

Paddocks equal profit

Fertiliser is a key investment on any sheep farm. By far the best returns are achieved from rotational grazing systems

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The average sheep farm in Ireland utilises 5.6t of grass dry matter/ha/year. Results from recent grassland systems research at Teagasc Athenry show that each tonne of grass DM grown will support a ewe plus her lambs for a year including their winter feed.

Ireland's strength in sheep production lies in our ability to produce meat from an almost entirely grass-based diet giving us a competitive advantage over many of our EU competitors. The main challenge for pasture-based systems of sheep production is to improve the growth and utilisation of pasture and increase the output of lamb from grassland.

With grass making up 90% to 95% of the annual energy requirements of sheep any improvement in the efficiency of production and utilisation greatly increase profitability. Each additional tonne of grass DM/ha utilised will increase profit by €105/ha. Data from Teagasc Athenry and commercial sheep farms participating in the Teagasc BETTER sheep farm programme indicate that there is room for significant increases in the level of grass grown and utilised on Irish sheep farms.

Some of the key areas to focus on are:

- Soil fertility
- Field divisions/grazing groups.
- Measurement/budgeting.

Soil fertility

Pastures simply will not perform to their potential if the soil fertility is not correct. The soil's ability to provide the optimum quantity of nutrients for grass growth determines the productivity of a field. Soil ferti-



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ity should be foremost in the mind of anyone who wishes to maximise the financial return from grazed grass.

Fertiliser accounts for up to one-fifth of the total variable costs on sheep farms, so effective management of fertiliser will save you money. The exact quantities of lime and fertilisers needed can be determined with a soil test which should be carried out every three to five years. The results are the foundations for a fertiliser and lime plan. Your Teagasc advisor or a private company can organise the test and take the samples if you prefer.

A liming programme should be in place on all farms in order to have soil pH at its optimum year on year. This will prevent soil pH from dropping to such an extent that the response to applied fertiliser is compromised.

Field division/grazing groups

Set stocking/continuous grazing systems are still common on Irish sheep farms. In these systems, sheep graze the same grassland area throughout

the grazing season. Grazing systems where sheep are moved in rotation through a series of paddocks offer greater flexibility in grassland management by allowing increased control over sward structure, grazing severity, regrowth periods and overall pasture supply.

Rotational grazing involves dividing the overall grassland area into a number of paddocks. These paddocks are grazed, fertilised and rested in turn and allow greater levels of herbage utilisation to be achieved.

On the Teagasc sheep research demonstration farm in Athenry, a simple five-paddock rotational grazing system is used. This can also be split temporarily, as needed, to give up to 10 grazing divisions per group.

Average residency time (how long the sheep spend) in paddocks in April, May and June is five days (2.5 days per division).

Post-weaning, a leader follower system is used. Lambs have first access to fresh regrowth, grazing it down to around 6cm, with the dry ewes then grazing the paddocks down to 4cm to

ensure quality leafy grass in the following rotation.

By controlling grass quality this form of grassland management maximises grass growth and utilisation while maintaining animal performance.

A general recommendation with regard to paddock size taking an example of a farm with a flock of 100 ewes stocked at 10 ewes/ha would be a minimum of five paddocks of 2ha (5ac) each per grazing group. This can be further divided using temporary fencing as required.

Using all the grassland production and utilisation information gathered from the grazing trials on the Teagasc research demo farm over the past number of years there may be scope to increase grass production and utilisation even further by employing a six paddock rotational grazing system with each paddock 1.6ha (4ac) in size.

From analysis of our data, this would show a possible additional increase in grass production and utilisation per hectare of approximately 15%.

Measurement and budgeting

With the basic building blocks of soil fertility and infrastructure in place, the next step to getting more from grass is to develop grass measurement and budgeting skills. Grass measurement and budgeting does not have to be complicated or expensive as is often the perception.

There are a number of methods that can be used to measure grass supply (grass covers) on farms. Sward sticks, rising plate meters and the quadrant and shears method are all common.

What method you use is irrelevant, the important thing is that some form of measurement is carried out on a regular basis to aid management decisions.

Table 1: Grass days-ahead guidelines for sheep farms

Month	Days ahead
March	25
April	18-21
May-July	12-14
August	15-20
September	25-30
Oct-Nov	30-40

PastureBase Ireland is an online grassland management programme that enables the farmer to keep track of grass growth per paddock, the number of grazings per paddock and the quantity of grass being consumed at each grazing. This highlights poor performing paddocks and deficiencies in grazing management.

This programme allows you to input grassland measurements and information on stock numbers. Using this information, grassland management advice is generated based on your current grass supply and demand status to aid decision making on your farm.

Table 1 shows an example of grassland 'days ahead' targets developed through grazing trials on the Teagasc research demonstration farm in Athenry that can be used to more accurately manage grass during the main grazing season to improve the management, utilisation and quality of swards offered.

If you are still using a set-stocking system you have scope to vastly increase your grass output by establishing a paddock system and using these tools. Why not give it a go?