

Silage challenge highlights untapped energy potential

True value of grass silage

Treating grass as a crop is paying dividends for one Northern Ireland-based producer. And, despite already achieving considerable success, he's planning to increase productivity, of both his silage swards and his herd, by reseeding with high-sugar grass varieties.

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Greater focus on the financial value of home-grown grass silage has made Northern Ireland-based producer David Kenwell recognise the benefits of treating his leys more like a crop. Analysis of first- and second-cut silage, as part of the 2014 Yara Grass Prix competition, showed his unit's grass silage had a value of £1,559/ha when compared to buying-in the equivalent energy in brewers' grains. "I was very surprised at its value," says David, who farms between

Omagh and Enniskillen. "Putting a financial value on grass silage is not something we've done previously."

Silage competition

David was one of 10 dairy and beef producers from across the UK and Ireland who took part in the inaugural Yara Grass Prix competition. As part of the competition, finalists competed to achieve the highest metabolisable energy yield (ME/ha) averaged during the first two silage cuts taken from their best field.



David Kenwell (right) and Germinal's David Little

Yara's Jez Wardman, who confirms that the competition will be run again in 2015, says the aim is to highlight the value of grass silage and the importance of treating it like any other crop.

"Many producers know if they have produced enough or not enough silage each year, but if they had to buy in the equivalent in feed they would be surprised at how much it would cost," he says.

"By maximising the quality of grass silage produced, producers have the potential to significantly reduce bought-





Silage sampling: monthly testing helps David Kenwell to feed the right supplementary ration

in feed costs, which will go some way in protecting themselves against market volatility."

Average grass silage results from across the UK and Ireland show there is significant room for improvement in terms of dry matter yields and ME yields per hectare. On average producers achieve 8t/ha DM yields and ME yields of 88,000MJ/ha. However, on average, all of the Grass Prix units were able to achieve about 50% more (see Table 1).

David's farm performed well above the UK average but, having seen the results from across the Grass Prix farms, he has been convinced of the merits of further investing in grass management and, in particular, improving grass quality.

High rainfall

Grass silage forms the main forage component of the diet for his 300-cow Holstein Gulladoo herd at Kenwell Farms. With the herd yielding 9,000litres and housed for most of the year, the pressure is on when it comes to silage making.

"We are in a high rainfall area and can't get good enough yields from maize or wholecrop," adds David. "Grass is the only thing we can grow and our aim is to get a decent tonnage with above average quality."

Close attention is paid at silage making

time, with grass cut at mid-day to ensure that all dew has gone and grass is tedded out and allowed to wilt for 24 hours. David also believes it is well worth making extra effort on the clamp to ensure the pit is covered early and weighted down sufficiently. However, since the competition, David has been convinced that good silage making comes down to more than just weather. "The top farms all used high sugar varieties," notes David. "It took this competition to understand that it takes very little to improve grass silage quality and it's something that you can control by selecting the right varieties and using the right fertiliser."

David believes upping the total ME of the grass, with the help of Aber High Sugar Grass varieties and targeted fertiliser use, will help boost the total energy available to the cow and reduce the amount of concentrate he needs to feed.

The farm generally takes one to two silage cuts a year for clamping. One additional mini cut is also taken off reseeded ground at the start of the year and made into big bales. This provides a high quality bite for the high yielding group of 150 cows and also provides enough time for the clamped silage to ferment. David views regular reseeding as a worthy investment to maintain

quality and generally reseeds about 20 hectares each year. Silage is also analysed monthly to ensure that cows are fed accordingly and to avoid any potential drop in milk yields.

High-sugar grasses

To increase grass quality, David is working with Germinal in Northern Ireland to select the appropriate high sugar varieties to suit his farm's requirements, with the Aber HSG 4 grazing and cutting mixture likely to feature strongly.

He has also worked with Yara to draw up a nutrient management plan based on soil analysis results.

This has allowed formulation of specific compound fertilisers to fit ground requirements.

"Through soil analysis we found that the soils were acidic so we have applied lime," explains David.

"We're also incorporating sulphur and selenium into our compound fertiliser. You can save money on fertiliser by only targeting specific nutrients where they're needed."

David is also planning on applying fertiliser immediately after first cut to ensure that second-cut yields are optimised – every eight-day delay in fertiliser application can reduce yields in the subsequent cut by nearly 6%. |

Table 1: Grass Prix silage results 2014

grower	fresh weight yield (t/ha) (t/acre)	dry matter yield (t/ha)	metabolisable energy yield (MJ/ha)	relative ME yield (%)	value of grass (£/ha) (£/acre)
Willie Watson (1st)	50.1 (20.5)	17.7	183,927	209	£2,943 (£1,201)
David Kenwell	51.0 (20.8)	10.48	97,461	111	£1,559 (£636)
Grass Prix average	48.9 (20.0)	13.6	138,520	157	£2,216 (£905)
UK and Ireland average	24.0 (9.8)	8.0	88,000	100	£1,408 (£575)