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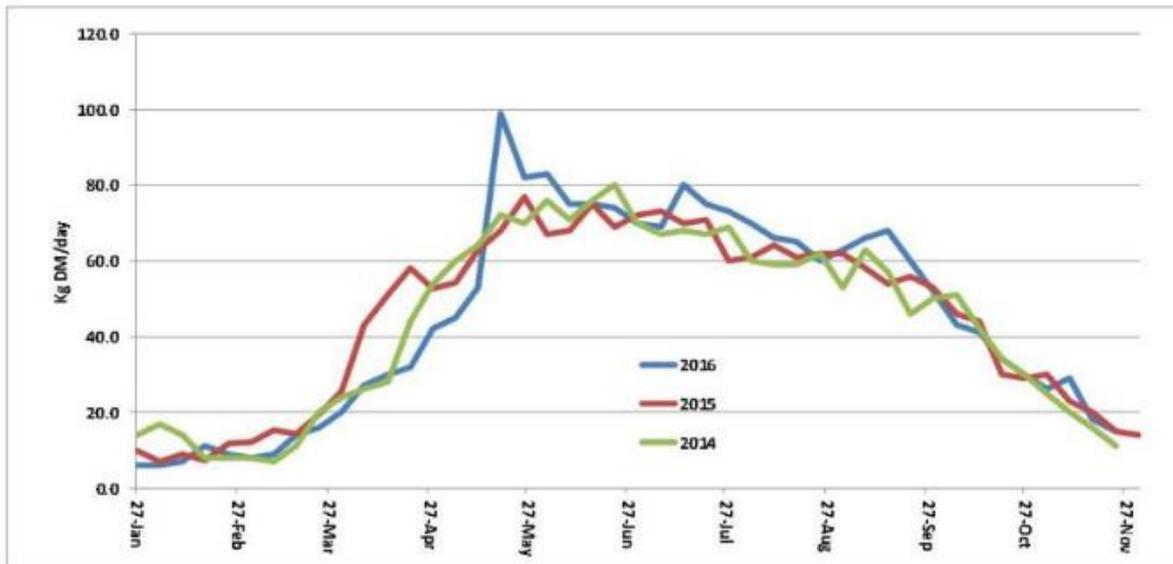
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## How is growth calculated

Growth is measured in kilograms of grass dry matter increase per day. For example, if a paddock was 1000 kgDM/Ha on Monday and 1350 kgDM/Ha 7 days later then the growth for the week is 350 kgDM/Ha and the daily growth is 350/7 days = 50 kgDM/Ha/Day

Calculating growth is one of the major outcomes from weekly measurements. Knowing the growth last week helps a lot in terms of making decisions for the week to come.

Typical growth curve for the year



The above growth shows growth for Ireland during 2016, 2015 and 2014. Useful points are...

1. Growth in December, January and February are low at between 5 and 10 typically
2. Growth starts to pick up at the end of March and April is a month of rapid increases
3. Between May and September, growth is in a band between 60 and 80.
4. Growth spikes above 80 are rare and you cannot plan for growths this high.
5. Growth in October can be quite good at 40

## Why is growth important

Growth is important since it measures the amount of new grass appearing on your farm each day. Then the key question is: how fast are my stock consuming grass. This is called Demand and there are documents in the Help Centre devoted to Demand calculations.

A simple demand example here is: you have 100 500kg cattle grazing 10 kgDM of grass each per day, which is 1000kg total consumption of grass dry matter per day. Let's assume they have access to 20Ha of grass, so the Demand/day is  $1000/20 = 50$  kgDM/Ha/day.

If the demand is 50 and the growth is 30, then you are grazing quicker than it is growing. Unless growth picks up soon with better weather to come, this is not sustainable and you have too many cattle eating too much grass

If the demand is 50 and the growth is 80, then the grass is likely to get too strong very quickly. The grass is growing quicker than the cattle and graze it down. This will require a possible change of management, perhaps put more cattle on this 20Ha or keep some of the 20Ha for silage.

## Growth and Weather

How you manage the relationship between growth and demand are the key to making profitable decisions in a timely manner.

Always make these decisions with an eye on the weather forecast since the growth changes quickly when the weather changes. For example if the growth was 80 last week and you make a decision based on a future growth of 80, if the weather changes from sunny/warm to rain/cold the growth can drop very quickly from 80 to 40.

## Negative growth

In very rare situations it will appear that there is less grass dry matter on a paddock on this measurement compared to the previous measurement. This can happen in spring, especially after a cold frosty winter, or during a drought situation.

For example, you have a cover in October of 700 and the next cover in February appears to be 400 yet there was no grazing in between. One point to keep in mind is that grass dry matter increases as the growing period increases. So the dry matter % of the grass in February could be over 20% while it might have been 15% in October. So it is quite possible that the cover of 400 in February was underestimated.

Likewise if your land has had no rain for an extended period, a plate meter might read that a paddock has dropped in cover, yet in reality the grass dry matter % is much higher than last week and the actual grass cover is higher than the value measured by the plater meter.

PBI will allow for a cover drop of 200 between farm walks before it insists on getting a graze event or a silage cut event. But only paddocks with a positive growth are used to calculate growth for the farm. So if a paddock was 700 last week and 630 this week, the growth is in theory -70 for the week or -10 per day, but PBI will ignore this negative growth in any case when calculating average growth for the farm.

### Average Farm Growth Rates

There are **two growth rates** displayed under the wedge. See screen shot below from the wedge screen.

|                                   |                        |                |
|-----------------------------------|------------------------|----------------|
| Farm Cover (kg DM/ha)             |                        | 892            |
| Cover / LU (kg DM/LU)             | <a href="#">i Help</a> | 162            |
| <b>Growth / ha (kg DM/ha/day)</b> | <a href="#">i Help</a> | <b>61 (43)</b> |
| Demand / ha (kg DM/ha/day)        |                        | 78             |
| Demand / day (kg DM/day)          | <a href="#">i Help</a> | 1340           |
| Days ahead                        | <a href="#">i Help</a> | 11             |
| Kg LWT / ha                       | <a href="#">i Help</a> | 0              |

The first growth rate value is calculated from paddocks with the paddock status 'Grass' where the cover has increased or the cover has remained the same as the previous weeks cover (*ungrazed paddocks only*).

The growth rate in the brackets is calculated from all paddocks with the status 'Grass' and 'Being Grazed' where the cover has increased, decreased or remained the same as the previous weeks cover (*growth for all paddocks, grazed and ungrazed*).

See example below

|         |           | Ungrazed Paddocks  |            |               |
|---------|-----------|--|------------|---------------|
|         |           | Grazed Paddock   |            |               |
| Paddock | Area (ha) | Paddock Status   | Growth/day | Growth Area x |
| 1       | 1         | Grass  | 50         | 50            |
| 2       | 1         | Being Grazed   | (10)       | 10            |
| 3       | 1         | Grass  | 40         | 40            |
| 4       | 3         | Grass  | 30         | 90            |
| 5       | 4         | Grass  | 20         | 80            |
| 6       | 2         | Grass  | (50)       | 100           |
| 7       | 2         | Grass  | 30         | 60            |
| 8       | 2         | Grass  | 35         | 70            |
| 9       | 1         | Grass  | 25         | 25            |
| 10      | 4         | Grass  | (30)       | 120           |
|         |           | Area of Ungrazed Paddocks  | 14         |               |
|         |           | Area of Grazed and Ungrazed Paddocks   | 21         |               |
|         |           | Sum of growth on Ungrazed Paddocks   | 415        |               |
|         |           | Sum of growth on Ungrazed & Grazed Paddocks  | 645        |               |
|         |           | Average growth rate on paddocks which have increased or remained the same            | 30         |               |
|         |           | Average growth rate on paddocks which have increased, decreased or remained the same | (31)       |               |