

WELSH PASTURE PROJECT

END OF YEAR REPORT 2023



Ariennir gan
Lywodraeth Cymru
Funded by
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BACKGROUND

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 20 beef and/or sheep farmers 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.

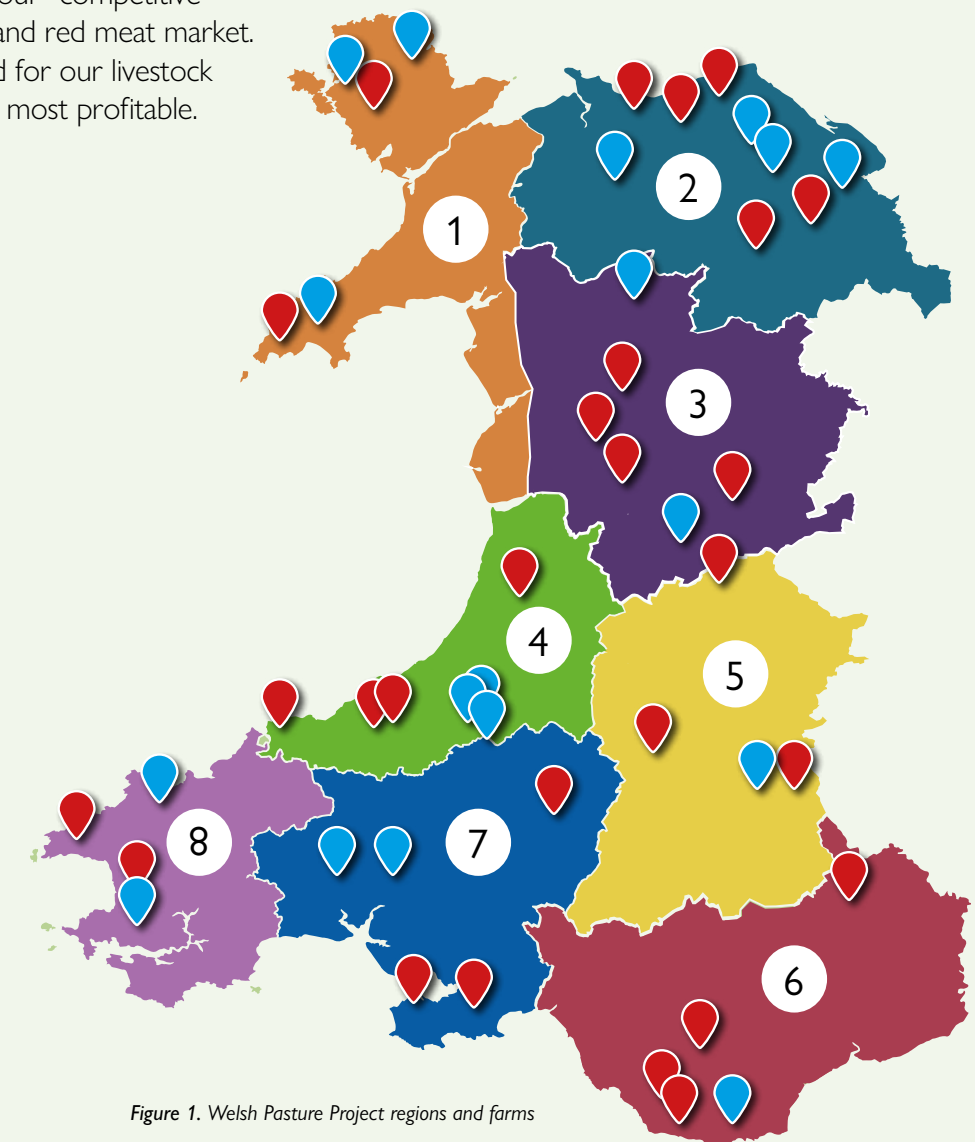


Figure 1. Welsh Pasture Project regions and farms

The aims of this project are to:

- Encourage farmers to measure pasture regularly
- Record regional pasture growth rates and share for other Welsh farmers to benchmark against
- Understand the impact of weather on pasture production
- Understand the impact of soil type, land class and management on pasture production
- Assist, share and develop decision making resources for grazing management

PASTURE MEASUREMENT

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

The standard UK question for dry matter estimate was used:

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

(x = compressed pasture height in 0.5cm)



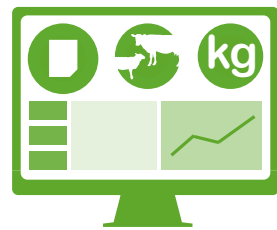
MEASURING TECHNIQUE

- 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 weekly or bi-weekly.
- Beef and/or sheep farmers measured a minimum of 20 hectares (ha) every fortnight.



RECORDING MEASUREMENTS

- Farmers entered their pasture cover measurements along with applications of manure or nitrogen fertiliser into Agrinet pasture management software. They then record any grazing or silage events too.

The above content was adapted from the Welsh Pasture Project – End of Year Report 2022 prepared by Precision Grazing.



LOOKING BACK ON 2023 A FARMER'S PERSPECTIVE

HUW WILLIAMS - Ffordd Las, Ruthin

Huw Williams milks 250 autumn-calving Holstein Friesians at Ffordd Las, near Ruthin, in partnership with his brother, Clwyd, and their parents, Elwyn and Gwenan. They are fourth generation dairy farmers and, like the families that farmed before them, grass underpins milk production and with the recent introduction of herbal leys, they have to create a continual grazing platform even in dry conditions on the 177-hectare farm.

Feed from high quality grazed grass and silage drives production and measuring grass weekly through the Farming Connect Welsh Pasture Project allows him to make informed decisions on grazing allocation which has transformed the way he farms:

“It has shown me what is possible. If someone had told me a few years ago how much milk I could produce on this farm from grass I would have laughed in their face, but having the data has shown what we can achieve.”

At Ffordd Las, the grazing platform is stocked at 4.2 livestock units/ha, with the herd at grass from mid-February until the beginning of November, but with cows housed three weeks before calving from 20 August and the far-off dry cows used to manage the covers.

At 0.8ha – 1.6ha, the majority of fields are small, allowing 12-hour grazing breaks without sub-division in many.

The aim is to close the farm in November at covers of 2100kg DM/ha. When grass growth kicks off in the spring, Huw targets covers of 2700kg to turn the herd into, grazing to a residual of 1600kg.

He uses a plate meter to collect grass data, inputting this into a computer program to calculate the average cover and growth rates for that week. The information is uploaded into a grass planner to enable long-term budgeting.

“We can see what size covers we are going to have and plan our fertiliser and feed requirements around that,” he says.

Data shared with the Farming Connect Welsh Pasture Project shows that the farm grew 8.3tDM/ha to 23 October 2023. The drought took its toll on grass availability in 2022, with production down to 7.5tDM/ha compared to 9.8tDM/ha in 2021.

Going forward, Huw believes there will be even greater pressure on farmers to produce more from less. Being part of the Welsh Pasture Project has been very beneficial in achieving that goal, he reckons.

“By sharing data, I can see what others are growing and I can bounce ideas off those other like-minded farmers.”



JAMES WILLIAMS - Cefn Draw Farm, Swansea

James Williams is the third generation of his family to farm Cefn Draw Farm, Three Crosses, Swansea. The farm had extended to 69 hectares but when James' father retired 29 hectares was sold. With 40 hectares of owned land remaining, James had to rethink his system.

Embarking on a Farming Connect Master Grass course in 2019 was a turning point, instilling the confidence and knowledge to appreciate that grass could hold the key to maintaining livestock numbers at historic rates.

He measures growth weekly, using the software programme, Agrinet, to calculate farm cover and the number of grazing days in each paddock.

These figures are shared with other farmers through the Farming Connect Welsh Pasture Project, allowing growers with similar land, climate and systems to benchmark their own production.

"I really like recording grass data because I can compare the figures every year, and weekly measuring gives me the incentive to go out and look at the farm," says James.

Reflecting on the last four years, he describes it as "transformational".

"I didn't realise the importance of managing grass, I see management above everything else as being the most important of all," he admits.

"The farm has been transformed in the four years since I started this journey. When I first started measuring, in the spring flush, I would record 90kg/ha DM growth a day, in 2023 it was 155kg/ha."

The key difference has been grassland management. Fields are subdivided into paddocks with investment in fencing and water infrastructure and a perimeter track

established around those to make the movement of animals between paddocks a simple and stress-free job that can be done by one person.

"When you are doing daily moves you can see how much grass has grown in a day, it is very exciting to see," says James.

"My one thing is to avoid overgrazing because taking that second bite before the plant has fully recovered takes energy out of the root reserve."

Looking ahead to 2024, he will build on what he has already achieved. "It's all about high utilisation, non-selective grazing and genetics."



SAM SAWDAY - Hill Farm, Hay-on-Wye

At Hill Farm, near Hay-on-Wye, Sam and Will Sawday and their mother, Penny Chantler, run a flock of 1,500 pedigree New Zealand Romneys.

They have been measuring grass for five years, and in 2023, they shared their growth data through the Farming Connect Welsh Pasture Project. Grass measuring is done weekly during the growing season on the 61-hectare (ha) home block.

"Measuring and uploading the data to Agrinet has helped us to understand what our farm is capable of," says Sam.

Before he got involved in the Welsh Pasture Project he used the data shared by other farmers on the site to inform his own decision making.

"I would get an update every two weeks and I could see what was happening from region to region and how we compared."

"It's been particularly important during the summer dry periods – the figures graphically show when growth is dropping.

"If we were doing that on eye alone, we would be 10 days slower in taking action, but we can anticipate those feed shortages and make decisions based on the data."

When the grass is measured it is done in a very uniform way.

"We follow the same route each time, the same pattern, measuring pretty much the same spots, it removes all the variables," says Sam.

What it has shown is how variable performance can be from field to field.

"The most useful aspect is understanding what is there, what's the potential and what are the ups and downs going forward," says Sam.

"The more you measure the more you understand your farm and which fields to subdivide."

It also helps avoid situations when paddocks are overgrazed.

Measuring gave the business the confidence to graze some of the land with 90 dairy-cross steers this summer for the first time, in a grazing agreement with another farm, to build soil fertility and break the worm cycle.

Hill Farm is a business that doesn't stand still and plans for 2024 are already evolving. "We are trying to improve our rotation and improve the balance between quality and rest periods and see what we can achieve," says Sam.



**ANDREW GILES -
Maesllwch Home Farm, Wye Valley**

To produce high-quality milk and keep its dairy cows healthy, Maesllwch Home Farm needs to grow plenty of good grass.

Achieving that comes from measuring yields weekly to monitor sward performance.

“Grass is a key driver of profit in our business,” says Andrew Giles, who produces milk from a herd of 550 New Zealand Friesian cows.

Weekly grass measuring is a job that must be done “without fail”.

For the last three years, Andrew has been sharing his grass growth data through the Farming Connect Welsh Pasture Project.

Gathering this data helps him to plan for pinch points in the growing season, and to manage those at the earliest opportunity.

Maesllwch Home Farm is a very dry farm with a rainfall average of around 860mm (34 inches) a year.

But with excellent grass management from Andrew and his team, the farm can grow an average of 13tDM/ha a year.

When growth falls below the average for what Andrew would expect at a specific time of year, one of the first changes he makes is to extend the length of the grazing round.

If the weather forecast points to a dry spell, concentrate feeding is initially increased and silage might be fed in the paddock too, on top of a fresh grazing break to adjust grass demand.

Grass measuring is done every Monday by herd manager John Thomas, who inputs the data into Agri-net to provide an accurate picture of grass covers and growth.

The data is discussed at a team meeting between Andrew and John, farm manager, Tom Williams, and assistant herd manager, Luke Evans.

Decision making is based on this data to ensure that the herd is presented with high quality grass every day of the grazing season.

Andrew became a Welsh Pasture Project monitor farmer because he understands the value in sharing information and ideas.

“There are many farmers, myself included, who have been measuring and monitoring grass for a good number of years. If we can encourage others to do that through the Welsh Pasture Project and utilise that information then this project has been successful,” he says.



2023 PASTURE GROWTH REVIEW

Overall, the 2023 grazing season has brought higher grass production than previous years. However, high rainfall throughout the majority of the season has caused very challenging grazing conditions for some farms.

After a slower start than previous Springs, grass growth, on average was higher than in 2022 through April and peaked at a weekly average of 86.1 kg DM/ha in the middle of May for dairy and/or beef and sheep farmers. This peak was followed by a trough in grass growth over the following weeks as we experienced an extended dry period early in the season, where grass growth was below growth for the same period in 2022. This continued to be the case until the rain arrived in July, and August was recorded as one of the UK’s top ten wettest summers.

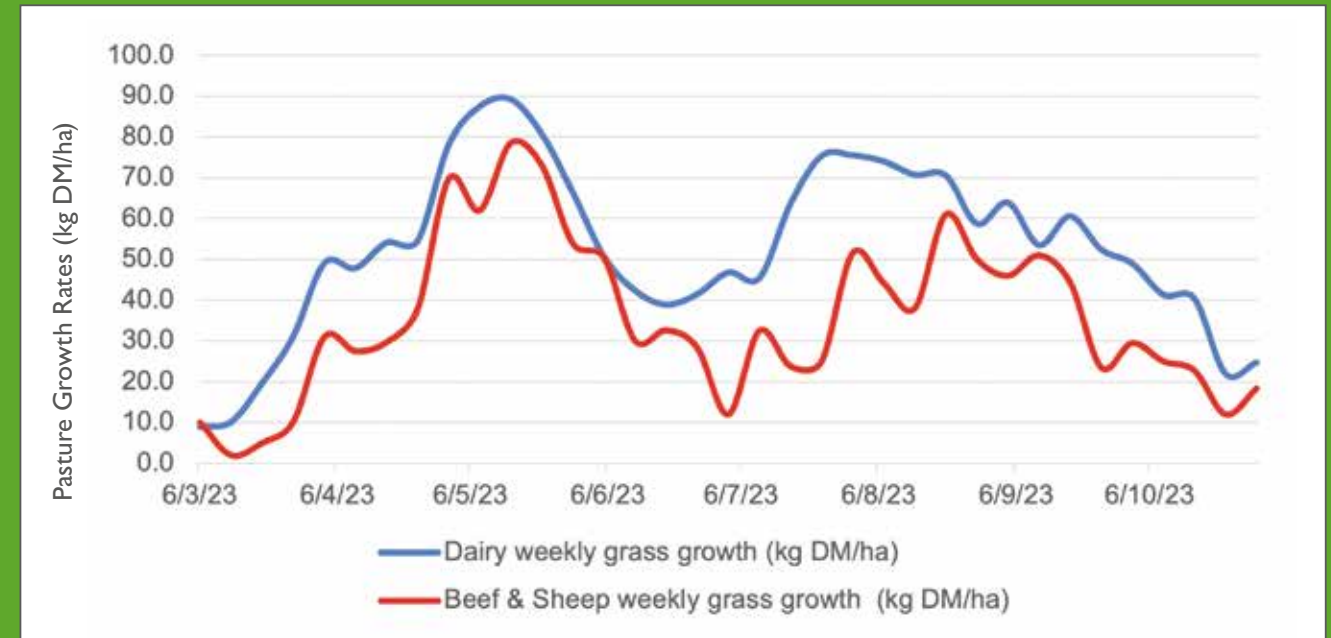


Figure 2 – Welsh Pasture Project pasture growth curve 2023

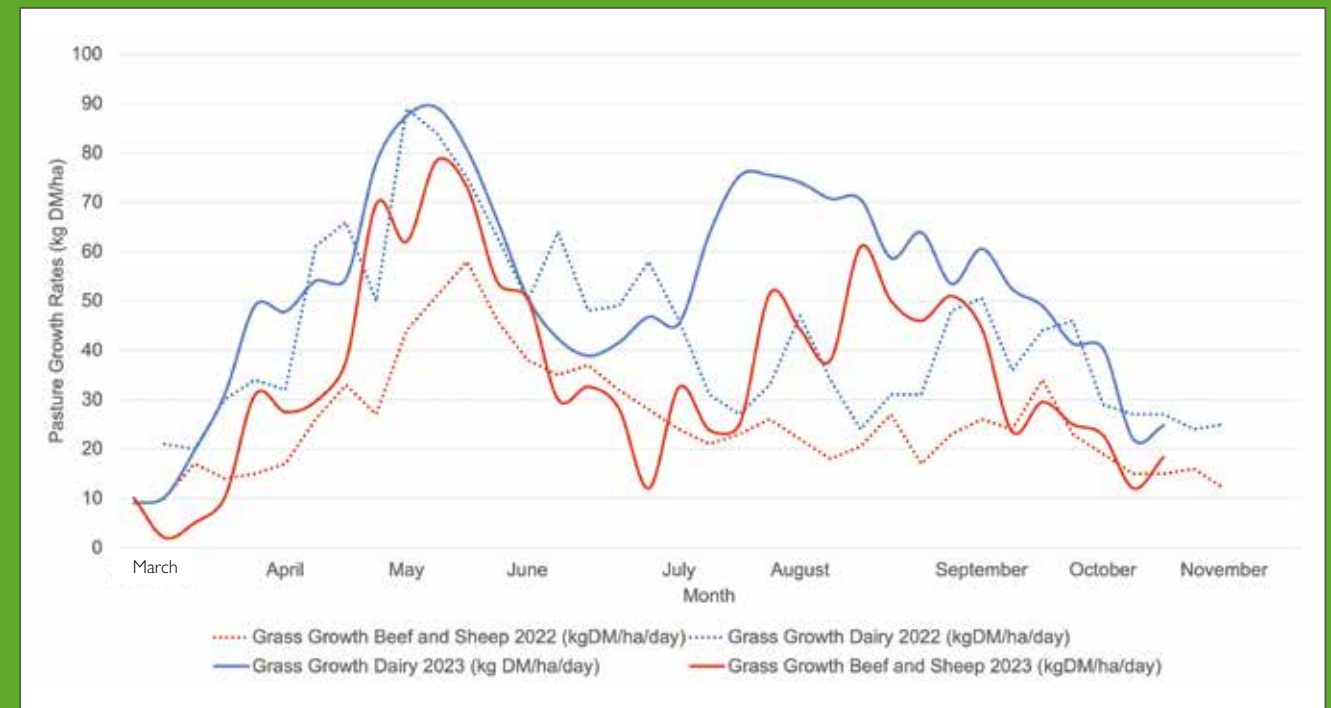


Figure 3 – Welsh Pasture Project pasture growth curve - 2022 vs 2023

REGIONAL PASTURE GROWTH CURVES

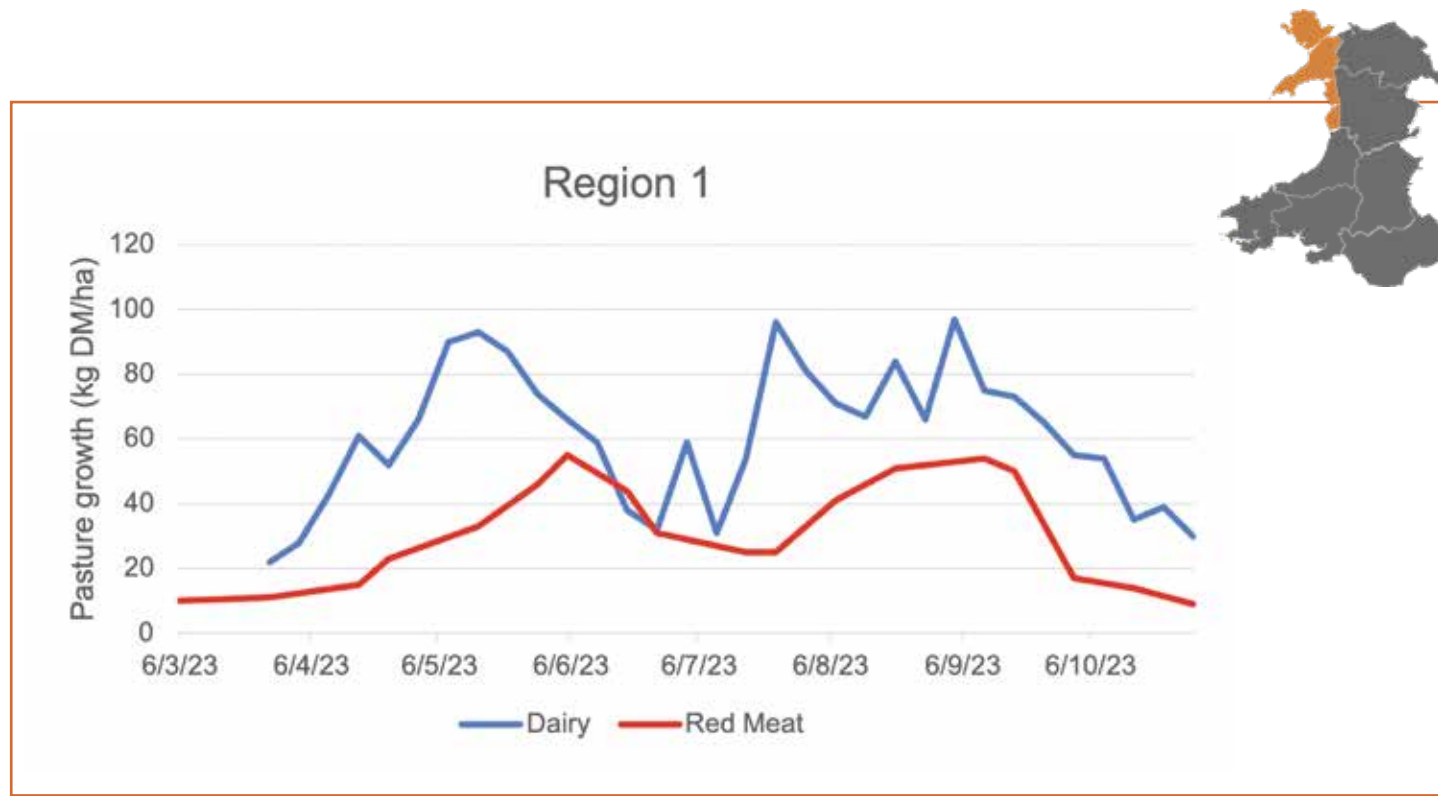


Figure 4a - Pasture growth curve 2023 for region 1

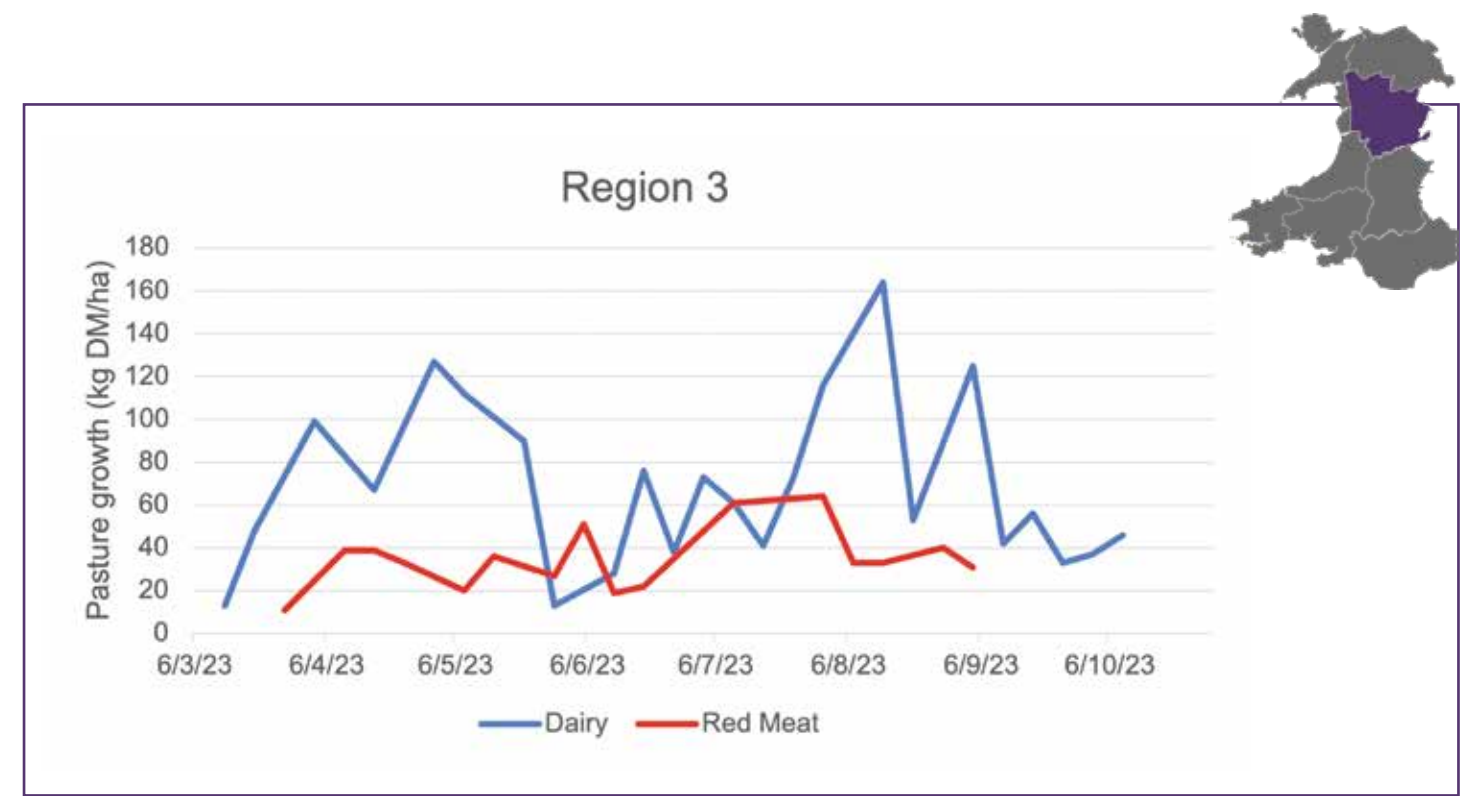


Figure 4c - Pasture growth curve 2023 for region 3

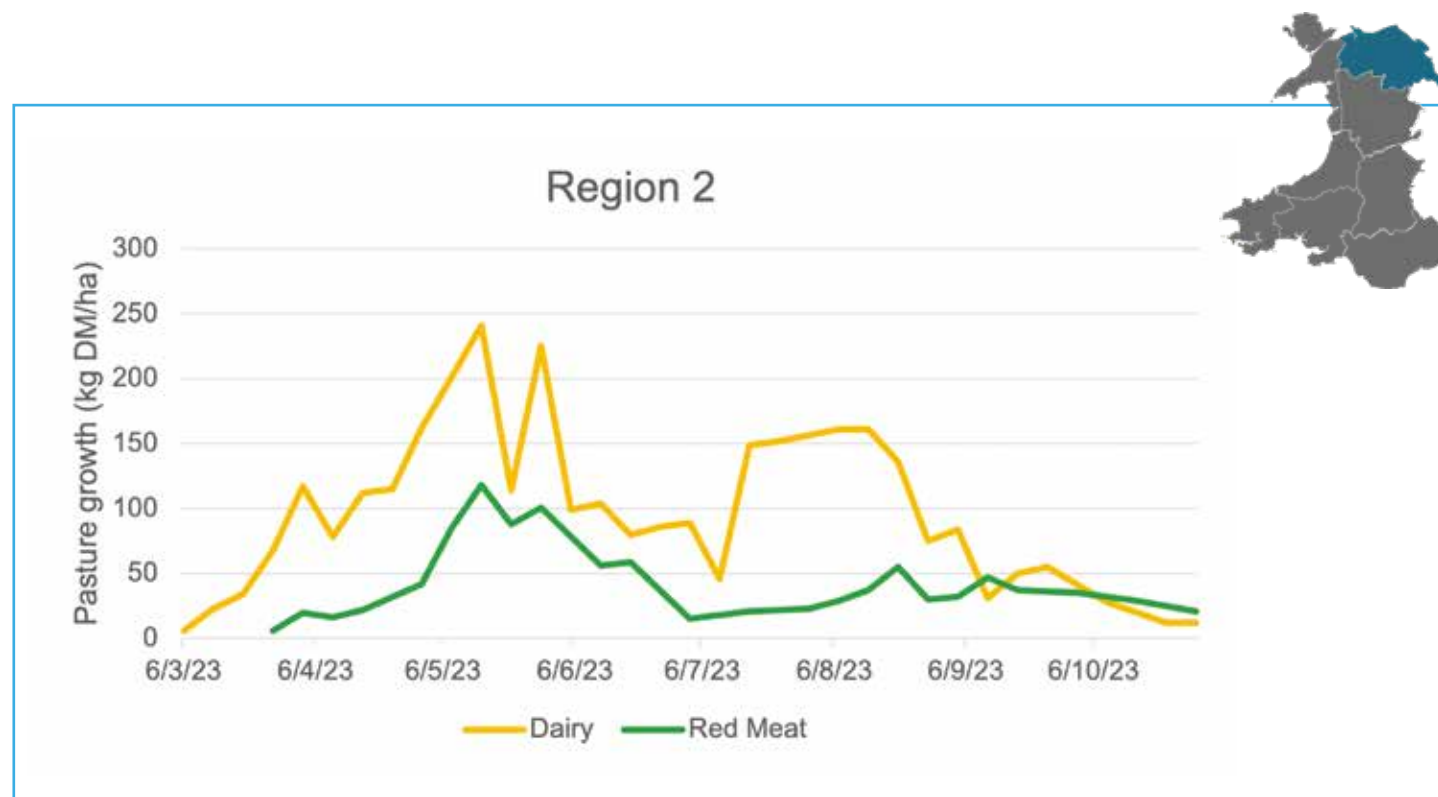


Figure 4b - Pasture growth curve 2023 for region 2

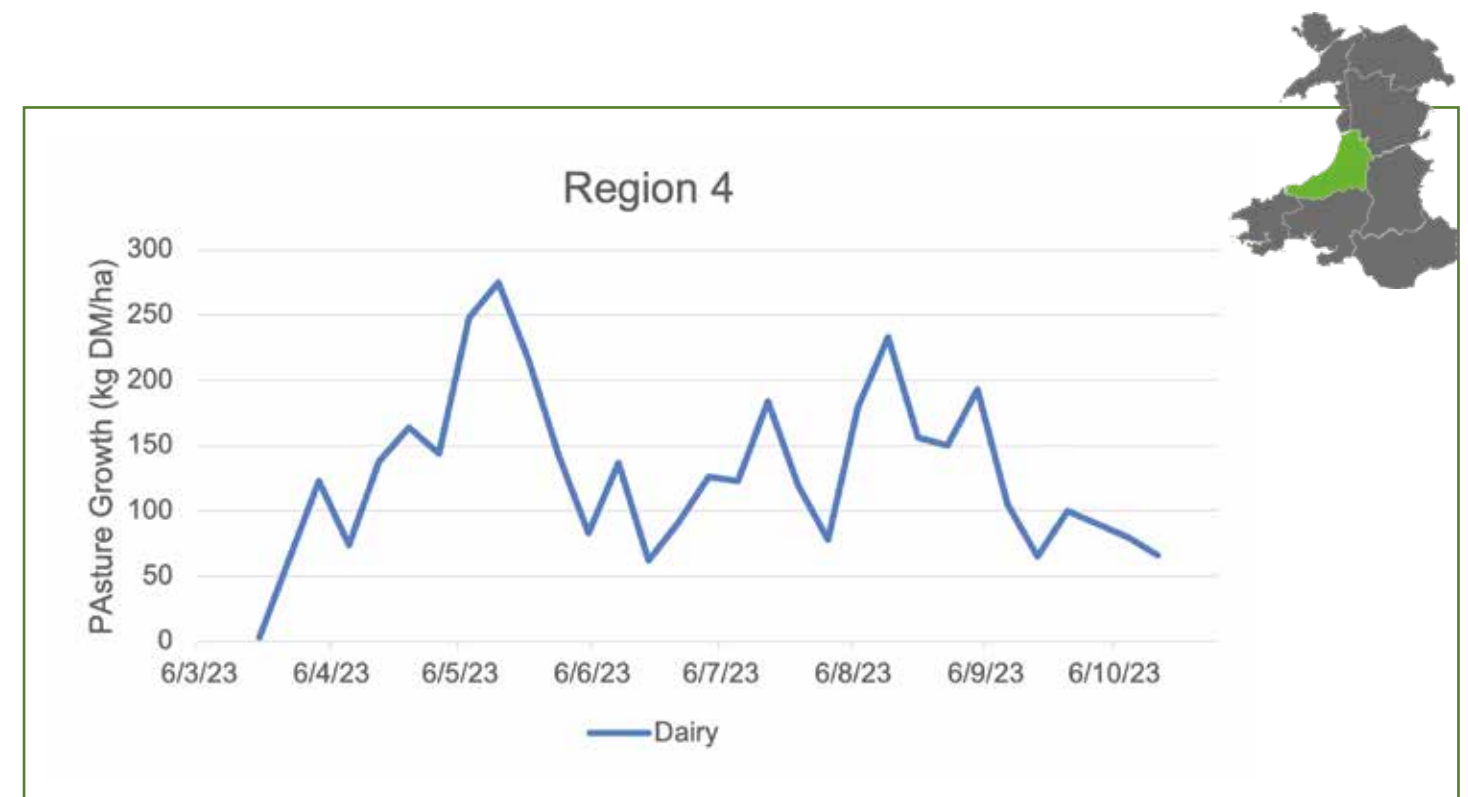


Figure 4d - Pasture growth curve 2023 for region 4

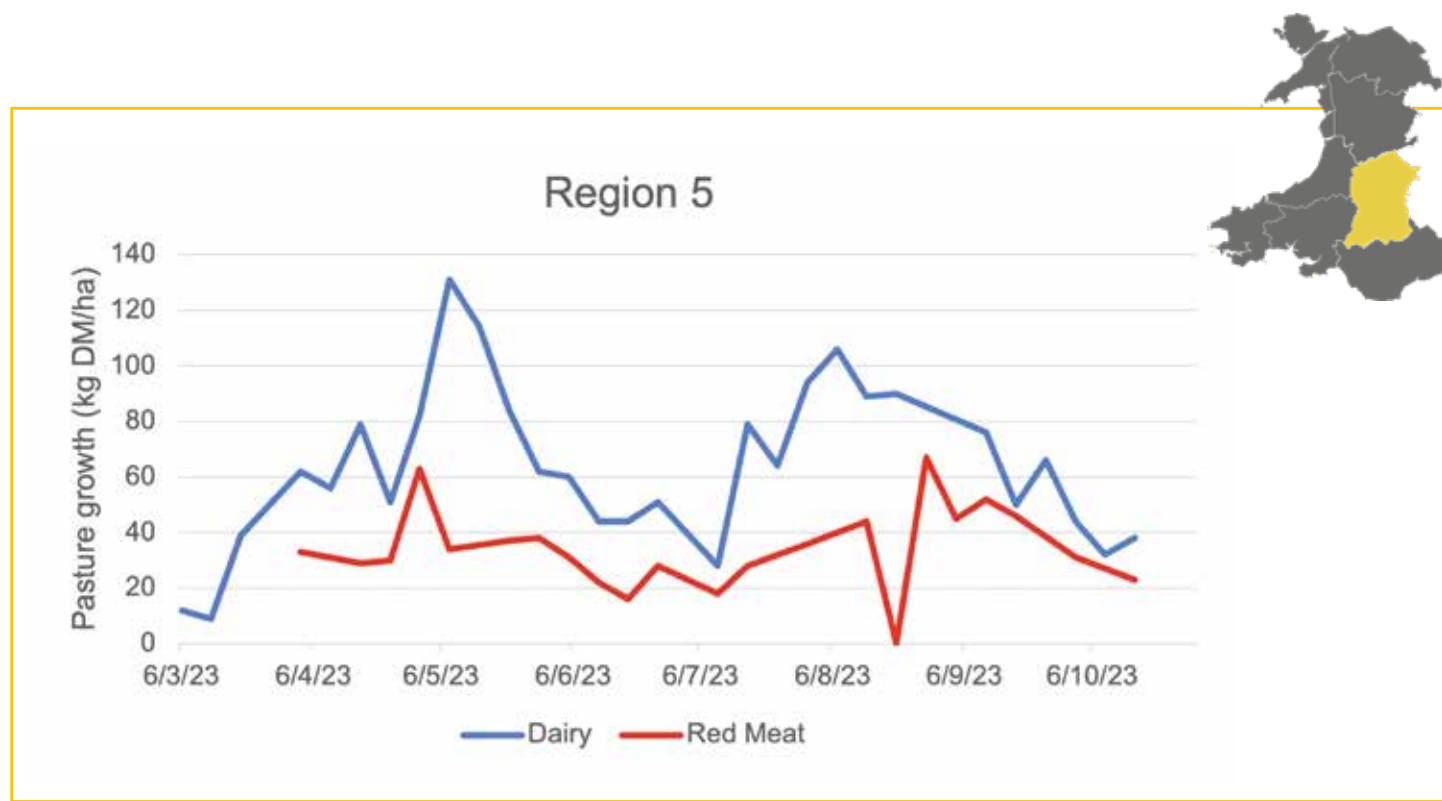


Figure 4e - Pasture growth curve 2023 for region 5

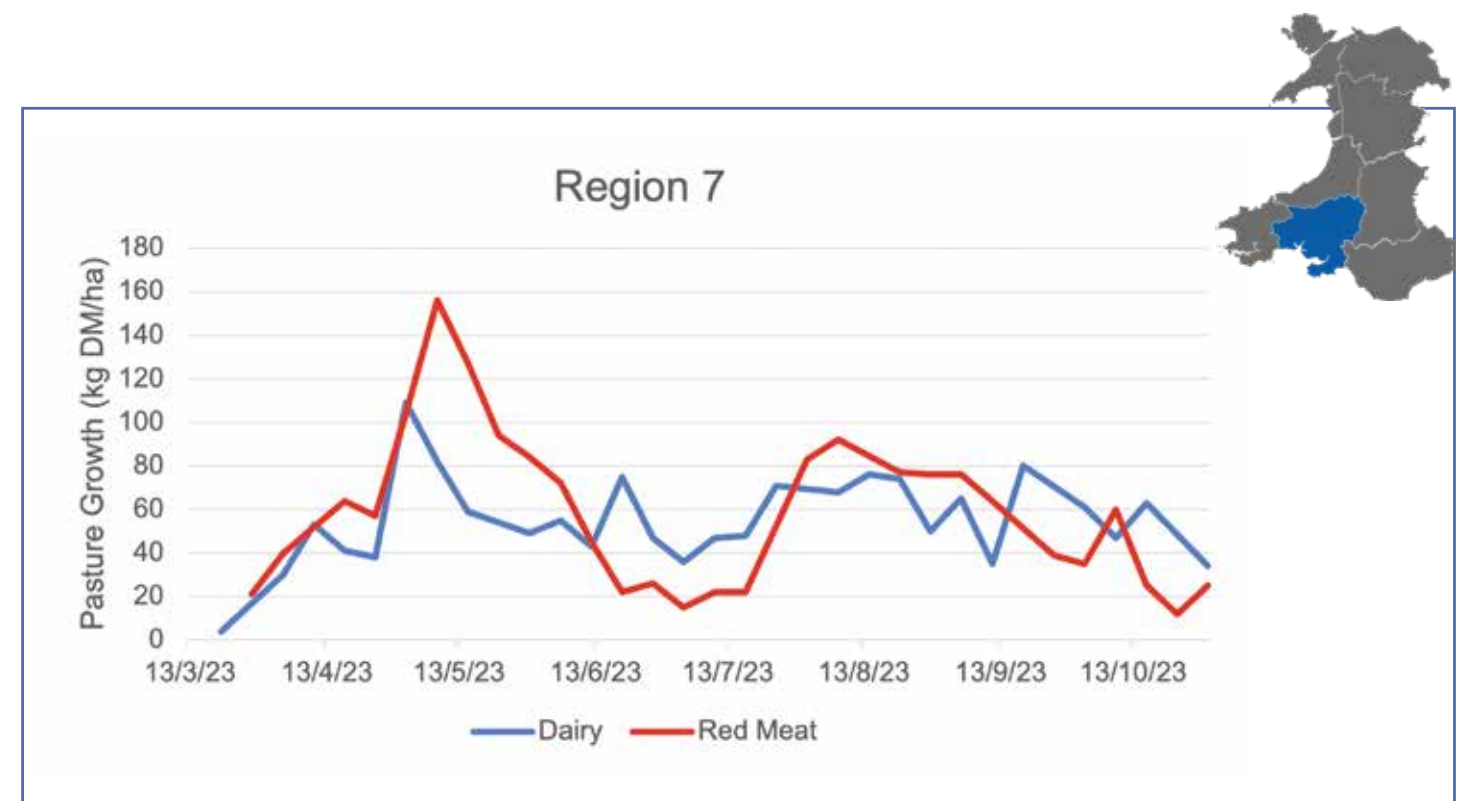


Figure 4g - Pasture growth curve 2023 for region 7



Figure 4f - Pasture growth curve 2023 for region 6



Figure 4h - Pasture growth curve 2023 for region 8

TOTAL PASTURE GROWTH FOR 2023

On average, dairy farms across Wales grew 13.4tDM/ha and beef and/or sheep farms grew 8tDM/ha. 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.

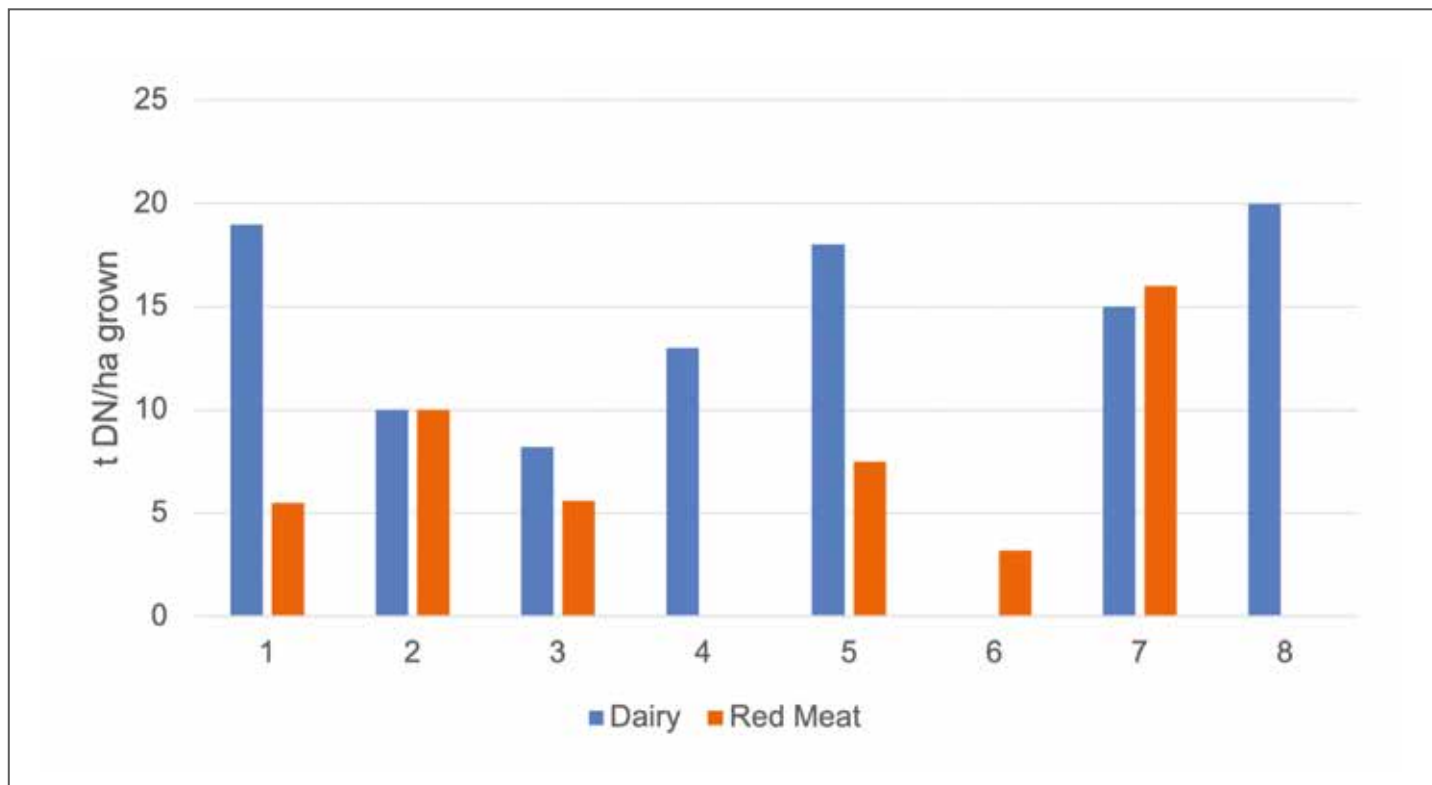


Figure 5 - Estimated tonnes of dry matter (t DM/ha) for the Welsh Pasture Project 2023 per region

This is higher than the 10 t DM/ha and 6.8 t DM/ha reported in 2022 by dairy and beef and/or sheep farmers participating in the Welsh Pasture Project, retrospectively. However, similar to 2022, there is a large variance of pasture growth rates throughout different regions of Wales.

We would like to take this opportunity to thank all the contributing farmers who have submitted their grass measurements throughout the 2023 grazing season. Their commitment and willingness to be a part of the project allows us to provide the latest regional grass growth figures for Wales regularly throughout the season.