

Boosting production from grass

Lancashire farmer Richard Corlett has increased the productivity of his grassland and boosted average herd yield by 1,320 litres after just two and half years of grassland improvement activities. *British Dairying* reports on the progress made.

At Home Farm, near Ormskirk, the leys are younger and more productive thanks to improved soil structure, more frequent reseeding and overseeding, and good weed and pest control. Soil testing identifies shortfalls in nutrient requirements and slurry and fertiliser applications are tailored to ensure high quality grass growth is cost-effectively achieved.

Richard first started working with the Grassright Group in the spring of 2008, receiving advice and practical support from the companies involved. Richard's herd was averaging 8,680 litres/cow and the goal was to increase milk yield and milk from forage, by focusing attention on improving grassland production.

Representatives of the Grassright Group—Limagrain UK, Opico, GrowHow and Dow AgroSciences—visited the farm and assessed the ground cover and sward content of all the fields as well as the existing nutrient and weed control plans. An action plan was drawn up to prioritise which fields to target first for sward and soil improvements, and what was required.

Improving soil structure

Investigations had revealed compaction in many of the fields, and so grassland subsoiling was car-



Richard Corlett has benefited from help and advice from the Grassright Group to improve the conditions and productivity of their grass leys.

ried out in the first autumn, using an Opico Sward Lifter to break up surface pans and improve drainage.

"Leys are noticeably drier in wet weather now," says Richard. "With drier land, there's less poaching, and less damage to the sward. Last year cows were turned out two weeks earlier than normal."

Autumn is the ideal time to subsoil grassland. It will ensure good drainage through the wet months and prevent flooding and plant death—both of which reduce a field's productivity.

Surface compaction in some of the grazing fields also became evident early this year. Through

the summer it was too hard to slit the ground to aerate the top layer of soil and help stimulate grass growth. However, Richard was able to break the compaction after the rain in late August using an Opico Sward Slitter.

Weed control

Good weed control had been achieved prior to the start of the project. Taking advice from Dow AgroSciences, Richard is now keeping on top of the weeds, selecting herbicides appropriate to the specific weed problems in each field. For example, Doxstar has been used to treat docks in silage leys, and Thistlex where

thistles have become a problem in the heifer grazing.

He has benefited from the use of Dow's translocated herbicides in which the active ingredients are taken down into the roots, effectively killing the whole plant and achieving long-term weed control. This year Doxstar applied in one silage field pre-first cut, when the weeds were young and actively growing, cleared the docks, allowing Richard to maximise yield in what has generally been a poor year for grass growth.

Improving soil nutrients

Richard had already been receiving nutrient management planning from GrowHow's Encompass programme prior to his involvement with Grassright. Soils were routinely sampled and analysed for pH, phosphorous, potassium and magnesium. Now, slurry samples are also regularly analysed for their nutrient content.

With knowledge of both the levels of phosphorous and potassium required, and an accurate picture of the nutrients supplied by slurries and manures, Richard has been able to implement a more precise nutrient plan. Slurries and manures are targeted to where they will be best used—where soil indices are low or where nutrient

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Compaction from grazing the herd in a three year old ley was removed using a slitter this year to aerate the soil and stimulate grass growth.

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Clover has been added to existing leys by overseeding.

uptake is greater, such as in silage leys. Fertilisers are then used to make up any shortfall. This means Richard has been able to change from using NPKS compounds to primarily NKS and straight nitrogen.

This approach has prevented any sulphur shortfalls in the soil from limiting silage quality, and also saved money as Richard only applies the nutrients that are needed. Estimated savings from a more targeted approach to fertiliser on silage ground in 2009 were around £55 per hectare.

Adding clover

Although Richard had successfully controlled the docks on his farm, he had also killed off the clover. One of the first activities in May 2008, straight after first cut silage, was to oversow with pelleted CloverPlus white clover blend using an Opico harrow and seeder. By pelleting the clover seed, the weight and size is increased making distribution at sowing more

even. The pellet also includes the bio-stimulant Headstart which helps the seed establish in the competitive environment of an existing sward. Richard has continued to use overseeding and successfully replenished clover levels in established grass leys.

Limagrain's John Spence adds: "Overseeding is an under-utilised technique—it enables sward productivity to be boosted without having to take a field out of production. Richard has used this technique to reintroduce clover to the sward allowing him to benefit from its nitrogen fixation and exploit clover's richer supply of protein, minerals and trace elements.

"Overseeding grass seed mixtures into worn out leys, increases the production and quality of a sward, without reducing grazing and cutting acreages."

Across the country, the weather in 2010 has been a challenge for dairy farmers—a cold spring followed by a dry June and July—has created grazing and forage

shortages, and led to a fall in milk yields. Heat stress has also depressed intakes during the hot spells, so buffer feeding has not always returned yields to normal levels.

At Home Farm, there was no early turnout this year as cold weather delayed spring grass growth. Some of the silage fields had to be grazed reducing the amount of second cut taken, and Richard bought in extra concentrates to buffer feed through the dry months to support energy levels and protect fertility.

Yield improvements

However, despite the difficult weather pattern, Richard is still pleased with the condition and

productivity of his grassland swards. When the project first started in 2008, he had been re-seeding silage ground every seven to nine years, but now believes a four to five year cycle is preferable. "I'd always been a little sceptical that a new re-seed could pay back in a year, but I've now seen it for myself," he says. "A field which was reseeded last autumn has produced plenty of bulk

for first cut and second cut and has even now got plenty of growth—noticeably a lot more than similar but older leys. In fact, with the improved leys, we've been able to take a good quantity of third cut silage to compensate for the shortfall in second cut.

"Now that I've taken the time to improve the leys, and seen the effects on milk production and the visible effects in the fields, I'll be keeping on top of my grassland management.

At Home Farm, the herd is now yielding an average of 10,000 litres/cow and Richard is planning to increase the 160-cow herd by another 20 animals over the next few years, confident that the leys will now support a higher stocking rate.



Subsoiling grassland has reduced compaction and enabled the grazing season to be extended.