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IRISH FARMERS JOURNAL

Spring

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Irish Farmers Journal

10 top grazing tips:

1. Take the hassle out of grassland management with a good paddock system
2. Choose ryegrass swards and see the benefits in increased sward productivity
3. Avoid the complexities, concentrate on the basics and reap the rewards
4. If you want grass in spring, you need to close paddocks on time in autumn

how to cash in on grass

5 Don't get in over your head, have a planned turn out policy in spring and remember to measure grass weekly

6 'Graze tight but remember, avoid poaching at all costs

7 Don't let swards get too high but also don't force animals to graze too tight

8 Build a grass bank/ reserve in autumn, it will allow you graze stock longer and reduce your winter feed bill

9 Save money; use clover to cut your Nitrogen bill

10 Know the fertility status of your farm; look after your grass and it will look after you

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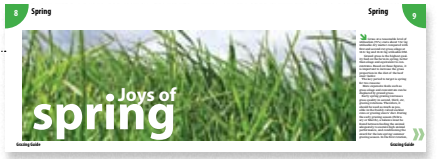

GRAZING +

Introduction

Exploiting our grass-based advantage

The potential to achieve high levels of lifetime gain from grazed grass gives Irish farmers a major competitive advantage over many of their European counterparts. On average the cost of producing a kilo of liveweight gain from grazed grass is 80-85% less when compared to an intensive concentrate based system.

Ireland and Britain are the only major beef producing regions within Europe that are not heavily dependent on intensive concentrate based feedlot systems to both grow and finish animals. In most of the major beef producing regions across continental Europe when a calf is weaned from its mother 100% of the liveweight gain achieved until slaughter is delivered from concentrates. In Ireland on a well managed grass based system there is potential to deliver over 80% of this gain from grazed grass.

Grazing Guide aims to help farmers ensure that they are exploiting the full potential of grazed grass on their farm, irrespective of production system or land type. Land type is often seen as a barrier to adopting good grassland management practices. However there are still a number of simple steps that farmers operating on heavy land can take to improve grass growth and utilisation. These are detailed throughout the guide.

Getting cattle out to grass early and ensuring an adequate supply of good quality leafy grass is available throughout the grazing season is key to obtaining high levels of animal performance. The guide breaks down the key management steps that should be taken during the spring, summer and autumn to ensure this is achieved. The role of clover, farm infrastructure, reseeding and soil nutrients in improving grass growth and utilisation are also covered in detail.

The authors of *Grazing Guide* hope you find it beneficial in improving grassland management on your farm and ultimately the profitability of your business.


Joys of
Spring

Grass at a reasonable level of utilisation (75%) costs about 7.5c/kg utilisable dry matter (DM) compared with first and second cut grass silage at 16.5c/kg and 18.2c/kg utilisable DM.

Grazed grass is the highest quality feed on the farm in spring, better than silage and equivalent to concentrates. Based on these figures, it is important to increase the grass proportion in the diet of the beef animal.

The key period to target is spring for two reasons:

More expensive feeds such as grass silage and concentrate can be displaced by grazed grass.

Early spring grazing increases grass quality in second, third, etc, grazing rotations. Therefore, it should be used as much as possible in the freshly calved suckler cow or animal's diet. During the early grazing season (February or March), a balance must be found between feeding the animal adequately, to sustain high animal performance, and conditioning the sward for the late spring/summer grazing season.

Spring

Turnout during the main grazing season

DOs	DON'Ts
Maximise early spring grazing in the diet of freshly calved suckler cows or priority cattle	Allow stock remain on paddocks during heavy rainfall resulting in poaching
Graze paddocks to 3.5cm to 4cm in the first rotation	Use silage supply as a target for turnout date
Implement on/off grazing or remove stock from grass to prevent damage	Turn out all animals in the herd at once

In the first rotation, the key is to graze paddocks out to 3.5 to 4cm and set up paddocks for following rotations. By doing this, grass digestibility can be increased by 4 units in May and June.

Across the country, the average grazing season length is 220 days.

OBSTACLES

Two of the main obstacles to achieving more days at grass, especially in early spring, are poor soil conditions and periods of high rainfall. If animals stay in the paddock, treading damage caused on heavier soils or during periods of heavy rainfall can result in reduced growth rates (up to 20% lower) during subsequent grazing rotations. Allowing animals access to pasture for a few hours per day (on/off grazing) has been shown to maintain high levels of performance when compared with grass silage based diets and may be a strategy that can be implemented to extend grazing season length. Traditionally, fattening diets have been focused on high grass silage combined with concentrates. With core prices envisaged to stay strong, beef farmers need to focus on producing more carcase output from pasture.

Animal performance increases, of both finishing and store cattle, from early turnout are substantial. Research work has shown that animals turned out early to grass have 6% (+23kg) higher carcase weight than animals turned out later in spring. This could equate to close to €60 to €70/head.

Benefits of spring grazing

Lower feed costs
Higher daily gain
Fewer days to finish/slaughter
Lower direct costs (labour/feed/machinery)

OUTPUT

The increase in animal output can be gained with good grazing management and earlier turnout. Not only is grass a lower cost feed but the slurry generated is reduced with a longer grazing season.

Achieving an extra day at grass for the suckler cow is worth on average €1.50/cow/day. It is clear that major efficiency gains can be made with early turnout.

The goal with spring grazing is to ensure that priority stock have first access to grass, i.e. the stock that will make most economic use of the available pasture and reduce their days to finish.

Unlike a dairy farm, a beef farm has the opportunity to turnout stock in smaller numbers. This can be advantageous in targeting high grass utilisation.

Perfect timing

Getting the turnout date right

The aim in spring is to increase the proportion of grass in the diet of the grazing animal while at the same time budgeting so that there is enough grass until the start of the second grazing rotation in

Continued on next page

Spring

early to mid-April.

Spring grazing should start in February/March and continue until mid-April. This varies from farm to farm but the overriding aspect of grazing management is to make good use of spring grass.

PRIORITY STOCK

All animals in the herd do not have to be turned out together or at the same time. Groups of animals should be prioritised for early turn-out, i.e. those that will benefit most from high quality spring grass e.g. young bulls, steers or beef heifers.

FIRST ROTATION

The first grazing rotation should be 40 to 50 days and finish around 10 April. This can be extended to 20 April in later growing or poorer grass growing areas.

AREA TO GRAZE FIRST

Graze 30% to 40% of the grazing paddocks first to allow re-growths to accumulate for the start of the second rotation.

Turnout during the main grazing season

TURNOUT IS TOO LATE	TURNOUT IS RIGHT	TURNOUT IS TOO EARLY
Too much grass	Cheaper feed costs	Run out of grass
Poor grass utilisation	Long first rotation	Very short first rotation
Poor grass growth	Utilise all early grass	Reduced grass growth
Short first rotation	Can close only what's required for silage	No grass before early May
Too much area for first cut silage	Priority stock to grass	No rest period for paddocks
High stocking rate on grazing area	Maximise slurry use and reduce chemical fertilizer	Silage cut will be late or unable to make sufficient quantities
Too cautious	Continuous measurement	No measurement
Slurry may not be spread because of heavy covers		Poor utilisation of slurry

What are the advantages of finishing the first rotation on time and the disadvantages of not finishing on time?

ADVANTAGES	DISADVANTAGES
Have 6-7cm of grass (1,200+kg DM/ha) on first grazed paddock	Too much grass on farm
Have the recommended 10 to 14 days grass on the farm	Have 21-28 days grass on farm (double the requirement)
High grass quality for second rotation due to high grass utilisation in first rotation	Poor grass utilisation
Create a 'wedge': most grass will be in the paddock grazed first in spring, least in the paddock grazed last	Post-grazing height too high; will result in poor quality grass in subsequent rotations
Can close 30-40% of farm for silage	Will have to close >50% of farm to correct grass surplus
Little topping required	One to two rounds of topping required
Higher weight gains	Poor weight gain

Silage ground should be grazed early in the first rotation — this will increase the available grazing area.

STRIP GRAZING

If strip grazing or block grazing, a maximum of three to four days per block should be practised during the first grazing rotation to protect re-growth and ensure grass supply for the second rotation.

POST-GRAZING

Post-grazing heights of 3.5cm to 4cm should be targeted during the first grazing rotation. Late turnout with high cut grass covers will often lead to poor grass utilisation and subsequent poor pasture quality.

Turnout of animals should take place during periods of dry weather, with good underfoot conditions — this will give animals an opportunity to 'settle' and start grazing properly.

Early turnout will reduce the accumulation of surpluses during the main grazing season.

Setting up the farm to utilise grass

To ensure efficient grass-based beef production, a rotational grazing system is essential. A rotational grazing system should have a minimum of six and, ideally, eight grazing divisions or paddocks per grazing group on the farm.

WHY USE A SYSTEM?

Paddock grazing works on the basic principle of `graze and rest'. Therefore, once a paddock is grazed, it is allowed to undergo a rest period to rejuvenate the sward leaf for the following rotation. Grazing swards with fast rotations in spring, (e.g. 12 to 15 days) will decrease grass production on the farm and place the farm at a greater risk of running into grass deficits.

A rotational paddock system can reduce the risk of parasites, especially when calves are part of the production system.

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SETTING UP

- Get a farm map with exact areas of each paddock.
- Number every paddock.
- Assign specific paddocks to stock, i.e. cow paddocks, fattening stock paddocks, leader follower paddocks.
- Keep a record of dates when grazed, fertilised, topped and cut for round bale silage.
- Find out the reseeding history and soil fertility of each paddock.
- Maintaining a small number of grazing groups will allow the total number of paddocks required to be maintained at a manageable level. This can be done by grazing steers and bulls together and by mixed grazing of cattle and sheep and leader/follower systems. Roadways are an advantage as they allow access to paddocks and avoid soil damage.

PADDOCK SIZES

Aim for equal divisions, avoiding long, narrow divisions. The ratio of field sides should be no more than 4:1 to prevent narrowing of paddocks.

The ideal size for a 40-cow suckler herd is 2ha/paddock. Ensure that each paddock has a number of access points. Water trough access is equally important.

Temporary electric fencing should be used to divide larger fields to give the required paddock size, especially when grazing silage fields during the first rotation.

Divide paddocks so that at least four or five grazings can be achieved in spring and two or three in autumn.

WATER

A water supply in each grazing division is necessary. Ideally, every

Positives of paddock systems and negatives of not using a paddock system

POSITIVES OF PADDOCK SYSTEM	NEGATIVES (WHEN PADDOCK SYSTEMS ARE NOT USED)
Grazing management control	Lack of control
Higher grass production	Lower grass production
Ensure high utilisation	Poor utilisation
Improve grass quality	Lower grass quality
Greater access particularly in wet weather	Poor access
Allow strip or block grazing	
Control of grass budgeting	

paddock should have a permanent water supply.

Placing troughs across fences reduces the number required.

If using a temporary wire to strip or block graze, strategically place troughs in the field so that animals do not have to walk back over the grazed area for water (see Example 2).

Keeping water troughs in the centre of the paddock allows for them to be further split with temporary fencing.

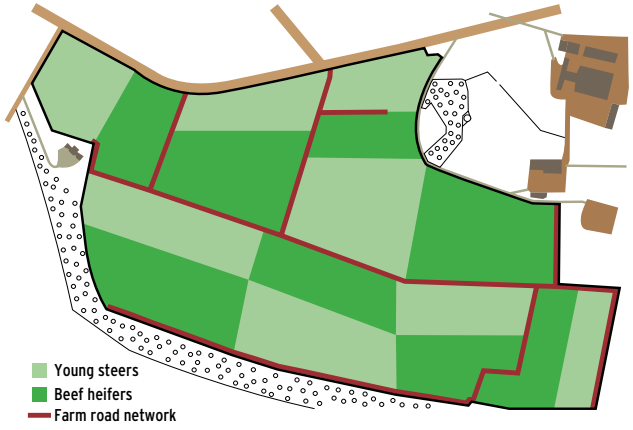
Alternatively, water troughs can be fitted with a long length of water piping and the water trough can be moved between grazing areas within the one paddock.

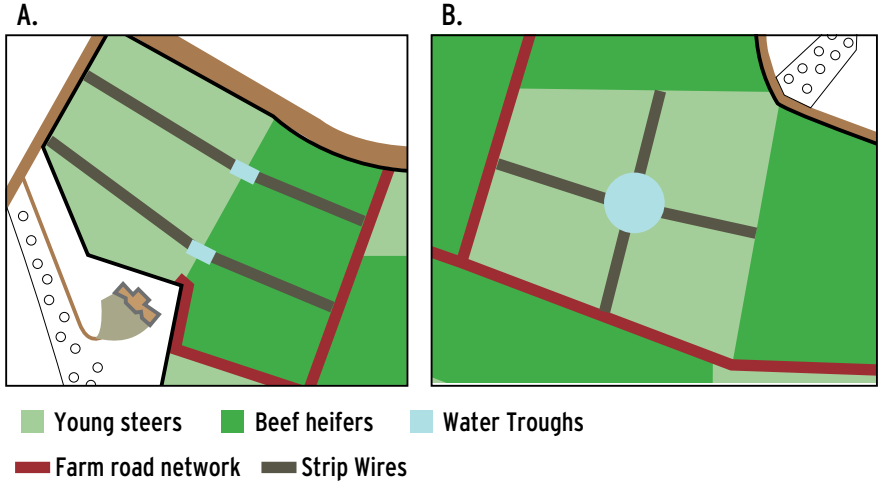
Water supply/pressure will often dictate the size and type of water trough used.

Farm roadways
Roadways are an obvious advantage as they allow easy access to paddocks and avoid soil damage.

Water supply
Keeping water troughs in the centre of the paddock allows for them to be further split with temporary fencing.

Temporary fencing
Temporary electric fencing should be used to divide larger fields to give the required paddock size, especially when grazing silage fields during the first rotation





Example 1
The map shows a section of a farm — there are two groups of stock (e.g. young steers and beef heifers) grazing the area shown. Each group has eight grazing divisions. The young steers graze the eight paddocks light-shaded and the beef heifers graze the eight dark-shaded paddocks. The red lines show the road network throughout the farm.

Example 2
Diagram A shows two water troughs (in blue) placed across the fence and serving two paddocks.
The heavy dark lines show where strip wires might be placed and how the water troughs serve two divisions.

Diagram B shows a paddock that is block grazed. One trough is placed in the middle and services each of the four grazing divisions.

Applying slurry in spring

Cattle slurry, as a valuable source of N, P and K, should be applied on the fields that need it most and at the time of year that will give you the best response.

All of the P and K in slurry is available to be utilised and fields that are low in both of these nutrients need to be targeted to receive slurry. On a lot of farms, this will be the silage fields as this is where the feed that eventually produces the slurry comes from in the first place.

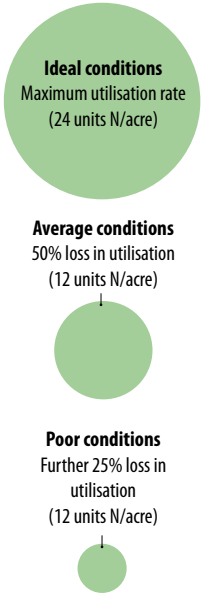
The time of year that slurry is spread does not affect the availability or utilisation of P and K. This is not the case with N.

N IN CATTLE SLURRY

Half of the nitrogen in cattle slurry is in an organic form and the other half is as ammonium, the very same form of nitrogen that is in purchased urea fertilizer.

It is the ammonium half that can replace bought in bagged N.

Figure 1
2,500 gallons cattle slurry per acre (spring application)



Similar to urea fertilizer there are times of the year during which you can expect to get the maximum value of N from slurry and this is very much weather dependent.

Ideal conditions for getting the best nitrogen utilisation from cattle slurry are:

- Overcast with very little sunshine
- Slight drizzle of rain
- Little or no wind

Where the weather conditions are only average, there is a 50% loss in utilisation rate and where the conditions are poor, i.e. a dry, sunny day with a strong breeze/wind, there is a further 25% loss in utilisation rate (Figure 1).

A good rule of thumb is that a day that is very good for drying clothes on a washing line is a bad day for spreading slurry if you want to get the maximum amount of N in it utilised.

In order to get the maximum value out of the N that is in cattle slurry, the majority of it should be spread in the spring when the weather conditions favour it most.

When weather conditions are suitable, apply 2,500 to 3,000 gallons of slurry to the paddocks/fields that will not be grazed for at least six weeks.

Paddocks that have heavy covers of grass should not get slurry until immediately after they are grazed.

When fields are grazed and closed for silage, apply between 2,500 and 3,000 gallons of cattle slurry per acre before applying any bagged N. Reduce the amount of bagged N spread by taking into account the units that have been supplied in this slurry.

There are three main advantages with using a trailing shoe slurry

A trailing shoe allows slurry to be spread in a wider window, increases N utilisation and allows slurry to be spread on heavier covers.

Spreading slurry

DOs	DON'Ts
Spread most of the slurry produced on the farm in the spring rather than the summer	Spread slurry when heavy rain or frost is forecast
Apply 2,500-3,000 gls of slurry to ground that is going to be grazed in six weeks	Apply slurry to heavy covers; wait until they are grazed first
Spread slurry on silage ground to replace nutrients and reduce chemical N requirement	Apply slurry on dry sunny days with strong breeze
Spread slurry on dull and slightly wet days	Apply slurry on top of bagged fertiliser

spreader in the spring compared with using a splash-plate spreader:

They widen the window of opportunity in getting slurry out on farms with heavier soils.

They allow you to spread slurry on paddocks/fields with heavier covers of grass and still be able to graze them six weeks later, i.e. less contamination of grass.

They increase the utilisation rate of the N that is available in slurry by up to 40%.

While there are advantages to using a trailing shoe spreader in comparison with more conventional spreaders, at their current cost they are still only justifiable in most cases on a contractor scale. Individual farmers should negotiate the best rate possible (per 1,000 gallons spread).

TOP TIPS

Ideal conditions for spreading slurry

- Overcast with very little sunshine
- Slight drizzle of rain
- Little or no wind

Spreading nitrogen fertilizer

Nitrogen fertilizer can provide a boost to spring grass growth, allowing for more cattle to be turned out earlier. Soil temperatures need to be at least 5°C before there is an adequate response to it and the date at which this occurs can differ from year to year.

In good growing conditions, 1kg of N has the ability to grow 10kg to 15kg of grass DM during February while, in other years, there can be little or no grass growth response to the N due to prolonged cold weather into March. The general recommendation has been to apply nitrogen fertilizer six weeks before your expected turnout date. With farms that are moving towards turning out smaller groups of cattle at intervals and starting with an earlier turnout date, this recommendation no longer applies and a more targeted approach is needed.

- Paddocks or fields that have heavy covers of grass built up on them (10cm+) from the previous autumn and over the winter should be grazed before applying N.
- Paddocks with little or no grass covers should receive cattle slurry first and N at a later date. These will be the last to be grazed in the first rotation.
- Target your earliest N applications on the paddocks and fields that have the greatest production potential – predominately ryegrass swards – with 5cm to 8cm of grass that have good fertility (P, K & lime)
- Apply no more than 23 units N per acre for the first application.
- Wait until soil temperatures are at least 5°C and rising.

Wait until soil temperatures are at least 5 degrees and rising before spreading N

Urea is cheaper per kg N than CAN and should be used in spring applications wherever possible to reduce costs.

The amount of N that should be spread for first cut silage will depend on a number of factors:

- Where slurry is applied first, the requirement can be reduced by 9 units N per 1,000 gallons spread per acre, e.g. 24 units N less when 2,500 to 3,000 gallons are spread.
- The amount of ryegrass in the sward to respond to N. Old pastures with low levels of perennial ryegrass should receive a maximum of 80 units (from both slurry and N fertilizer).
- New reseeds will give a response up to 100 units per acre.
- Most fields should be targeted to receive 90 units in total.
- Where fields have received N in the weeks coming up to closing for first cut silage, 1/3 of this N is still assumed to be available and this should also be taken off the requirement.

Spreading nitrogen

DOs	DON'Ts
Apply N in spring when soil temperatures are above 5°C	Spread N on heavy covers until after grazing
Apply to swards with grass between 5 cm and 8 cm	Spread N on bare paddocks. Spread cattle slurry on them instead
Apply 23 units per acre for the first application	Apply more than 80 units N per acre for first-cut silage on old pasture
Use urea rather than CAN to reduce costs.	Apply more than 90 units N per acre for first-cut silage on most other swards
Take the amount of N spread in cattle slurry into account when applying chemical N for silage	Spread chemical N when there is heavy rainfall forecast
Graze 40% of farm by March 17 and the rest by April 10. Dates can be extended by 10 days on heavier farms	Turn cattle out late as it will lead to grass accumulations during the main growing season