

Healthy soils for profitable grassland

EBLEX recently worked with the Catchment Sensitive Farming initiative to hold an event at Woodhead Farm near Danby in North Yorkshire - a dairy unit surrounded by beef and sheep farms.

Around 35 producers heard James Bretherton from AgScope, discuss the benefits of having healthy soils, while Liz Genever demonstrated the new Healthy Grassland Soils Assessment Tool.

James explained that soil is made up of around 45% minerals, 5% organic matter, 25% water and 25% air. If this balance is affected by poor management or compaction, soil-life struggles. He suggested the need to think of the soil as the 'rumen' of the sward, as soil-life breaks down nutrients so that grass plants can use it to grow.

Liz led the visitors to the first field, which was permanent pasture near to the buildings. There was a good level of perennial ryegrass growing, but ground cover was patchy. When a hole was dug, there was some tightness at around 10-12 cm down. However, when the new assessment tool was followed - it scored 2 on the scale. This means that monitoring of the soil was recommended but no interventions are needed for now.

The second field was also permanent pasture. This had better ground cover but lower levels of perennial ryegrass compared to field one. There was a wet patch just below the gateway, possibly due to a spring, which made travel at silaging difficult at times.

To sward lift or not?

The soils scored 1 and 2 across the field, so there were no obvious soil health issues in the top 20cm. Some of the group thought that using a sward lifter in the spring would help to solve the drainage issue; most of the group however felt that doing this just before cutting silage would not be useful.

Advice from ADAS in the 1980s stated that sward lifting should be done in the autumn to allow the roots to recover and to stabilise the cracks. If machinery or stock is allowed to return to recently loosened soils, more harm can be done than good.

The last field visited was a recent re-seed. Poor sward quality was the reason cited by the farmers for ploughing the field out, as soil conditions were actually quite good. Some of the group thought it might have been better to spray off the old sward and direct drill grass seed into it. However, the hosts said the original sward was too thick to do this successfully.

Looking for worms

During the walk everyone became slightly obsessed with finding worms, as they worked through the [worm identification worksheet](#). Both lob and black-headed worms were found, which was a good sign as these are the vertical burrowers that help create drainage channels.

More clover?

Overall there were no real issues with soil compaction at Woodhead farm. An area of more concern was a lack of clover. Weed control had killed off any sown clover. Most of the group thought that increasing clover content across the farm should be a target for the future.



Thanks to Jonathan Payne and Jonathan Skidmore from Catchment Sensitive Farming and Rob, Mark and Amanda Smith from Woodhead Farm for running an informative and enjoyable event.