



WELSH PASTURE PROJECT



2021



Cranfa Amaethyddol Ewrop ar
gyfer Datblygu Gwledig
Ewrop yn Buddsoddi mewn Ardaloedd Gwledig
European Agricultural Fund for
Rural Development
Europe Investing in Rural Areas



Llywodraeth Cymru
Welsh Government



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INTRODUCTION

The Welsh Pasture Project provides regular information on regional pasture growth rates and pasture quality to enable livestock farmers to make informed, proactive grazing management decisions. It involves 19 dairy and 29 beef and/or sheep farms who are measuring their pastures and providing feedback on growth trends.

With Wales' reliable rainfall, pasture is our "competitive advantage" in the local and global milk and red meat market. It is the most sustainable source of feed for our livestock and, when managed well, it is easily the most profitable.

The aims of this project are to:

- Capture reliable data to produce regional pasture growth curves to assist future on-farm planning
- Record regional pasture growth rates and share with all Farming Connect members
- Understand the impact of weather on pasture production
- Understand the impact of management on pasture production
- Assist, share and develop decision making resources for grazing management



METHOD

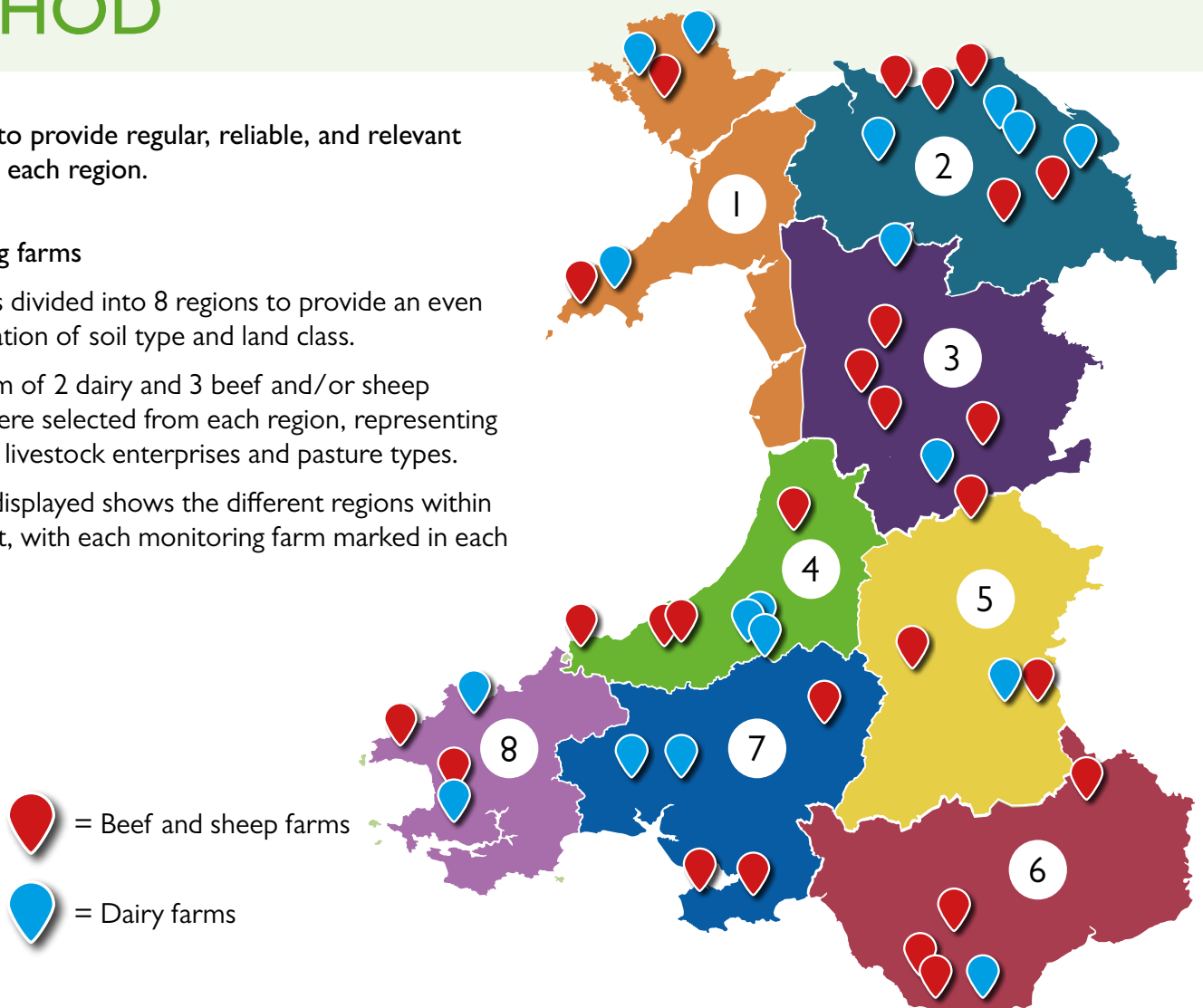
Designed to provide regular, reliable, and relevant results for each region.

Monitoring farms

Wales was divided into 8 regions to provide an even representation of soil type and land class.

A minimum of 2 dairy and 3 beef and/or sheep farmers were selected from each region, representing the typical livestock enterprises and pasture types.

The map displayed shows the different regions within the project, with each monitoring farm marked in each region.



PASTURE MEASUREMENT

All farmers used an electronic rising plate meter, which was calibrated and fitted with a plastic plate for consistency.

The standard UK equation for dry matter estimate was used:



$$\text{Pasture cover (kgDM/ha)} = 125x + 640$$

(x = compressed pasture height in 0.5cm)



MEASURING TECHNIQUE

Each field or paddock was measured with a minimum of 30 “plonks” evenly spaced across the field in a “W” shape or a diagonal line. The farmer followed the same route for each measurement.



MEASUREMENT FREQUENCY

Dairy farmers measured their grazing platform each week. Beef and/or sheep farmers measured a minimum of 20 hectares (ha) every fortnight



RECORDING PASTURE COVERS

Farmers entered their pasture cover measurements into Agrinet pasture management software. They then recorded any grazing or silage events. The number, weight and feed demand (from pasture) of the livestock grazing the area being measured was recorded. Any applications of manure or nitrogen fertiliser were recorded.

EXPERT FARMERS

As part of the project, we have four expert grassland managers who have been giving an insight into their system and timely decision-making information over the past year.

You can find a range of material from podcasts to short videos from the expert farmers on the Farming Connect website.



Ianto Parri
Gwynedd
Beef and sheep
farmer



Rhys Williams
Gwynedd
Dairy farmer



Bleddyn Davies
Ceredigion
Sheep farmer



Andrew Giles
Powys
Dairy farmer

GROWTH CURVE

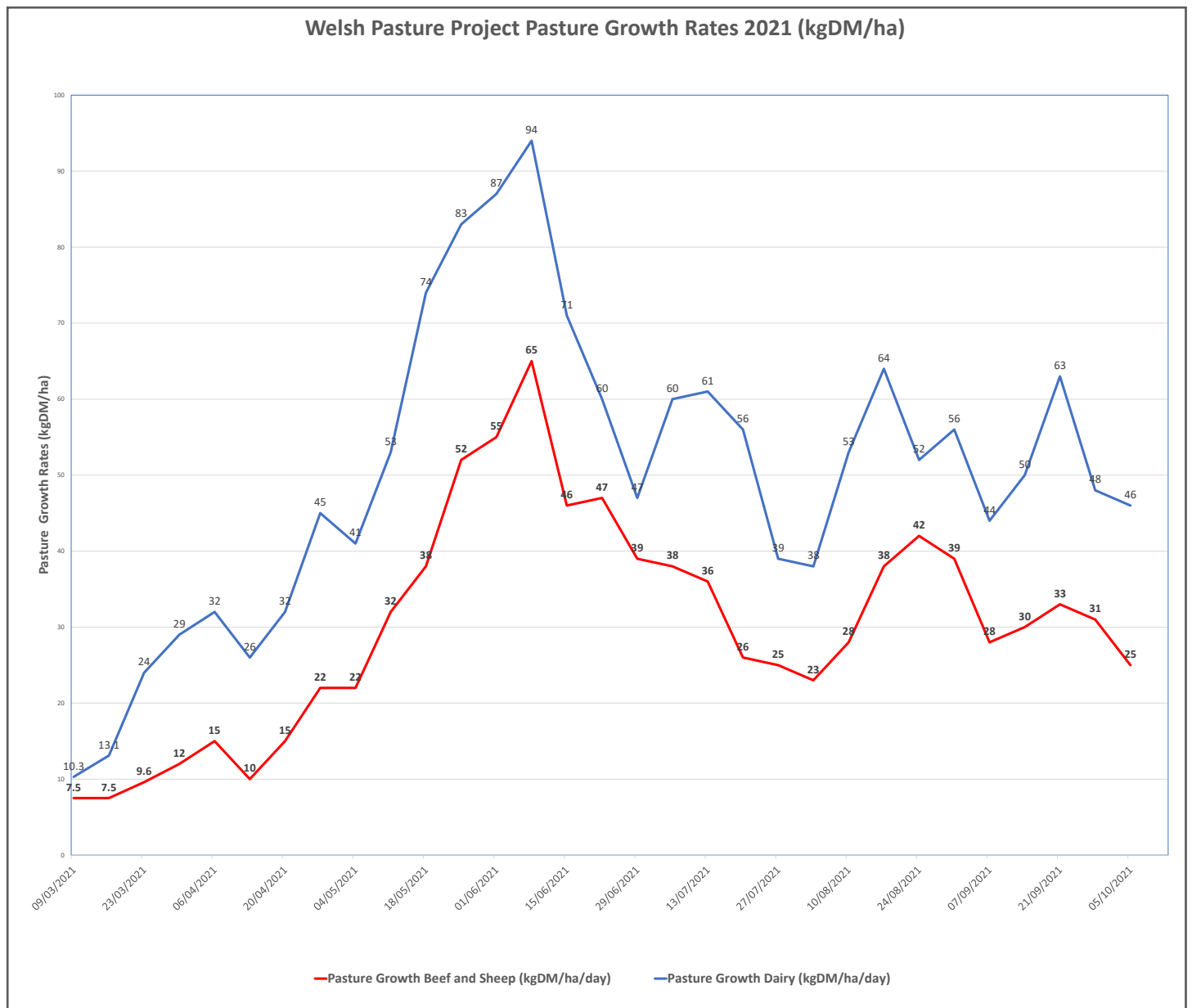
The below graph shows the average pasture growth rates throughout the year on dairy and beef and/or sheep farms.

2021 has been a challenging year for managing pasture, the cold and slow start to the grazing season in April and May led to feed shortages at a key time of year on many farms. This was followed by a large increase in growth rates in June, with many farms struggling to maintain quality.

Localised rainfall during the summer months has meant there has been a large variation in pasture growth rates, with some farms carrying a surplus all summer and others having to buffer feed during the dry period.

Late summer brought rainfall and good temperatures for most, allowing pasture covers to build, setting farmers up in a good position for the autumn grazing period.

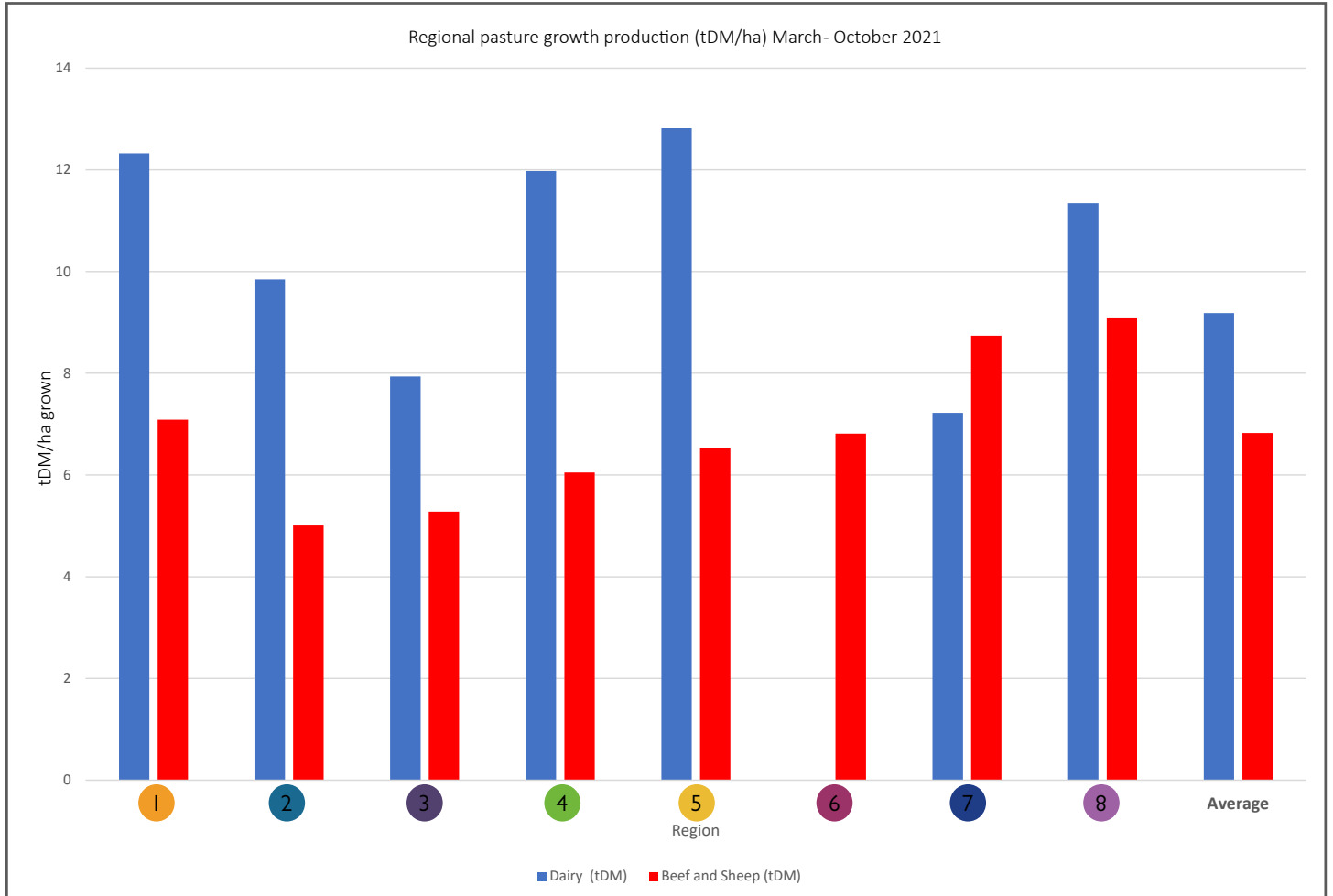
Through measuring pasture regularly and understanding farm demand, proactive grazing management decisions can be made to ensure the quantity and quality of pasture grown on farm is optimised, and therefore stock performance maximised at the lowest possible cost. Average growth during the main grazing season (May to October) has been 58 kgDM/ha/day for dairy and 36 kgDM/ha/day for beef and/or sheep.



PASTURE PRODUCTION

The graph below shows the estimated tonnes of dry matter (tDM/ha) grown on dairy and beef/sheep farms throughout the eight regions that are part of the Welsh Pasture Project.

Between 1 March and 30 October. During this period, dairy farms produced an average of 9tDM/ha and beef and/or sheep farms grew an average of 7tDM/ha



RESULTS

Each week, the pasture measurements were downloaded and checked for accuracy with any anomalies being removed.

An average, split into beef/sheep and dairy, was then calculated for each region and for the country.

The information was added to a map and management tips were provided by grazing consultants as well as experienced farmers within the group.

Results were shared on the Farming Connect website and social media channels.

Scan code to view all results

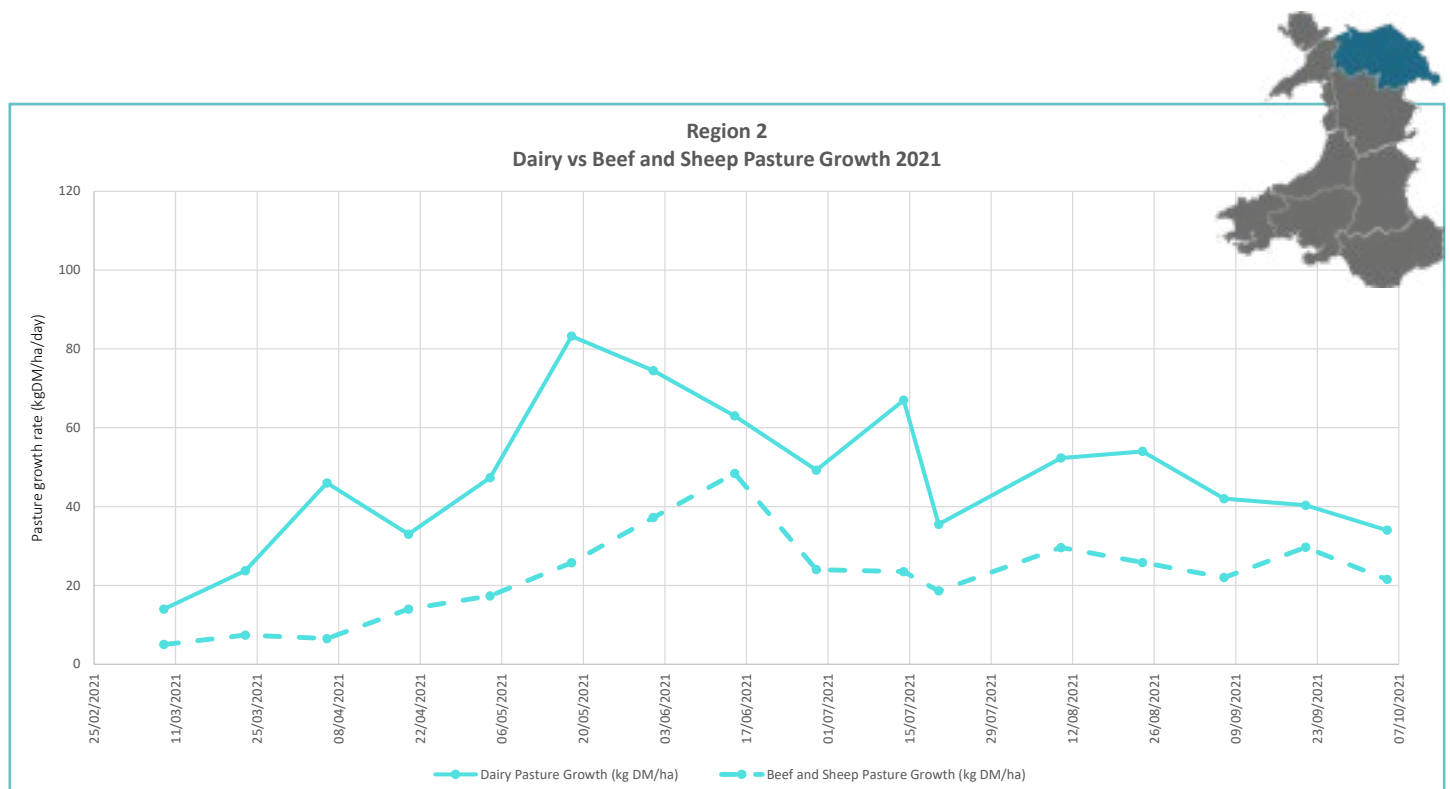
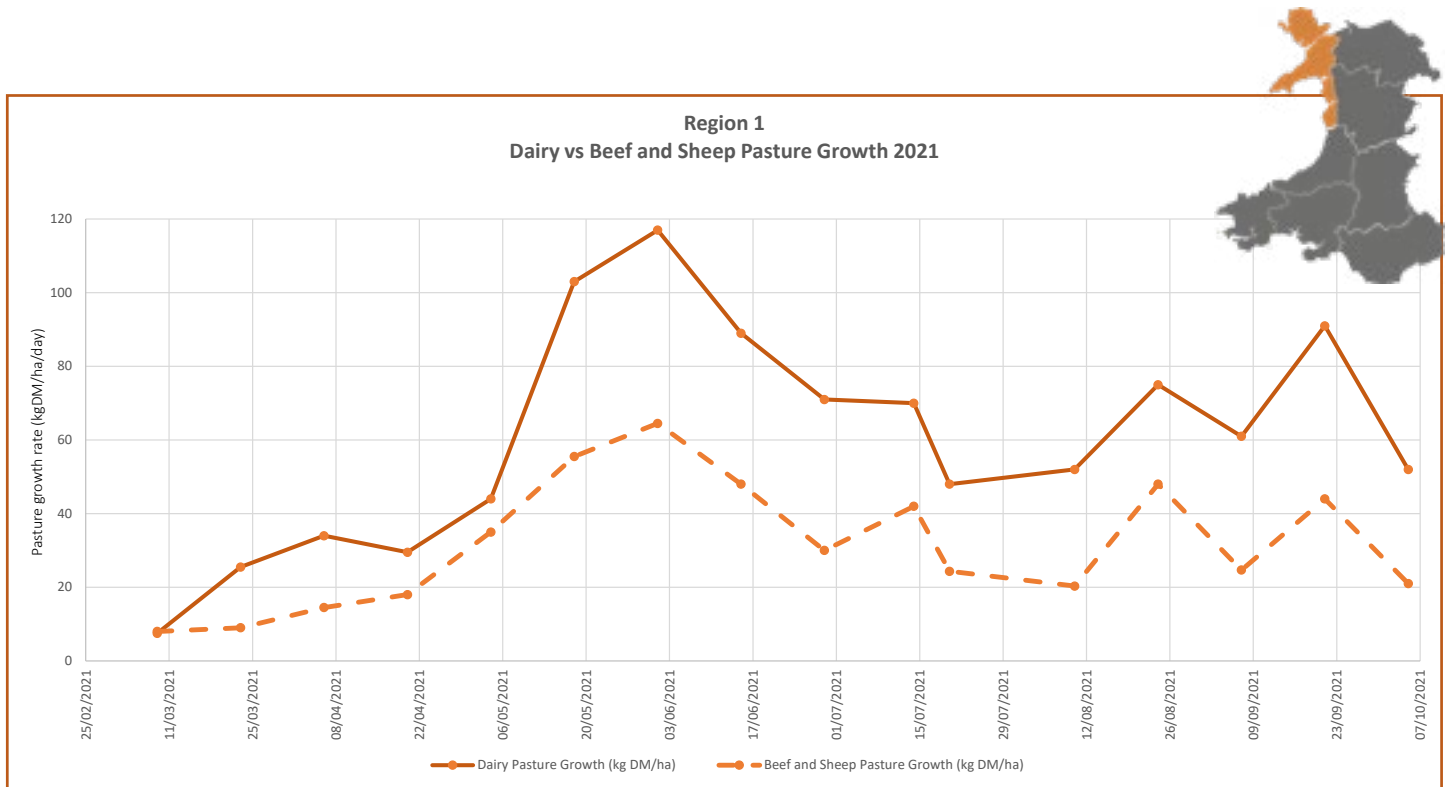


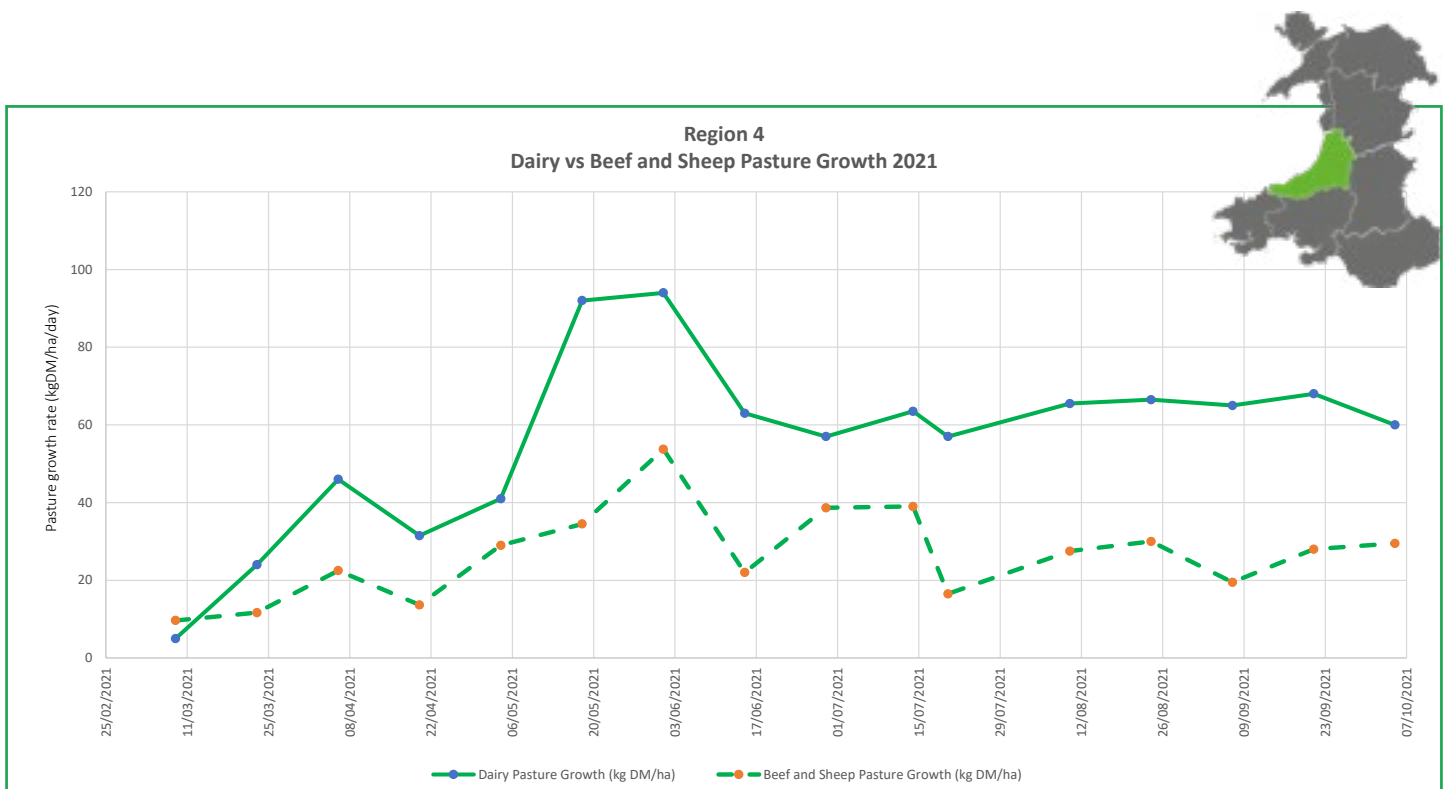
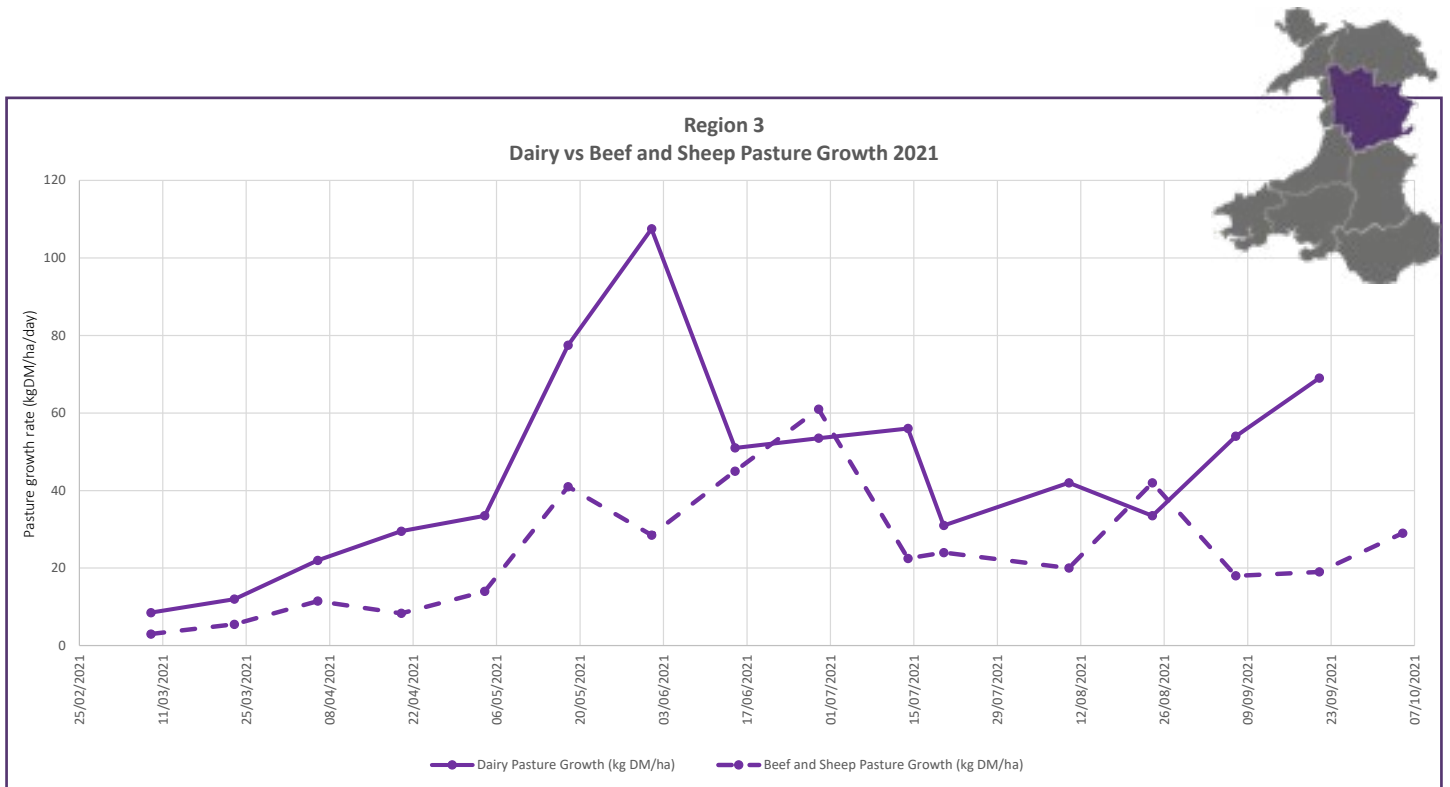
REGIONAL GRAPHS

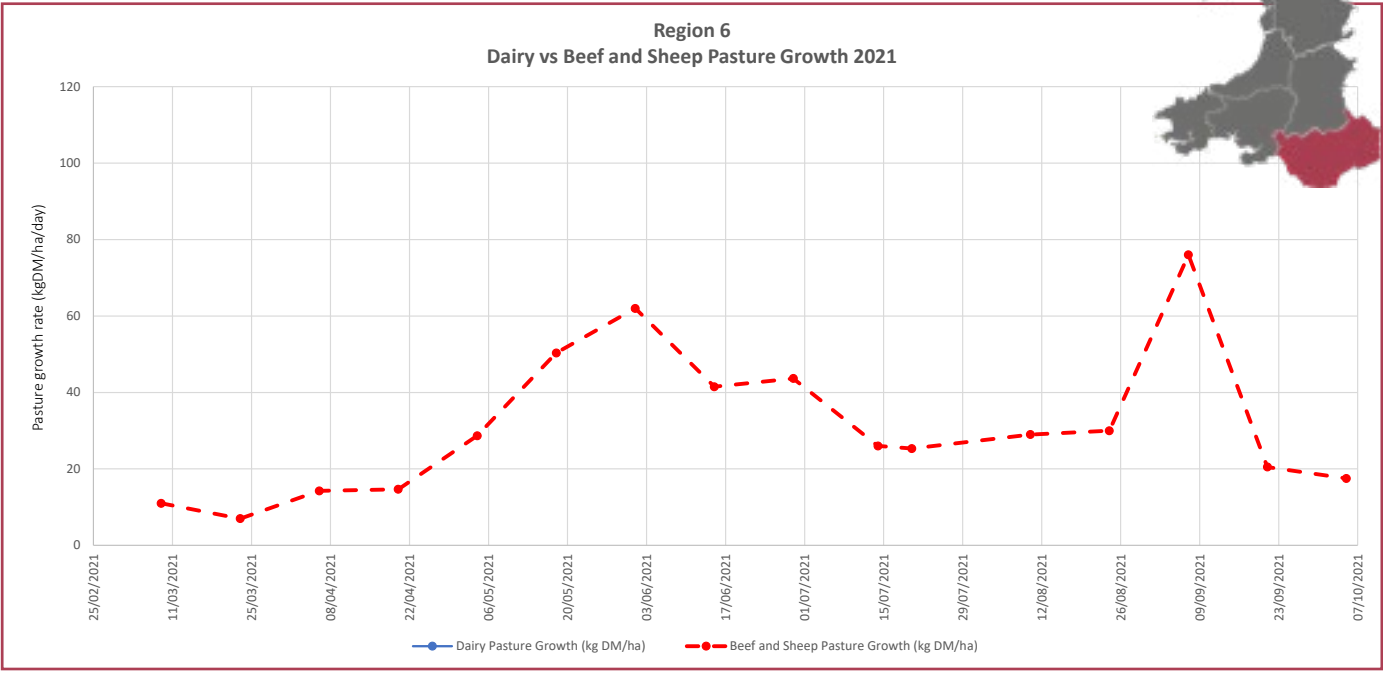
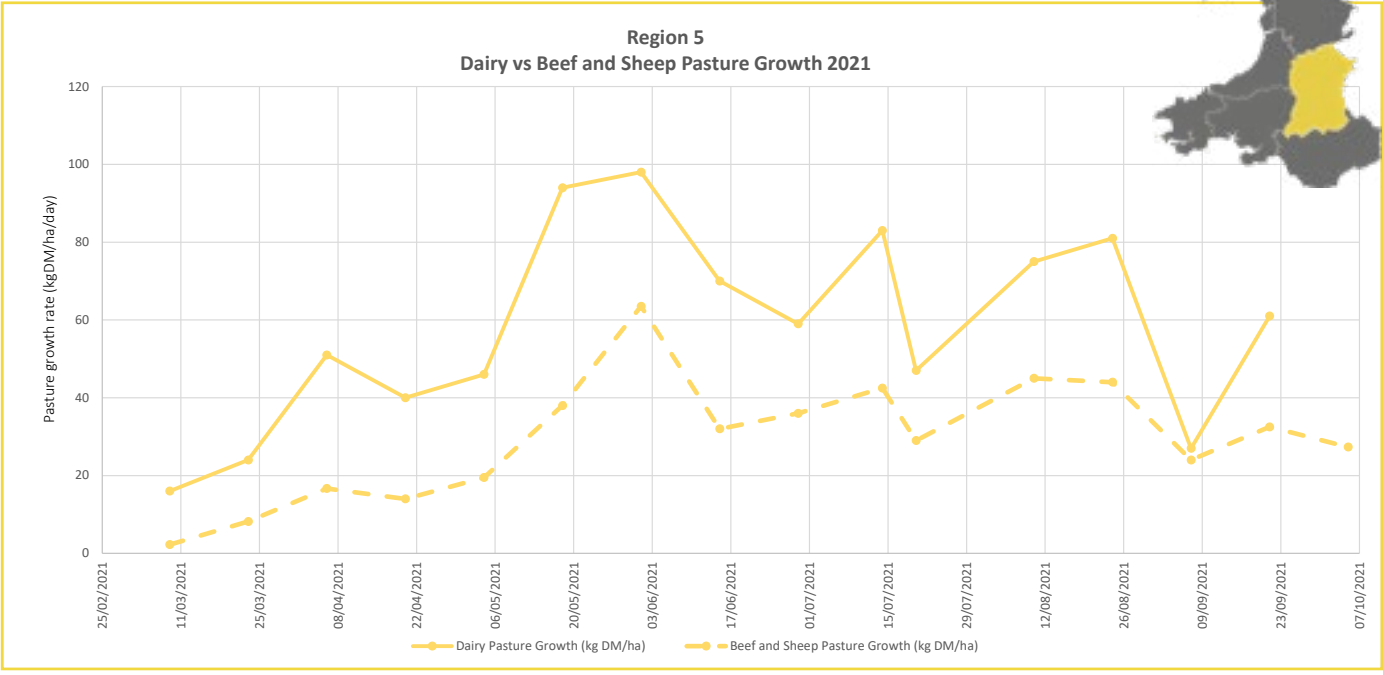
The graphs show the average pasture growth rates (kg DM/ha) for each region for both dairy and beef/sheep.

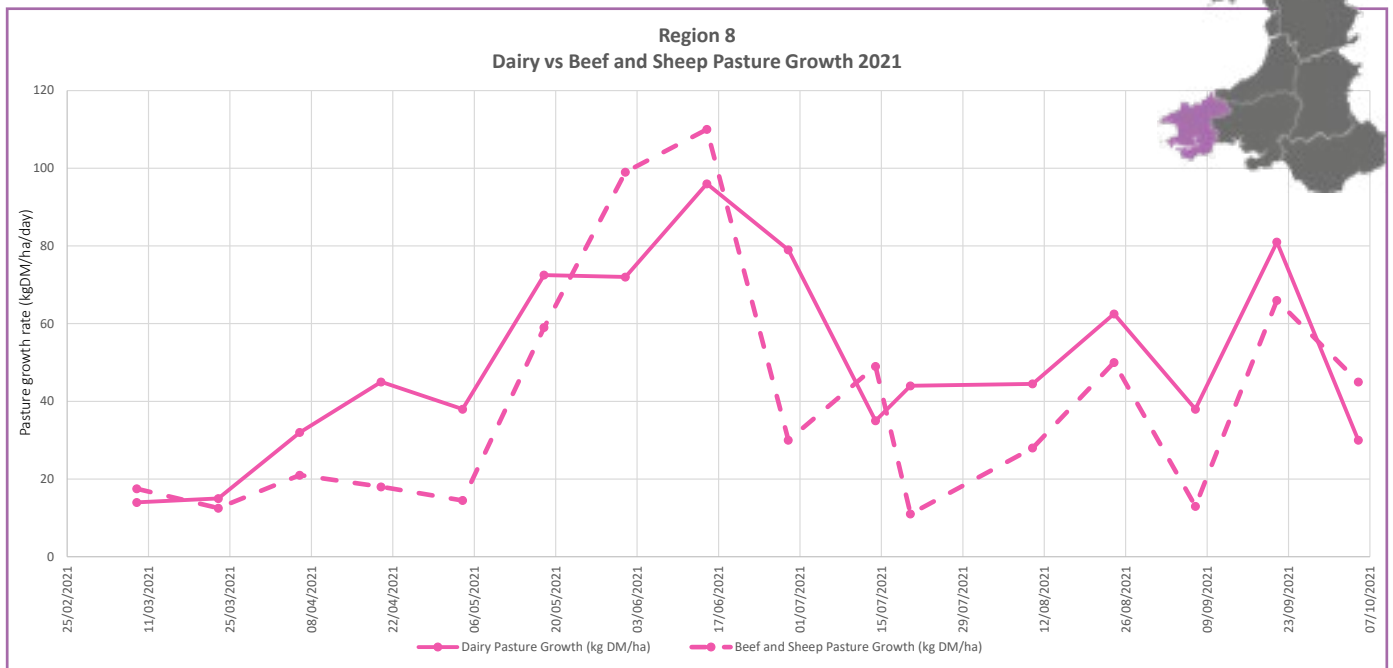
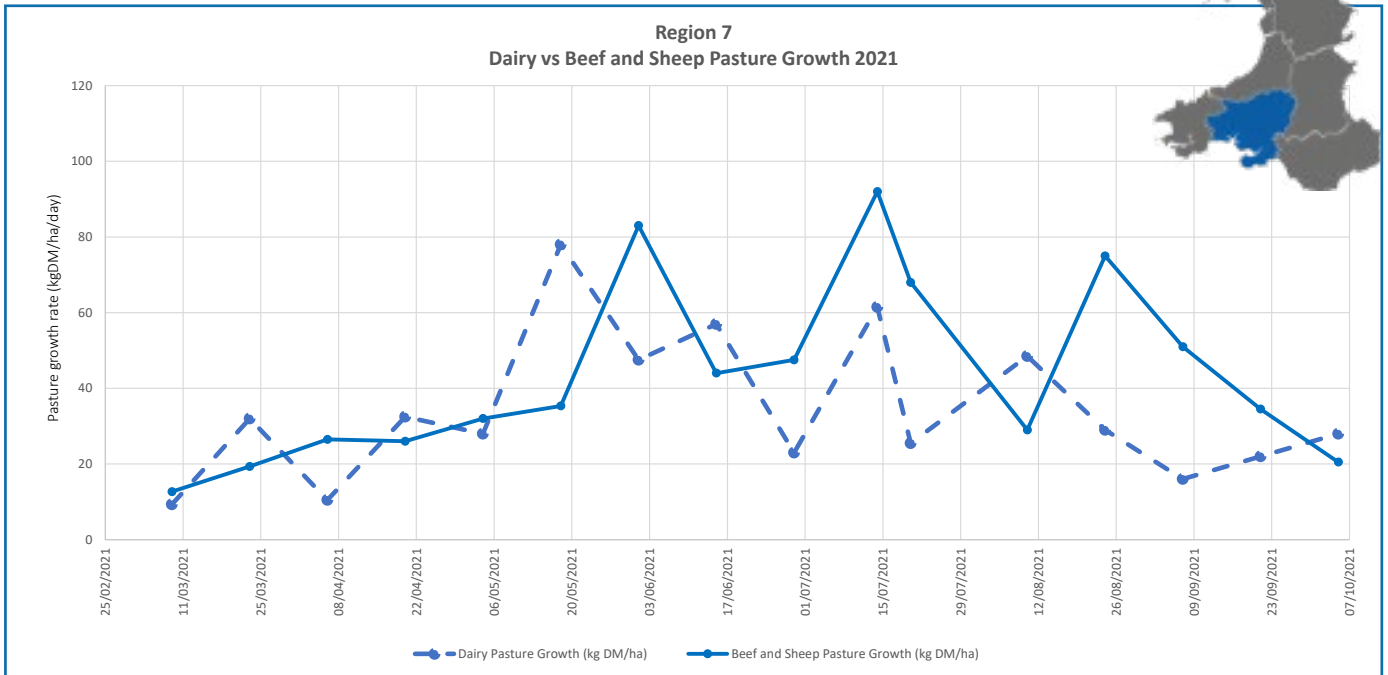
There are a number of factors that affect pasture growth rates across different regions including weather conditions and land position, soil type and fertility, grazing management decisions and pasture variety.

By knowing the weekly pasture growth rates and trend in your region, you can make pro-active grazing management decisions which increase production and reduce costs.









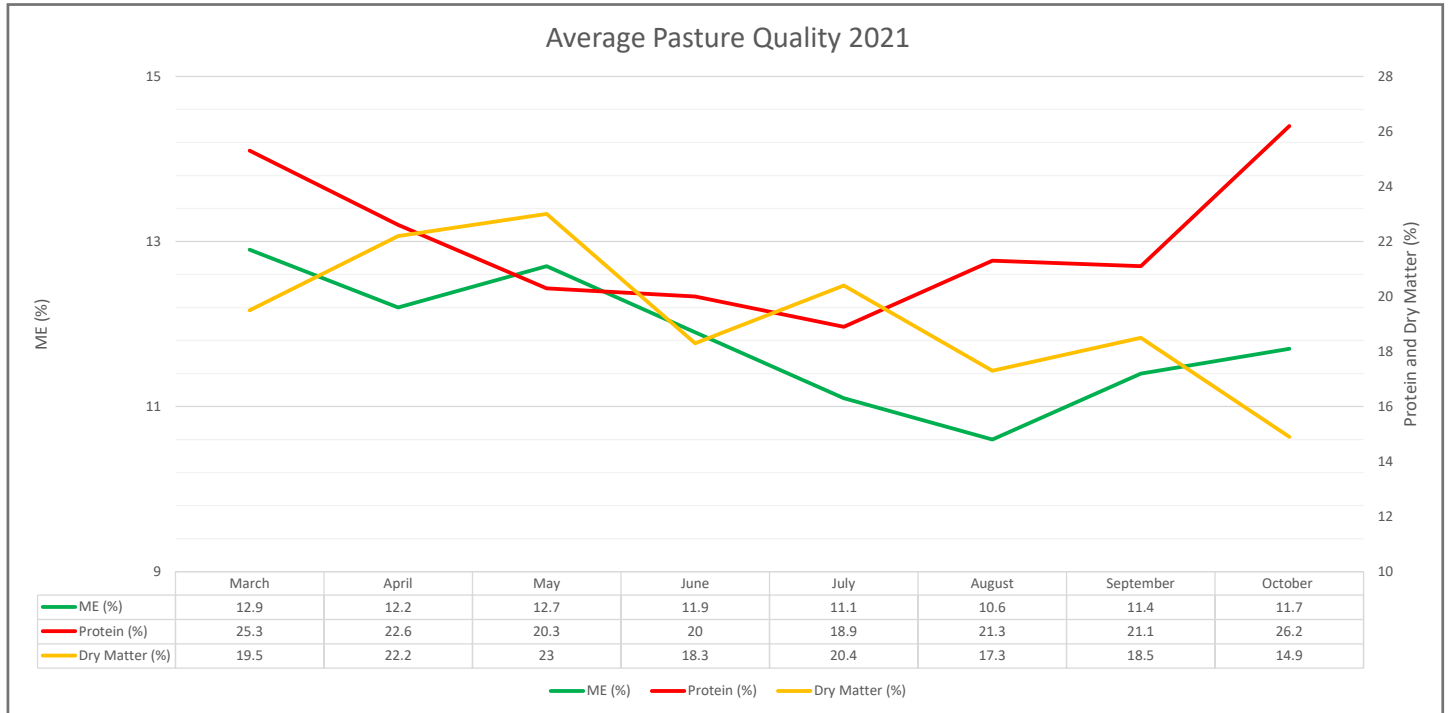
PASTURE QUALITY

One beef/sheep and one dairy farm from each region (16 in total) have been taking monthly fresh pasture samples for NIR (Near Infrared) analysis.

This has provided the following data:

- Energy (MJME)
- Protein (%)
- Dry matter (%)

The graphs below show how the quality of pasture has varied throughout the year on both dairy and beef/sheep farms. On the farms that were sampling the average pasture quality, samples have not dropped below 11 MEMJ or 20% protein. This has given many farmers the confidence to remove or reduce concentrate use, even at key stages of the livestock production cycle.



Average pasture quality for beef, sheep and dairy.

	Energy MJME (%)	Protein (%)	Dry Matter (%)
Dairy	12.0	22.9	18.8
Beef and sheep	12.0	21.7	19.9

