Farm facts

Underley Farm is a total of 540 acres split approximately 50/50 between permanent pasture and arable rotation. The soil type is Herefordshire red soil with rainfall at around 700mm per annum. The beef enterprise is a prime example of the integration between the beef and dairy sectors we are trying to achieve with Cattle Connect. 450-500 dairy beef cattle are finished annually, a significant proportion of which are British Blue crosses. Growing and finishing diets are based on ryegrass and maize silage in a TMR and growing cattle are rotationally grazed in paddocks from March to October depending on the season. Project activities included establishing red and white clover leys or silage and grazing.

2012 project activity

To improve the protein content of the forage in the TMR and reduce the feed costs, red clover was grown for the first time in 2012 at Underley. To explore different ways of establishing red clover leys were sown in the spring (following maize) as a straight re-seed, undersown to barley, and also in the autumn following winter wheat. Soil chemistry showed that a finely ground soluble calcium lime was needed to raise the pH from 5.5 and 0.24.24 was applied at 247kg/ha to supply P & K. All three methods of establishing the red clover ley were successful, although when autumn sowing it is important that the crop is well established before winter. A new red clover ley has been established in August 2016 with the red clover variety AberClaret.

Seeds mixture

4kg Hybrid Ryegrass (AberEcho)
4kg Hybrid Ryegrass (AberEve)
2kg Intermediate Perennial Ryegrass (Aberfarrell)
2kg Red Clover (AberRuby)
1kg Red Clover (Milvus)

Sown at 13kg/acre on 14th May and 18th September 2012
50kg/acre barley cv Concerto

Soil indices P=1, K=2, Mg=3
Fertiliser: 124kg/ha of single top (27-0-0-12)
200kg/acre of Saltmix (0-6-13-29)
Herbicide: 4.51/ha of 2, 4-DB as the sodium salt

Red clover ley established under barley

Autumn sown red clover ley
Based on the red clover analyses, when compared with a typical grass silage the purchased feeds needed for the finishing ration for 500kg cattle gaining 1.4kg/day would be 14p/head/day cheaper and for a 300kg store gaining 1kg/day the ration would be 10p/head/day cheaper.

White clover at Underley

Over the course of the project Ian found that using a shallow direct drill to establish white clover leys with high sugar ryegrasses (HSG 3 with AberDairy white clover blend) resulted in high yielding and high quality leys. Improving on the farm's silage analyses from 12% CP in 2012, the 2015 white clover ley silages analysed out at 14%, 17% and 19% CP in the three silage cuts, respectively. This enabled significant savings in the protein blend, reducing TMR costs with each successive silage cut. The winter housed continental cattle grew at 1.23kg/day thanks to the high protein white clover silage.

Grazing is key to the system at Underley and under well managed rotational grazing of the white clover leys the cattle grew at over 1kg/head/day without any supplementation.

*AHDB Dairy RFV - barley @ £135/t, rapeseed meal @ £216/t

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**Ian said,** “The improved silage and grazing of the clover leys has knocked at least a month off our finished cattle and given us the ability to push more cattle through the system and helped to dilute our fixed costs”. 