

WELSH PASTURE PROJECT 2020 Review

41 farmers, a mixture of dairy, beef and sheep from a range of different land types and systems across Wales have been measuring their pasture regularly since the Welsh Pasture Project started in September. Dairy farmers measured grass on a weekly basis and beef and sheep farmers on a fortnightly basis.

The aims of this project are to:

- Encourage project members to measure pasture regularly and discuss results with other farmers.
- Record regional pasture growth rates and share with all Farming Connect members.
- Provide useful information to support farmers to make proactive grazing management decisions.
- Understand impact of weather on pasture production.
- Understand impact of management on pasture production and pasture quality.

HOW THE PROJECT WORKED

Each farmer had to reliably measure a minimum of 30 hectares (ha) of pasture using a rising plate meter. All plate meters were calibrated and adjusted to use the same equation:

Dry Matter per ha = $125x + 640$
(x =height of compressed pasture in 0.5cm increments)

Farmers ensured consistency by recording a minimum of 30 measurement per field and always following the same walking route across each field. Results were uploaded into pasture management software Agrinet. This data was reviewed weekly by the Precision Grazing team, who followed up any anomalies, before passing the approved data to Farming Connect, who produced the weekly bulletins. 16 farmers were also selected to take pasture quality samples, sharing photos of the pasture before and after sampling.



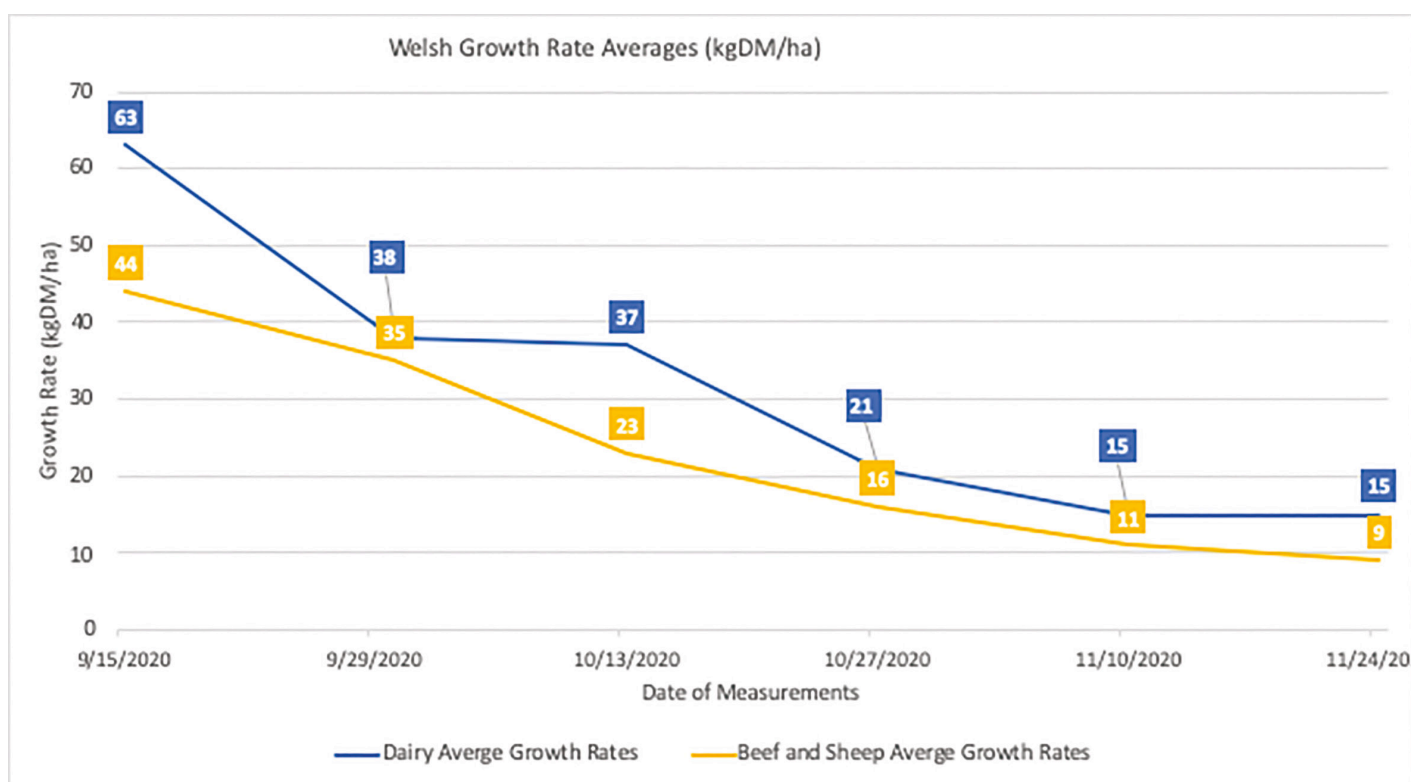
OVERVIEW OF FIGURES

2020 has been a challenging year for many to manage their grazing, with a very wet start to the year preventing early turnout, followed by an unusual dry period in May/June when the highest grass growth rates of the year would usually be expected.

Since the Welsh Pasture Project started in September, higher than average growth rates have been seen across Wales, however, wet conditions in October made utilising pasture efficiently difficult for many farms.

Overall, the project farms finished in a strong position at the end of November with dairy farms with an average farm cover of 2,370kgDM/ha and beef and sheep farms with 2,155kgDM/ha.

The graph below shows the average growth rates of all regions in Wales for dairy, sheep and beef farms over the duration of the project (September – December 2020).



Graph I. Welsh growth rate averages (kgDM/ha)

| Date | Dairy Average Growth Rates (kgDM/ha) | Beef and Sheep Average Growth Rates (kgDM/ha) |
|------------|--------------------------------------|---|
| 15/09/2020 | 63 | 44 |
| 30/09/2020 | 38 | 35 |
| 13/10/2020 | 37 | 23 |
| 27/10/2020 | 21 | 16 |
| 10/11/2020 | 15 | 11 |
| 24/11/2020 | 15 | 9 |

Table I. Welsh growth rate averages (kgDM/ha)

BEEF AND SHEEP CASE STUDY

Farmer: Sam Sawday, Hill Farm, Llanigon Hay on Wye

Farm system: Hill farm partnership, 1,400 ewes spread over 3 main blocks of owned and rented ground, 500 acres farmed on less favourable ground on the Black Mountains, ranging between 500–1,500ft.

The farm is based on a forage based system, only using grass and forage crops. The flock consists of NZ Romney and Romtex ewes with rams sold under the High Country Romneys name. They are split into stud flock and commercial flock. They lamb outdoors in April.



CASE STUDY

Pasture type

“We have lots of permanent pasture, but we do put new leys behind our forage crops. We are moving away from ryegrass and clover and more towards herbal leys and summer cropping now to increase diversity into the system.”

2020 grazing season

“We found this grazing season the most challenging we have had because of the wet winter. The reason we are having feed budget issues now is because of 12 months ago. The trouble was most of the animals were on forage crops in the wet weather and utilisation was poor leading to a shortage of feed.”

“It’s only now, by having a handle on measuring and understanding and comparing to other years’ data, we can see that. We ended up having to do a lot of double grazing last winter, which meant re-grazing cover in January, and that really took our average farm cover down in the beginning of April. Then we had a dry spell. If we had higher covers, we probably would have achieved better grass growth rates, but we had average farm cover of 1,600 – 1,700kgDM/ha in mid to end of April and we were very tight for grass”.

How did measuring help the 2020 grazing season?

“It was really interesting measuring more than normal in the growing season of 2020 as we could foresee where we were heading and what we had to do. It sharpened our decision-making which was really good for us. We made decisions that we wouldn’t have normally done. For example, we took 200-300 ewes from one farm and moving them to another based on the average farm cover measurements of each block to even things out.”

Measuring experience

“I have been measuring pasture covers for three years now. I measure throughout the grazing season and I find it extremely useful to prepare a feed budget.

I usually use Agrinet to enter data in and see where we stand. I don’t fiddle around too much with it. I mainly use it as a visual to understand where we are and work out a management decision from that.

Due to the large area we cover, to make it as practical as possible, I measure an area of 100 acres at about 1,000ft on the farm which represents the rest of the farmed area well. I then use that data to predict growth rates in the other blocks. I measure every 7-10 days.”

Other benefits from measuring grass

“Predicting ahead is the most powerful tool I get from measuring grass, for example, allowing us to measure grass in the autumn to create a feed budget for the winter. Also, to think about when we do things and where growth rates are at. Then, you realise you can achieve a lot more growth. You’re not going into it blind.

We are now in a good position to keep expanding. We have realised this year that the limited variety of animals in our system holds us back. If we had cattle in the system, they could utilise different pastures better to compliment the system we run. A farm needs a variety of species, and a variety of animals, to make it work!”

Hill Farm’s 2020 Grazing Season – Agrinet Best Paddocks

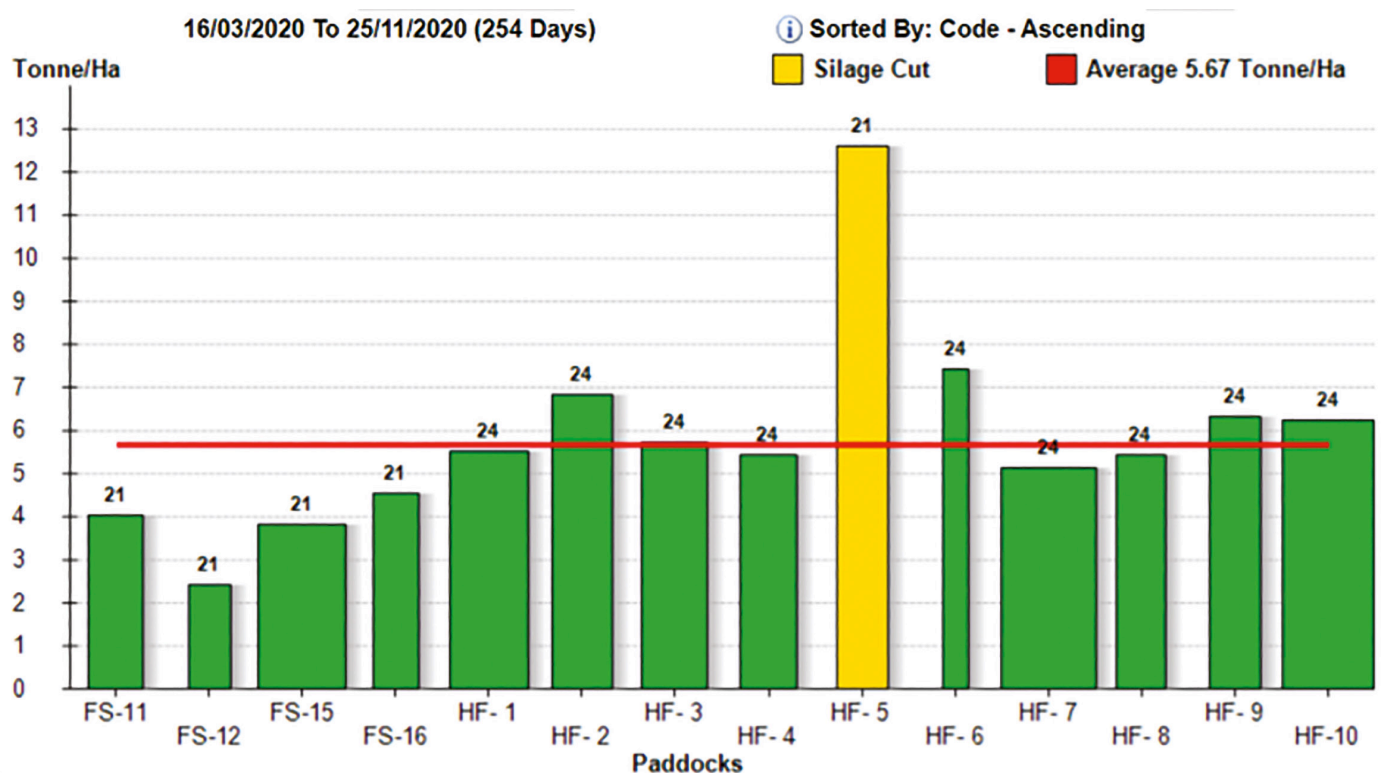
Average growth rate of fields for 2020: 29 kgDM/ha

Average pasture grown per ha: 5.67 tonnes/ha

Number of measurements: 24

Most of the pasture over the 500 acres of land is permanent pasture, ranging from 500 – 1,500ft. On average, field yields between 4-7tdm/ha.

The Agrinet Best Paddocks feature can identify best and worst performing fields as explained below (reviewing 2020 grazing season). On Sam’s farm, measuring has enabled him to identify FS – 12 and FS – 15 as the poorest performing fields, justifying actions to be taken to improve their performance.



Graph 2. Best Agrinet Paddocks feature for Hill Farm

DAIRY CASE STUDY

Farmer: Edward Morgan, Carreg-y-Llech Farm, Mold

Farm system: Based in Denbighshire, Edward runs an autumn block calving system, milking 220 cows. The system has a focus on grassland management with the grazing platform covering 48 hectares (ha) split into 20 paddocks, averaging 2ha per paddock.

Nature of pasture

"The oldest ley is 10 years old. We aim to renew 10% of the grazing platform every year. Autumn is the best time for us to reseed as we need the grass in spring as we are autumn calving system."

2020 grazing season

"We didn't turn our cows out until the last week of March after a wet winter. It seemed to dry up quickly after that."

"This year was the first year we didn't have any sheep on the grazing platform. We normally have them for two to three weeks in November to graze all the platform off. We stopped taking the sheep as we wanted to turn out earlier in spring. It worked really well this year, much better than expected!"

"We have the benefit with autumn calving as to numbers we are able to turn out in spring. We turned 100 cows out first and then more as we could. We kept anything producing over 28 litres inside and turned the rest out. The grass then started to grow rapidly and everything got turned out. We felt in control and on top of the grass this year despite it being challenging at times."

"My worry was, if we didn't have sheep, we would end up with loads of grass which will lose its quality and cows won't graze it or perform as we would like them to. But, as we managed it well through measuring grass and planning ahead, that wasn't the case at all"

"It became dry very quickly and we had very little growth during May. An allocation of 4 acres per day was kept to and we fed ad lib round bales to fill the feed gap for a week to reduce pressure on the grazing platform. In a similar situation in the past, we would have sped up the grazing rotation and allocating more area which would put us in a bigger feed deficit later on and cost us a lot more."

"Then, we had a peak of high grass growth towards the end of June, which I found hard to manage because all paddocks were growing at the same time. We took some bales off and this allowed us to manage the higher growth rates."

Autumn management

"Last year, we set stocked the dry cows in November, but this year, we split the fields up and kept them on a rotation to ensure we had a good clean out of pasture. We've seen much better regrowth on those fields compared to last year. The aim now is to stop temptation to graze it with sheep!"

Agrinet

"We have used Agrinet for a few years but this is the first year we have walked the farm every week without fail. This has given us more control of our grazing and the understanding of what is going on."

"I've found measuring for the Welsh Pasture Project and seeing the growth rates in other areas really interesting. As my assistant herds person Chiara measures the farm, I'm not always walking round but I can interpretate Agrinet, you can virtually farm blind!"

"After the walk each week, we have a discussion about the results asking each other what we think and then, if needed, run a few scenarios through Agrinet to see what the best plan is. For example, which field is best to take out of the rotation for bales, and then we act on it."

“By measuring we also got an understanding of what we have done and how it varies each year. If I didn’t have that it would just be that we made some bales at some point!”

“The field we reseeded this time was one of the fields that had the lowest growing rates we’ve had, but if you just looked at it and didn’t measure it you would think it was one of the best. But, by measuring, I knew it had grown the least grass from the Agrinet Best Paddocks feature.”

“More than anything, measuring makes you go out and have a look.”

“I don’t think it’s easy to manage grazing if you want to do it properly, but one thing that really helps is if you have the infrastructure in place. It makes life a lot easier and to realise the value of fresh grass in your system. It might be easy to turn them in the field and close the gate, but to do it properly is not.”

“I find one of the key things with measuring is knowing your pre-grazing and post-grazing heights. We have to graze a certain height to get around the platform at a certain rate to make sure we don’t have too much or too little grass.”

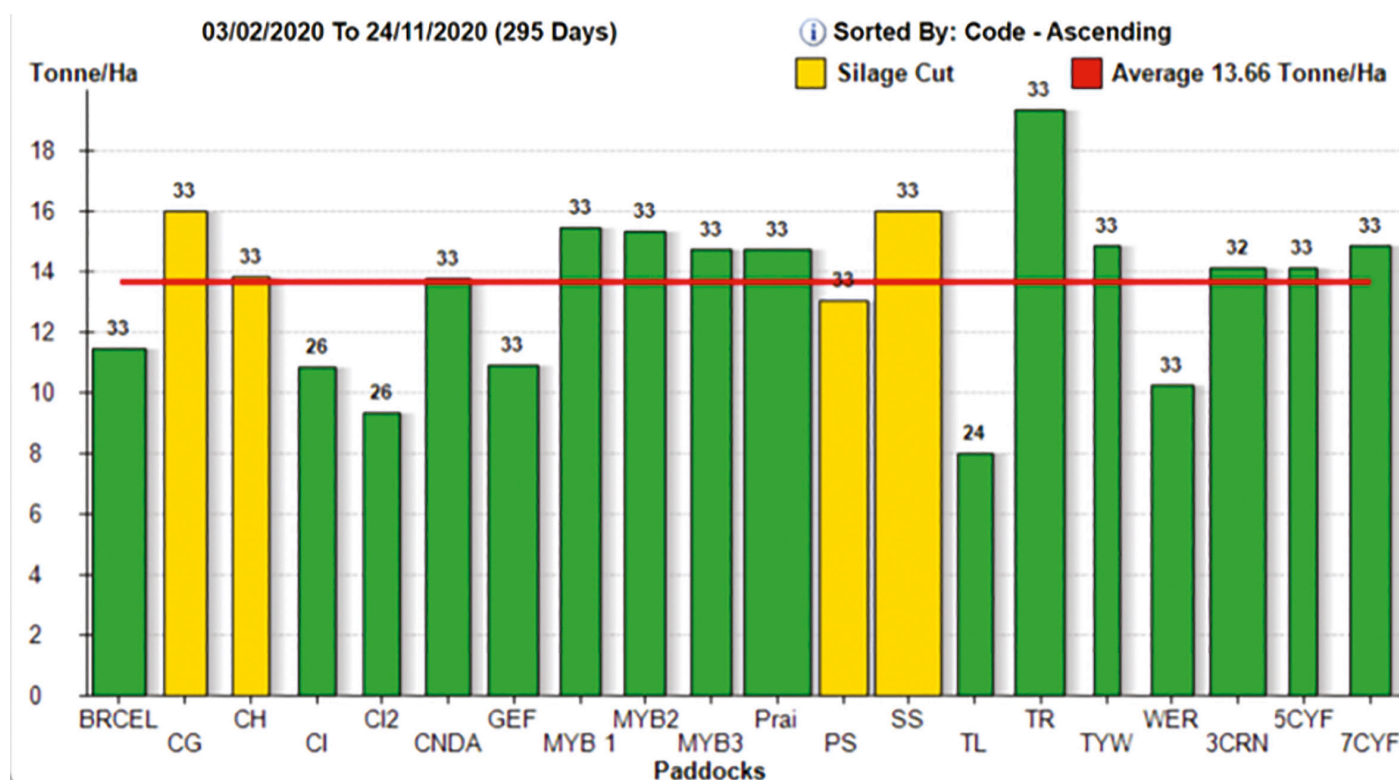
Carreg-y-Llech Farm’s 2020 Grazing Season – Agrinet Best Paddocks

Average growth rate of fields for the year: 60 kgDM/ha

Average pasture grown per ha: 13.66 tonnes/ha

Number of measurements: 33

The average field yields between 12-16 tdm/ha.



Graph 3. Best Agrinet Paddocks feature for Carreg-y-Llech

REVIEWING YOUR 2020 GRAZING SEASON

As the grazing season comes to an end, it is important to review how the season has gone on your farm.

If you've been measuring pasture all year into a software like Agrinet, take a look at the reports the software produces including best paddocks, average grass cover and grass growth throughout the year.

Discuss with your team members or make notes on how the grazing year performed.

Think about things such as:

- Did you have enough grass in spring 2020?
- Which fields were most prone to drier or wetter weather?
- Which fields were you unable to graze out in less than seven days?
- Which fields had the slowest regrowth?
- At which points of the year were stock not performing?

What further investigation is needed?

- Soil analysis – visual and chemical (soil test)
- Sward analysis – grass species and clover %

What actions are needed to improve?

- Arrange lime or compound fertiliser for spring
- Select fields for re-seeding
- Repair or renew fencing
- Maintain infrastructure – sub-division and water