

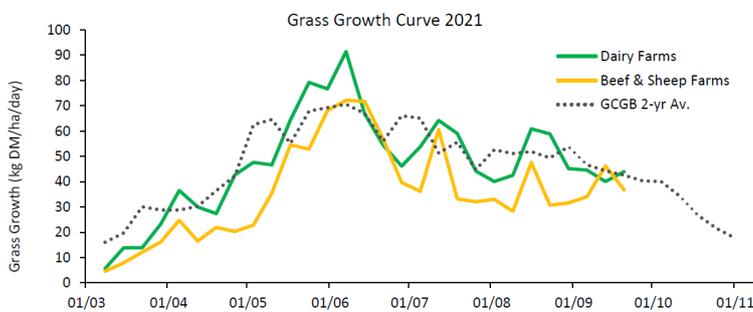
# FORAGE for PROFIT



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The Forage for Profit Discussion Group are a group of beef and sheep producers based in South West Scotland with a common desire to improve business profitability through improved utilisation of grass and forage crops.

August and early September have seen a dramatic increase in grass growth after some much needed rain and a jump in temperatures. The localised rainfall is demonstrated in GrassCheck GB grass growth figures with the average growth at 38.9kg DM/ha but a range of 23—80.2kg DM recorded. Annual growth figures are 11% lower than the Grasscheck two year average with an average yield of 7.5t DM/ha. Rainfall is still only around 50% of the typical annual rainfall at the SEPA Minnigaff weather station so potentially some prolonged wet spells to come in next few months.



## Rotationally Grazing Dairy Cows

The Forage for Profit group recently visited a local dairy farmer who converted from beef and sheep 5 years ago. The farm block calves in February with cows housed in December until turnout at calving after which they are rotationally grazed. The aim of this visit was to see what grass management techniques could be applied to a beef and sheep situation.

Grass is measured weekly almost all year round with grass covers entered into Agrinet to plot grass growth and produce a feed wedge. This wedge is used for all decision making such as when silage is cut, what fields are grazed next and how long they are grazed for. The grass is measured with a trail behind pasture-meter and measurement of the 150ha dairy platform and input of data takes approximately 2hrs per week. Silage is made from paddocks when there is a surplus of grass with supplements fed during deficits. The farm has a dairy platform which grazes only milking cows and then a separate block is used for grazing youngstock which simplifies the management of supply and demand for grass.

Rotationally grazing dairy cows has an element of simplicity as there is only one category of stock all with similar demands for dry matter intake for a set period of time. Beef and Sheep farms have multiple stock categories at any one time on the farm so requires more planning and inevitably more paddocks. The easiest way to start rotational grazing on a beef and sheep farm is with uniform groups such as store calves in spring/summer or ewes in autumn/winter. Rotational grazing of ewes and lambs before weaning can often compromise lamb performance as there can be too much competition from the ewes. If operating this system a leader—follower system should be adopted where ewes and lambs are given the first grazing and leave longer residuals which are then grazed by following cattle.

Essentially, the principles for grass management applies across both sectors but systems will differ when it comes to animal management and how they are monitored. A beef and sheep will farm will require more groups for different stock classes and will experience more variation in demand but the yields of grass being achieved by dairy farms gives the beef and sheep industry something to aspire to.

For more information and events from the Farm Advisory Service see [www.fas.scot](http://www.fas.scot) or find us on Facebook or follow us on Twitter @FasScot



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# FORAGE *for* PROFIT — Managing Grass Growth

## Building Autumn Grass Covers

Successful rotational grazing requires advance planning and actions taken in autumn will dictate grass available in the spring. The most important thing is that grass gets a rest to allow it to grow.

- During peak growth a new grass leaf will emerge every 7 days, as the season progresses into winter it may take 30 days to achieve the 3 leaf stage before grazing so rest periods will need to be longer during winter.
- Farm average cover in the autumn will need to be higher in the autumn than spring due to slower growth. Start building grass covers in August and September. Target farm average cover of 2600kg DM/ha for mid September
- If grass growth is slow in August and September reduce demand for grass to build covers
- Strip graze very long covers (>3500kg DM/ha) to increase utilisation
- It is important to graze swards in the autumn to clear out the base of sward and allow light in to encourage tillering but also allow enough time for grass covers to build before we enter a period of little or no growth. Daughter tillers produced in the autumn will form the base of grass swards in the spring.
- Nitrogen applications will now not be economically or environmentally viable but soils are still warm and with adequate moisture there will be a release of soil mineralizable nitrogen to support growth. Autumn is a good time to take soil samples and monitor pH, P and K levels. Response to Phosphate applications are greatest in the spring so it is recommended to apply in early spring and K will depend on whether land is required for grazing cattle in the spring and if so consider applying in the autumn or later in spring.

With all grazing systems the main aim is to give grass enough rest time to grow to its potential and ensure the feed requirements of the livestock being grazed are being met.

## Winter Feed Budget

Forage stocks on farm this winter will be lower than perhaps comfortable and with rising costs a feed budget is the best way to plan requirements and buy additional feed needed for the winter.

**1. Calculate the volume of forage available** – clamp length (L) x breadth (B) x height (H). Calculate the wedge and sloped sides separately ( $L \times B \times H \div 2$ ), before adding onto the total cubic meterage (m<sup>3</sup>).

**2. Convert volume (m<sup>3</sup>) into estimated tonnage** – assume 600kg/m<sup>3</sup> for dry silage, grass (wholecrop and maize silage have similar crop densities). Therefore, if 1,000m<sup>3</sup> x 0.6t = 600t forage freshweight. And if there is no effluent it will be +30%DM i.e. 600t x 0.3 = 180t dry matter. Refine this stage once a silage analysis is available. Similarly, weigh a few bales as they can differ significantly.

**3. Calculate silage demand** – the size of animal, body condition, stage of pregnancy, liveweight gain etc all impact actual demand. A formulated ration will be required to better match silage(s) to stock-class. In the meantime, let's assume the dry matter required for 100 cows and 86 weaned calves is 9kgDM/d and 4kgDM/d from grass silage (including 10% for wastage) over 180d winter. That is 224t DM demand. A rough table is provided below to support individuals calculations:

**Estimated forage dry matter intakes per day:**

<b>Spring calving beef cows</b>	8kg DM/d
<b>Autumn calving beef cows</b>	10kg DM/d
<b>Store cattle</b>	1.5kg/100kg lwt
<b>Ewe</b>	1.4kg DM/d

No. of cattle	x	DM intake/ head/day	=	Total intake	x	No. of days	=	Total (t)
100	x	9	=	900	x	180	=	162
86	x	4	=	344	x	180	=	62
						<b>Total (t)</b>		224

**4. Adjusting for a shortfall**—there may still be time to take another cut of silage or wholecrop spring cereals.

To calculate requirements reverse stage two above i.e. with a 44t DM shortfall, if budgeting on 30% DM forage =  $44 \div 0.3 = 147$ t freshweight. Supposing a yield of 12t FW/acre of spring barley wholecrop, 13 acres would be required.

NB. this is a budget that should be refined once more accurate information becomes available and revisited in the early months of feed-out. It is recommended to analysis the silage as soon as possible and build those figures into ration formulations.