

Happy graze

Is monitoring grass growth the key to by-passing rising feed costs? UK dairy farmer Dai Wilson believes so. That's not the only benefit either...

When it comes to utilization of grass, knowledge really is power. Temperature and rainfall determine grass growth rates but without knowing the extent of their impact on an ongoing basis, it is difficult to know when to start and stop grazing, let alone how much additional feed to provide in order to maintain milk yield. Grass quantification is the key. By monitoring with a plate meter once a week, it's possible to calculate and control the amount of dry matter provided by grass and thus plan ahead for periods of no or heavy growth, adjusting feed accordingly.

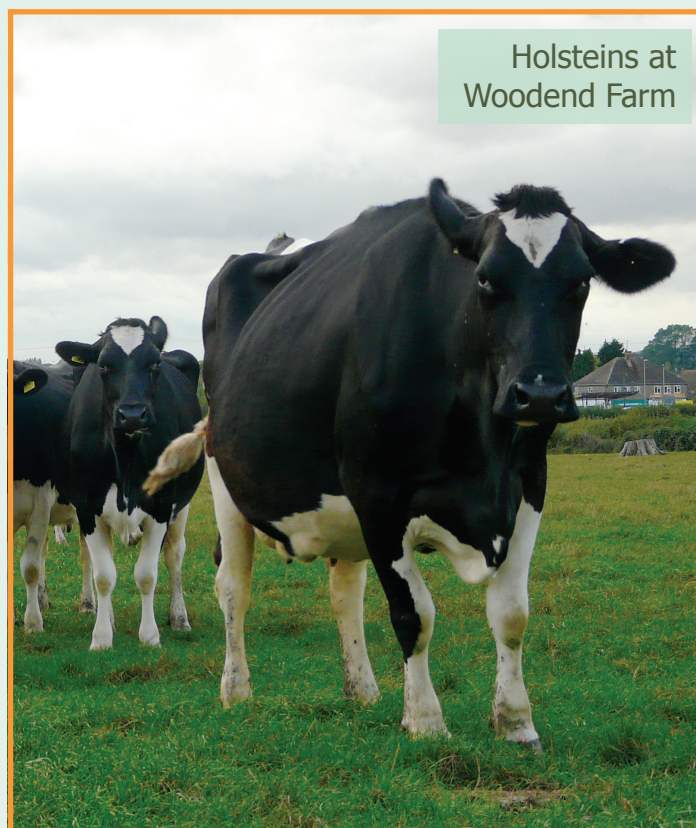
"Grass quantification is something all dairy farmers would be wise to understand – whatever the system they operate – as feed costs will rise and grass is good value," says Ruth Layton, Director of the FAI. "It's good news

for cow welfare and for the bottom line."

You don't need Friesians or Jerseys on a spring calving system to reap the benefits, either. Woodend Farm is a 1300 acre dairy and arable farm on the outskirts of Oxford, where grass quantification is being used with Holsteins and all year round calving.

Farmer Dai Wilson manages 250 cows at the farm producing 7700 litres per year, with cows fed 2t cake per year and a calving interval of 390 days. The cows are outside 7–8 months of the year. It wasn't always so; until Spring 2010, the farm had the same number of cows and yield, but cows were housed almost continuously and fed 3 t cake per year, with a calving interval of 430 days.

Dai took over management of the farm in June 2010 and



decided that optimising use of forage would help improve profitability. The transition, he says, was simple: "The costs were relatively low; the main job was ensuring good access to pasture even in wet weather, which we're achieving by putting in some new tracks. Basic fencing

was required to ensure tracks were secure and to divide larger fields and we had to ensure an adequate water supply in each paddock. Other than that, the ration in the trough was reduced and the cows were turned out!"

Dai then followed five simple 'rules' see *Table 1*.

Woodend Farm: grass quantification	Benefits
Walk grazing platform once weekly using plate meter to calculate kg/dm/ha.	Dry matter per field, total dry matter, growth rate and average cover can be calculated. Thus grazing area can be altered to suit, balanced with buffer feed as necessary.
Graze fields when <2800 kg/dm/ha is available.	Grass quality is optimised – beyond this, grass tends to lose quality as first leaf starts to die off and dead matter accumulates.
Graze fields down to 1500–1600 kg/dm/ha.	Grass quality is maintained throughout grazing season.
Provide buffer feed during dry spells when grass growth rate slows.	Grass can continue to form part of the diet, regardless of rate.
Graze early spring to autumn, but leave average cover of ~2000 kg/dm/ha over winter. This means leaving some areas with a cover of up to 2300 kg/dm/ha, and grazing other areas later, leaving them with less cover.	Provides a starting point for grazing in spring and helps protect soil and maintain soil temperature during winter, allowing growth to start earlier.

Table 1: Approach to and benefits of grass quantification at Woodend Farm, Oxfordshire.

Dai Wilson manages 250 cows at Woodend Farm, a dairy and arable farm in Oxfordshire, where grass quantification is proving a helpful tool.



Outcome and benefits

Through this approach, Dai has reduced the amount of time cows spend inside. "Using the plate meter and grass budgeting gave me the confidence to turn the cows out a month earlier this year," he says. "There's no better sight than cows on their first day out in spring – they gallop around like calves, then get their heads down grazing. They also seem to prefer lying at grass to lying in the shed. You do have to be careful in hot weather though: cows get heat stressed easily so it's important that there's shade in the field, or that they have access to the shed."

Overall, he has identified three key benefits.

2) Housing the cows outside also reduces the costs and labour associated with scraping, bedding and feeding.

3) Heat detection has improved as the cows show stronger heat behaviours on grass, contributing to improved fertility.

In the long term, Dai will cross the Holsteins with a New Zealand Friesian to increase resilience. "But it will be another couple of years before those genetics come through," he explains. "And it's not essential – I'm finding that the Holsteins can graze well if managed properly. If you look after the grass, it will look after your cows."



A plate meter is used on a weekly basis to calculate dry matter. The grazing area can then be altered to suit, balanced with buffer feed as necessary.

Fields are grazed down to 1500–1600 kg/dm/ha to help ensure that grass quality is maintained throughout the grazing season.



1) Grass is cheaper and better quality in terms of metabolisable energy (ME) than silage, thus the amount of cake required is reduced, whilst maintaining the same total of litres of milk sold per year. Dai estimates that, when feeding for 30 litres of milk, a full ration without grass costs ~£3.20 per cow per day and a ration including grass costs ~£1.80 per cow per day, the majority of which is due to the cost of concentrates.

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*Dai Wilson,
Woodend Farm*

