practice and any legislation adhered to:

- Target deficient soils and silage or hay fields
- Aim to apply in spring to achieve best capture of nitrogen

- Do not apply in quantities that might reduce the growth and density of the pasture

Fertiliser – must be used in accordance with needs to make up any deficit and encourage strategic growth e.g. spring or late summer but, wherever possible, complement clover e.g. no nitrogen fertiliser during the late spring and summer months when clover should be supplying that nitrogen .

GRAZING

Grass Height – is the most important guide to animal and grassland performance and proves to be a very challenging aspect of management for many farmers as they are very concerned about not providing the animals with enough grass and the impact that this would have on their performance. As a result, traditionally, cattle pastures have often been under-grazed and have failed to achieve their potential and it is important to meet the targets.

- Height too low
 - Animal intake and performance will be penalised
- Height too great
 - Animals will initially do well as they have plenty of grass but rejected grass will soon become stemmy and the feed value of the grass will fall dramatically

Target sward height (cm)

| Grazing System | Target Sward Height (cm) | |
|--------------------|--------------------------|-------------------|
| | Early season | Late season |
| Continuous grazing | 6-8 | 8-10 |
| Rotational grazing | Allowance (entering) | Residue (leaving) |
| | 15 | 6-8 |

GRAZING SYSTEM – although most beef cattle tend to be continuously grazed for practical reasons of labour and farm layout, a rotational system of anywhere between 2 and 10 paddocks or fields grazed in rotation can be employed. Particularly at higher stocking rates, rotational grazing can give much greater control and allow surplus grass to be cut for silage or for grass to be rationed when in short supply.

- Continuous grazing – avoids disturbance to stock and is easy and cheap to set out and operate but grass height must be monitored continuously and the system must have flexibility to respond to changes outside the range in the table above such as a 'buffer' area that can either be cut for silage or grazed according to grass growth. Lack of flexibility leads to wastage and severe loss of quality as the season progresses.
- Rotational grazing – offers more control and flexibility but can be more costly to set up (water supply and fencing) and more labour intensive. Stock movement from one area to another can be far more responsive to grass growth and lead to better utilisation and improved performance.

Regardless of the system chosen, the seasonal growth of grass must be allowed for with the total grazing area being enlarged as the season progresses to reflect slowing down of grass growth and increased intake for cattle as they grow.

Typical seasonal stocking levels for well managed grassland

| Season | Stocking pressure (kg animal liveweight per hectare) | Number of 400kg steers per hectare (assuming growth rates of 1kg / head / day) |
|------------------|--|--|
| Early (May/June) | 2,200 | 5.5 |
| Mid (July) | 1,500 | 3.3 |
| Late (Aug/Sep) | 1,000 | 2.0 |

PARASITE CONTROL

Internal parasites (worms) can be a major problem in growing and finishing animals and every effort must be made to avoid and control problems. Appropriate anthelmintics (drugs) must be used – drenches, bolus, injections or pour-on – wisely as part of a planned approach but grassland management can also supply 'clean' grass which can go a long way to reducing drug cost and the risk of resistance developing in the parasites.

- New reseeds
- Fields grazed by sheep or cut for silage only in the preceding 12 months

- Silage aftermaths

must be used in a planned way for the most susceptible stock to help avoid problems and ensure best control.

SILAGE OR HAY

Silage can make a substantial contribution to winter feeding or as a 'buffer feed' at other times. The silage must be made from high quality grass and clover and must be well preserved, whether it is stored in a clamp or baled. Key issues are :

- Early harvest before the grass flowers – in practice an eye must be kept on yields as young, leafy, high quality grass and clover can be low yielding and enough silage must be made to last the winter. Cutting date must reflect the expected contribution of the silage and the performance of the stock.
- Good wilting for at least 24 hours to eliminate effluent and improve the chances of good fermentation as well as to achieve good intakes
- Efficient clamping / baling and sealing – an additive may be considered for high quality material if either very wet (risk of poor fermentation) or very dry (risk of losses at feeding)
- Careful feeding avoiding waste

CONCLUSION

- Grassland can easily meet the nutritional requirements of store and finishing cattle with very good management with weight gains of over 1kg / day and enough gain in body condition to finish animals without supplementing their diet.
- For the highest levels of grass productivity and good animal performance, ryegrass pastures maintained by tight grazing in summer and reseeded as necessary should form the basis of the animal's diet with clover having a huge role to play.
- Fertiliser should be used in accordance with needs to make up any deficit and encourage strategic growth e.g. spring or late summer but, wherever possible, complement clover.
- Grass height is the most important guide to animal and grassland performance – traditionally cattle pastures have often been under-grazed and have failed to achieve their potential
- Although most beef cattle tend to be continuously grazed for practical reasons of labour and farm layout, a rotational system can give much greater control and allow surplus grass to be cut for silage or for grass to be rationed when in short supply.

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INFORMATION SOURCES

EBLEX (2006) Better Returns from Grazing Management – Beef Action for Profit 13

HCC (2008) Grassland Management