Gearing up for grazing

Paddocks, roads and water are the foundations of profitable grass management

Catherine Egan
Grass10, Teagasc Animal and Grassland Research & Innovation Programme

At Beef 2018, farmers will experience a new feature: a grazing infrastructure "village". Teagasc research has shown that for every additional tonne of grass eaten/ha on a beef farm, net margin increases by €105/ha.

If we take a 40ha farm, that's €4,200 from 1t/ha extra. The village will feature live demonstrations on how you can implement fencing, water, roadways and drainage works to make that possible.

It will also illustrate how to turn a parcel of land from a set-stocking "free-for-all" grazing scenario into a paddock grazing system. A paddock system will allow you to grow and utilise more grass of higher quality. Teagasc specialists, researchers and advisors will give tailored advice on grazing infrastructure options on your farm.

Improving grazing infrastructure on farm allows better control of grass, increased grass growth and improved animal performance. This is particularly visible during poor weather conditions and in both the spring- and autumn-growing seasons.

Cattle are easier to manage and become more docile, which is particularly important in a one person operation. Grass utilised on farms can be increased by either growing more grass and/or improving the utilisation rate. As pointed out earlier, margins on beef farms could be increased considerably by growing and utilising more grass.

On many drystock farms, there are too few paddocks per grazing group. In most cases, fields are too large with set-stocking practised. As a result, cattle are grazing paddocks for too long. The productivity is then significantly reduced.

In this scenario, farmers often find that regrowths are not protected and are continually grazed hindering growth rates. On the other hand, cattle are grazing excessively high covers resulting in poor utilisation. As a result, fields have to be topped to clean off the heavy residual.

PastureBase Ireland figures show that there is a direct relationship between the number of paddocks on a farm and the number of grazings that take place. PastureBase Ireland also identified that creating one new paddock on a farm will give five extra grazings on the farm for the year.

As a consequence of sub-dividing a farm into paddocks of adequate area, the number of grazings will increase in conjunction with DM production. Dividing fields into paddocks need not be an elaborate or high-cost project.

In the majority of cases, reels and poly wire can be used to temporarily split fields for grazing. Having adequate drinkers in fields is very important to allow subdivision. All of these options will be demonstrated at the Beef 2018 open day.

Calculating paddock size

Stock numbers	Liveweight	Days	Total liveweight
Ten cows	650kg	3	19,500kg
Ten weanlings	200kg	3	6,000kg
			Total 25,000kg @ 2% body weight
		Intake per day	510kg
		Target pre-grazing cover	1,200kg
		510/1,200 = 0.50ha (1.25acre)	

Teagasc research has shown that for every additional tonne of grass eaten/ha on a beef farm, net margin increases by €105/ha.

Key steps when setting up a paddock system

1. Create a farm map with precise areas

The first step is create a map of the farm. Ungrazeable areas, walls, ditches and hedgerows will influence where paddocks and farm roadways will go. Talk to your advisor about developing a farm map or use your own paper map. There are also a number of free maps online and apps that can help to map the farm.

2. Paddock size

The aim on beef and sheep farms is to grow grass in three weeks and graze it in three days. Three-day paddocks are the goal. A common question is: How large should paddocks be?

As a rule of thumb, a group of 40 suckler cows and 40 weanlings grazing on free-draining, productive ground should be allocated a 2ha paddock.

The plan is to have seven to eight paddocks per grazing group.

Avoid creating long narrow paddocks to minimise poaching. Aim for a ratio of 2:1 so that paddocks are twice as long as they are wide.

3. Plan out drinking points when dividing fields

Trough location in the paddock is very important. Avoid locating troughs near gateways. Ensure to position water troughs in a central location in the field, which means each one can serve a minimum of two paddocks. Ensure the drinker is positioned on level ground and balanced with some hardcore where necessary. In some cases, splitting fields like the spokes of a wheel from the drinker will ensure that cattle continue to have access to water while getting regular allocations of grass.

Alternatively, you could divide larger, square fields, into four, with one drinker serving many paddocks. This option is shown in Figure 1. There will be a full live demonstration of various aspect of water troughs, size, fittings, piping and various options displayed at the open day.

4. Farm roadways

Roadways allow more efficient access to paddocks. They enable easier movement and management of livestock around the farm. Roadways also allow for easier management of grass during difficult grazing conditions.

Ultimately, farm budgets will determine which roadway type is chosen. Every farm budget will be catered for at the open day, from very low-cost livestock roadways to more expensive machinery roadway.

All options to meet your needs will be discussed.

Pre-grazing grass height

The ideal pre-grazing grass height is 10cm to 12cm, which will be grazed tight down to 4cm. This will be demonstrated clearly at the Grass 10 village. Different grazing scenarios of different grazing heights will show what height grass should be grazed down to.

As the supply of grass this time of year exceeds demand, correct management is essential. Key tips on how to manage the excess supply of grass will be demonstrated on the day. This will be closely followed by discussions on all aspects of soil fertility.

You'll never get a better chance to see the range of infrastructure options assembled in one place. As well as seeing the demos you will have the chance to quiz independent experts on how to upgrade your own infrastructure. This is an opportunity not to be missed.

Figure 1
Paddock divisions

RETURN ON INVESTMENT

- Cost: €100/acre on average for fencing and water.
- Return: increase sward quality,
- More grass grown.
- More liveweight gain.
- Higher stocking rate.

The main return on investment comes in the spring and autumn time with up to 1t DM/ha extra grazed.

This extra growth alone represents a return of around 40%. The investment will pay for itself in about two years.

Up to €180/acre in one year from increase in animal performance and stocking rate.