



The Importance of Grass Budgeting on Irish Farms

Donal Patton

Teagasc, Dairy Production Research Centre, Moorepark, Fermoy, Co. Cork

Teagasc Ballyhaise Agricultural College, Co. Cavan



Presentation outline

- **Maintaining resilient grass based systems post quota.**
- **What is a grass budget?**
- **Why improving grass budgeting skills is beneficial.**
- **How to use and adapt your budget.**



Resilient Grass-based Dairy Systems

- SR matched to grass growth over a long grazing season

t Concentrate DM/cow	<i>Pasture grown, t</i>			
	10	12	14	16
0.00	1.5	2.0	2.3	2.6
0.25	1.7	2.1	2.4	2.8
0.50	1.8	2.2	2.5	3.0
0.75	1.9	2.3	2.7	3.1

- Increased grass production and utilisation essential (16 & 13 t DM /ha)
- National statistics
 - Average grazing season length of 223 days (Lapple et al., 2012)
 - Grass availability limits extended grazing (Creighton et al., 2011)
 - Feed supplementation at grazing is inefficient (Ramsbottom et al., 2015)
- Importance of grass supply/demand management will become more important as stocking rates increase on farms

Managing Supply and Demand

- Learning how to manage supply and demand is a skill set developed over time.
- The first step is learning how to accurately measure grass available.
- Regular measurement will allow you to build up a picture of the growth potential of your farm at particular times of the year.
- Using this information we can set out target covers for each week.
- For farmers who are comfortable with measurement budgeting is the next logical step.
- Among those measuring number who are using a grass budget is small.

Grass is a perishable feed

- Below 1200 kg DM / ha
- restricts growth
- Restricts intake



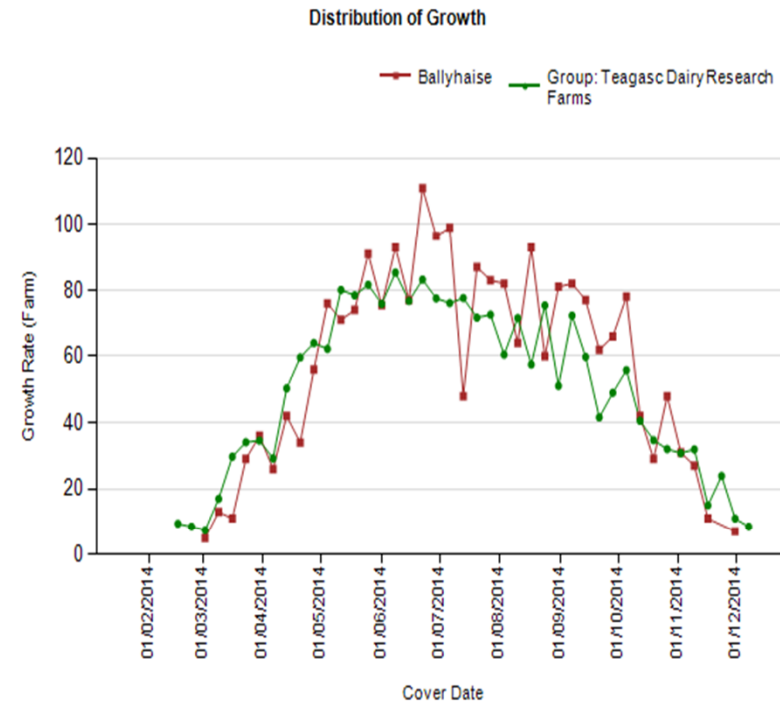
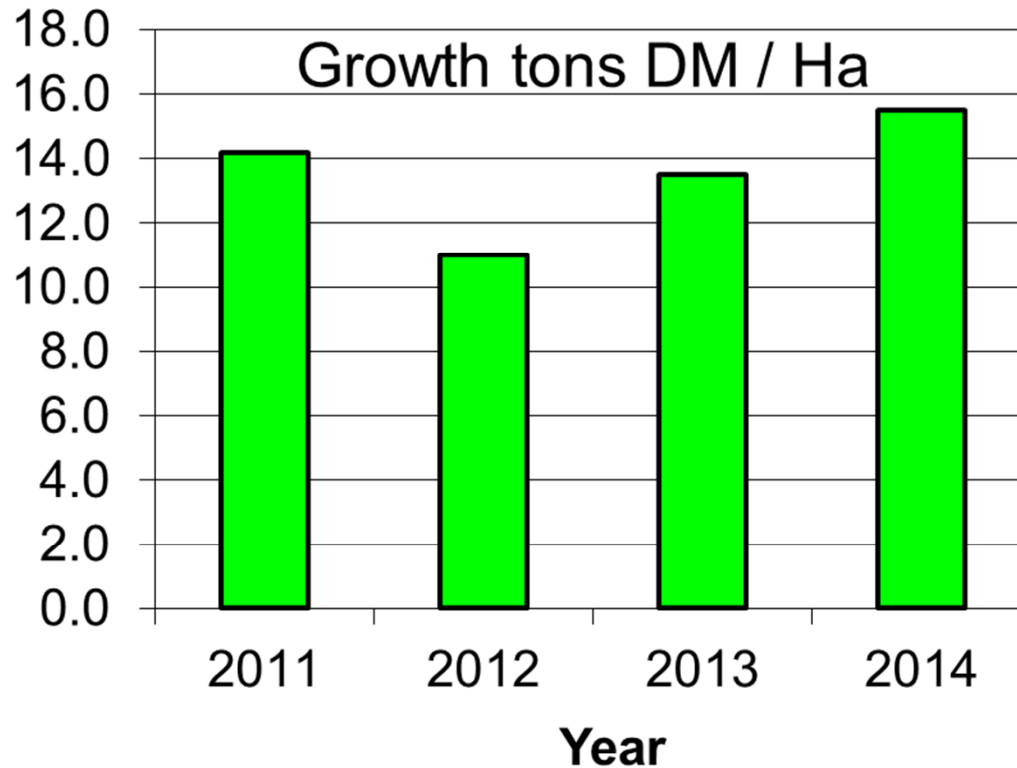
- 1200 – 1500kg DM / ha
- Max growth
- Max intake
- Max utilisation



- Above 1500 Kg DM / ha
- Restricts growth
- Restricts intake
- Restricts utilisation

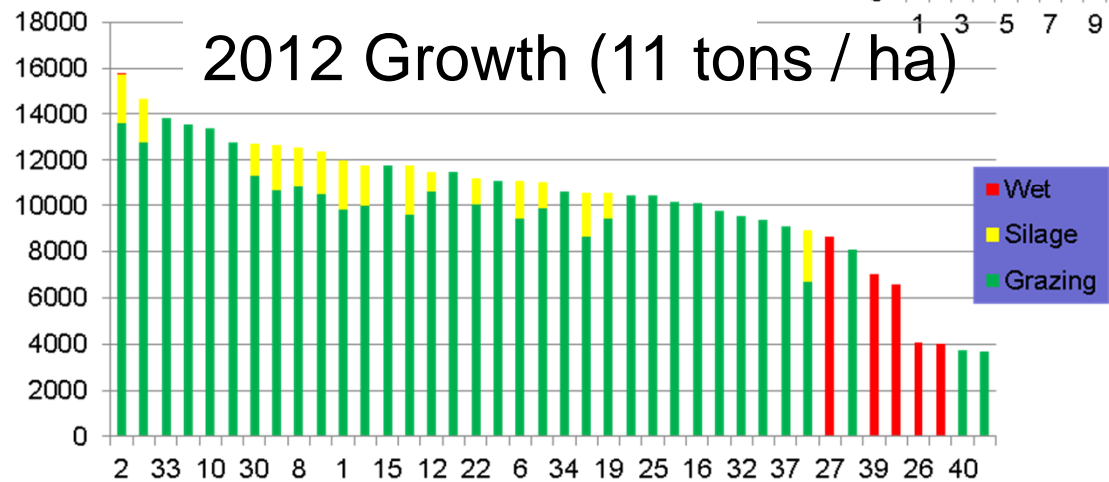
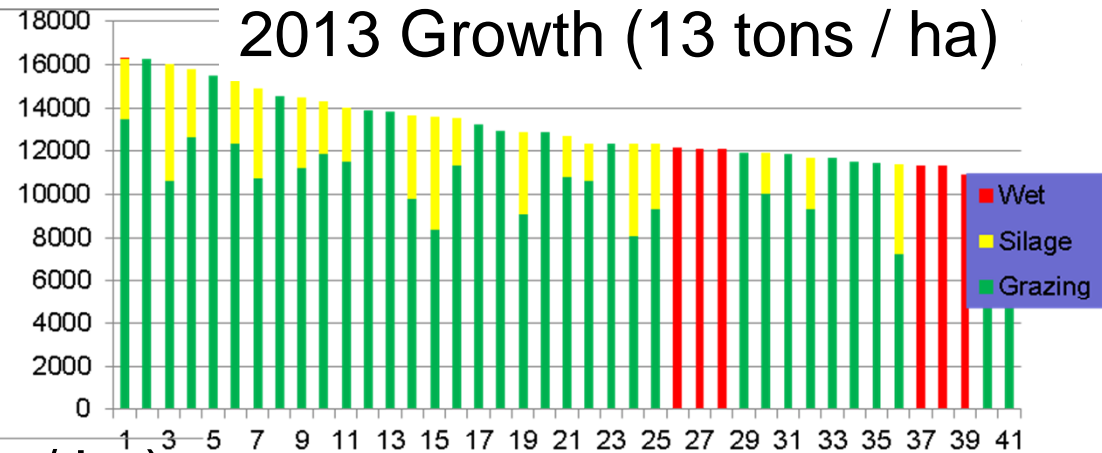
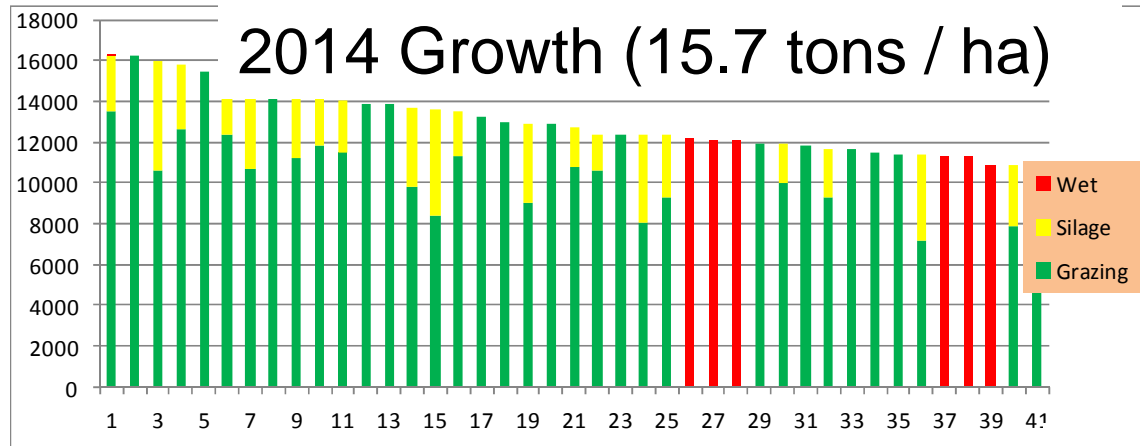


Variation in Grass Growth



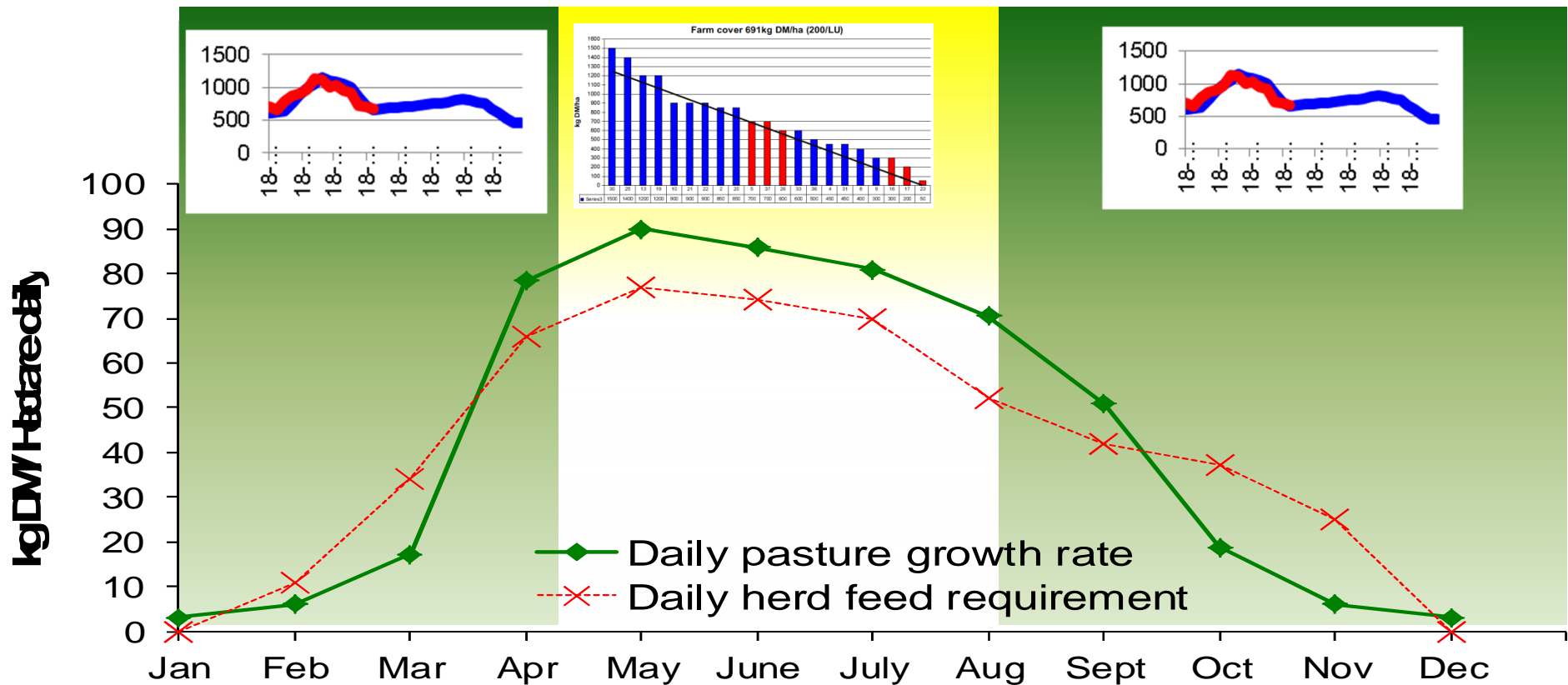
How can I maintain quality and quantity?

Grass growth is more variable on marginal soils



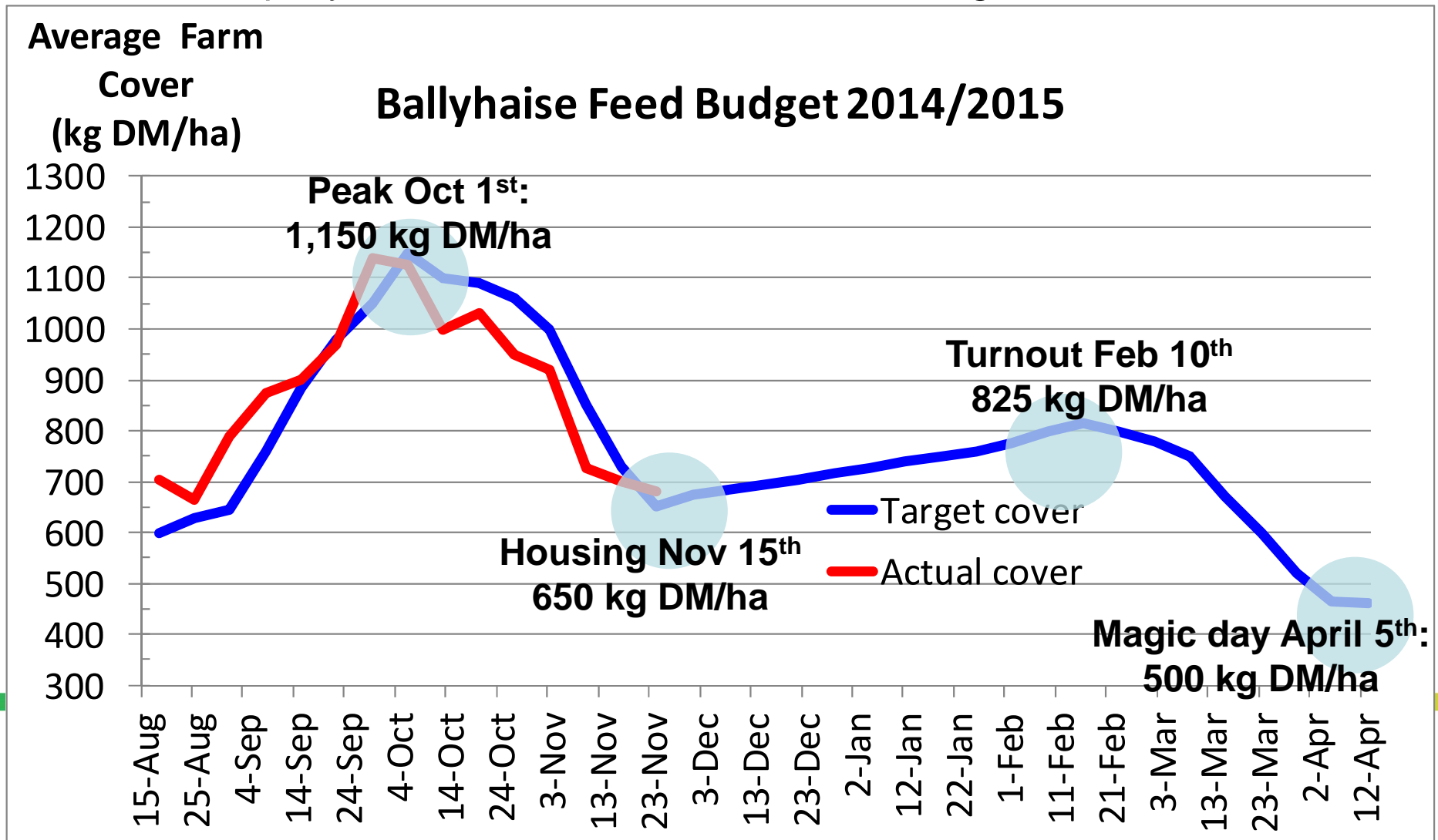
Grass Budgeting is Critical on Irish Dairy Farms

- In the absence of grass budgeting increases in stocking rate will reduce grazing season length and grass proportion in the diet resulting in increased variable and fixed costs of production
- The grass budget is the most important grazing technology reduce milk production costs by €100/cow/yr (2 cent/litre)



Feed Budgeting – achieving seasonal targets

- A grass budget is a plan for grass supply based on expected growth and animal requirements during the 'feed expensive months'
- Used to rapidly react when AFC deviates from target levels



Benefits of Feed Budget

- Timely response to surpluses and deficits.
- Medium term planning – course of action for next week.
- Long term planning – especially when expanding.
- Helps to identify problem areas – early spring.
- A very useful way of communicating with staff.
- Reduced feed costs.



Adapting Feed Budget

1. Budgeting is more complex with wet soils

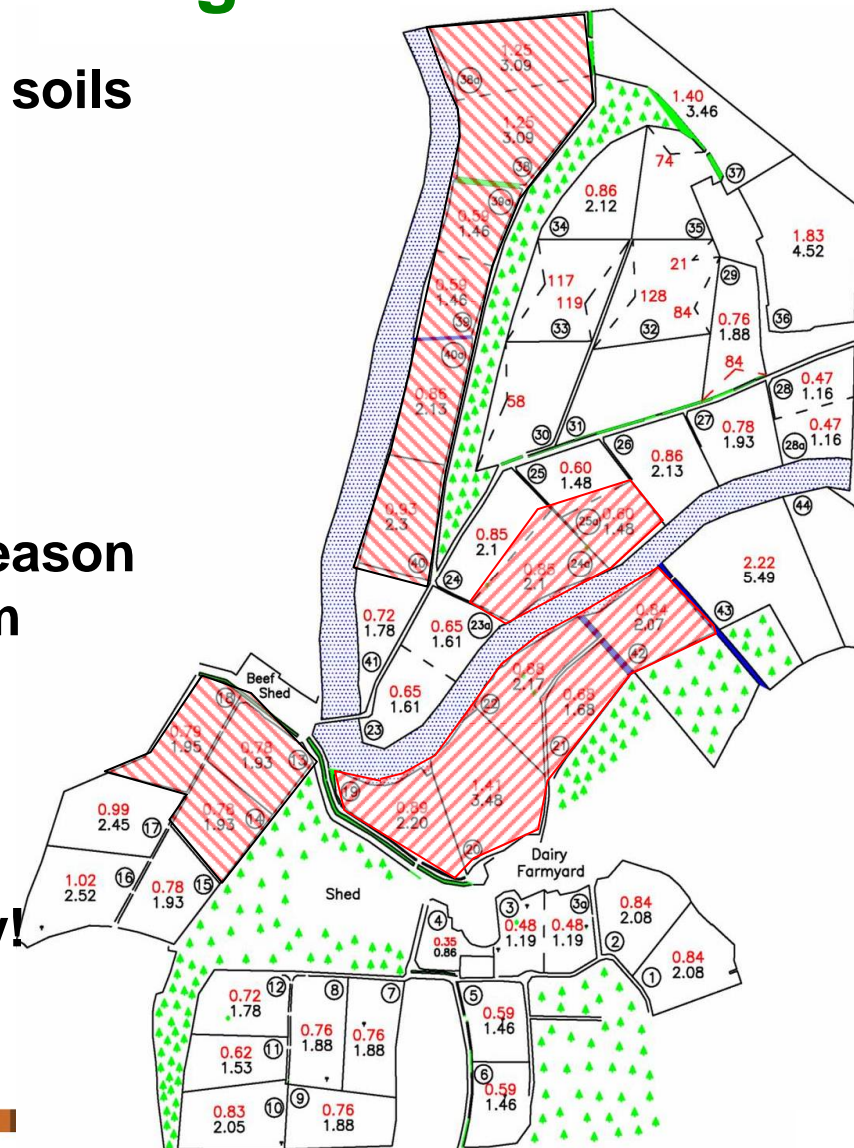
- Building high covers is too risky on wet areas
- Location of feed is important.
- Not included in first rotation – does not grow
- Growth is more variable

2. Building AFC to extend the grazing season must occur on drier soils within the farm

- Building in excess of 1150kg DM / ha will result in very heavy covers (2800 kg DM / ha)

3. Winter growth may be 0 kg DM/ha/day!

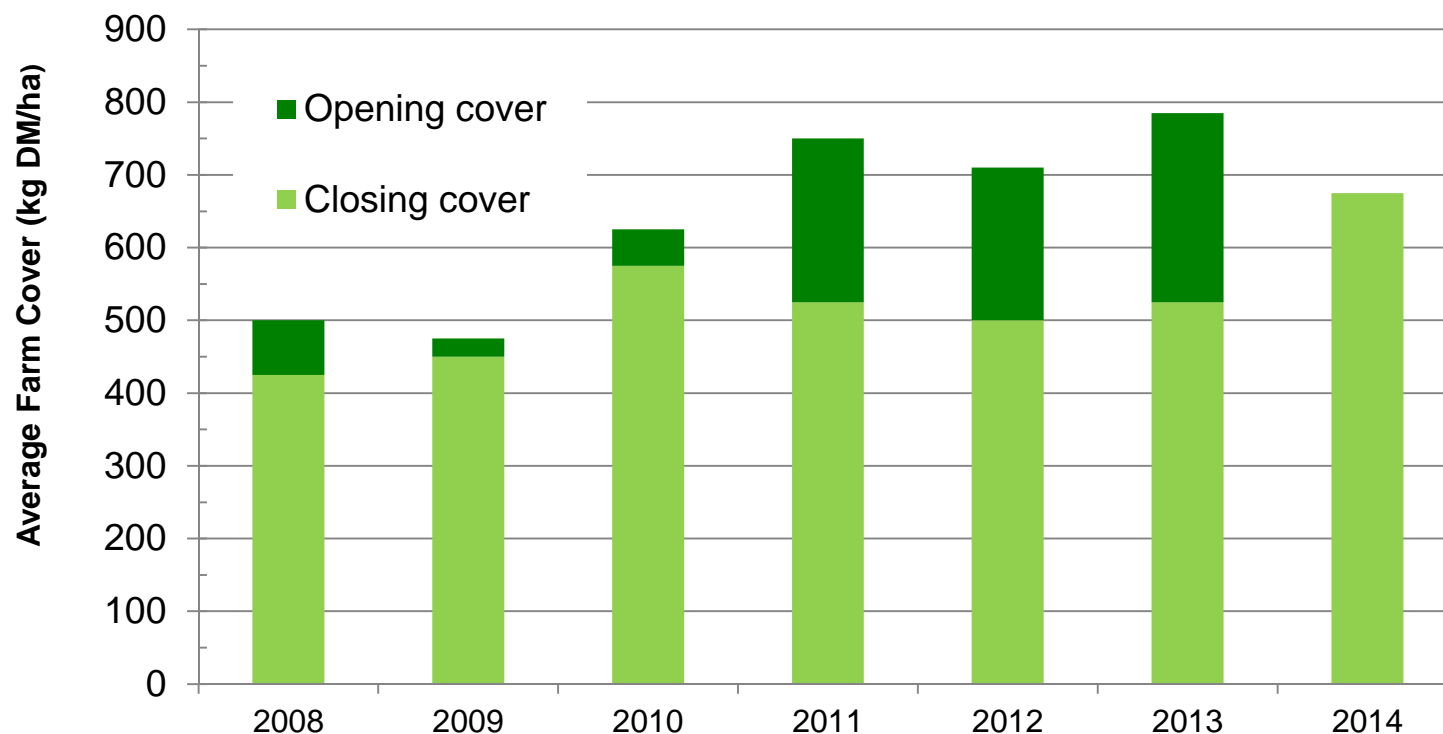
- Target closing cover essential



 = Preferentially managed Wetland

Ballyhaise Closing and Opening AFC

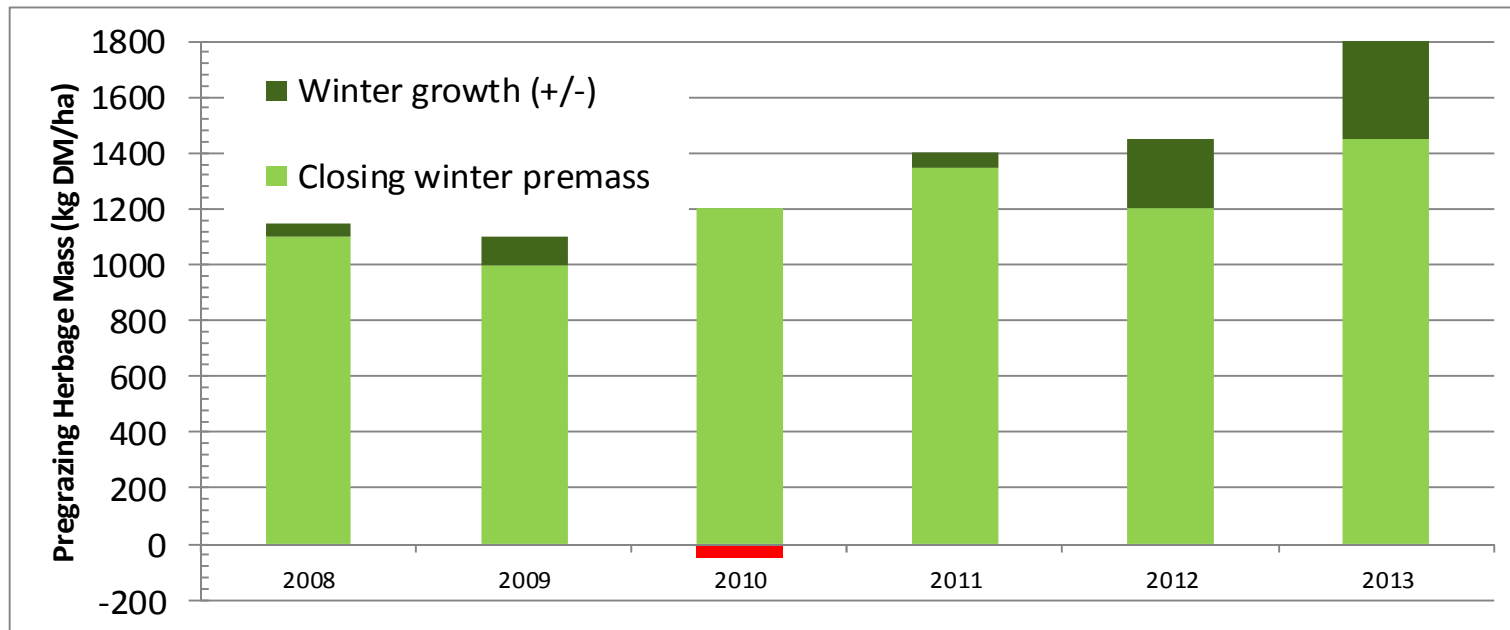
- Minimal winter growth in 2 of the last 5 years
- Essential to carry some high pre-grazing herbage into winter
- Target AFC 600kg – 650kg DM/ha at closing



- Average overwinter growth is 1.5 kg DM / ha per day
- Closing on the 5th of October is too late (25th of September)
- 70% grazed by 1st of November

Heavy Pre-grazing Herbage Masses on Wetter Soils

- Carrying high pre-grazing masses through winter is essential to meet feed budget targets and rarely results in sward decay



- Important that these were well grazed out in previous rotations
- Requires careful management in Spring – allocation, on / off grazing.

Feed Budgets at Ballyhaise

Lower target farm covers compared to Moorepark soils

- Peak of 1150kg DM/ha on October 1st
- Peak grazing covers on drier area during autumn
- Wetter areas preferentially grazed to maximise grass utilisation

Variable autumn/winter/spring grass growth rates require greater discipline to achieve target covers

- Commence building cover from August 1st and last rotation from Sept 25th
- Closing cover of >600kg DM/ha in mid-Nov
- Opening cover of >800kg DM/ha on Feb 10th
- End of Rotation 1 on April 7th to 10th at AFC of 500kg DM/ha

Conclusion

- Grass is a perishable feed with irregular supply.
- Budgeting is essential to maintain low cost systems (€100/cow less feed costs!)
- The budget is the most important decision making tool for 6 months of the year.
- It will help you make timely decisions and avoid severe feed shortages.
- You can alter and adapt the budget to suit your farm / system.

