

# Improving soil structure in grassland



**Tom Dening farms Green Acres Farm, a 900 acre dairy and arable farm in Somerset. The farm holds 160 milking cows, replacement heifers, and 300 beef cows, and grows 300 acres of crops including wheat, barley, oats and beans.**

Mr Dening had a Soils for Profit visit on his farm and was then successful in receiving a grant for the purchase of a soil aerator and a GPS guidance system. An advisor visited his farm, and drew up an action plan containing management recommendations and options for investment. Prior to the visit, Mr Dening was concerned with improving efficiencies on farm, including the application of manures and fertiliser as well as maintaining optimal soil structure for better yields and use of nutrients.

Grass plays a pivotal role in the feeding regime of the cows on the farm, and as such minimising soil structural problems such as compaction is important. During the visit soil profile pits were dug and compaction identified in some areas. *"Digging holes in the fields really allowed a closer look as to what was going on in the soil"* remarked Mr Dening. Recommendations following the visit included aeration to help alleviate compaction, as well as managing the stock and cultivations in a way that was sympathetic to soil and weather conditions. *"The (Soils for Profit) visit was very informative and the report that came in the post was farm specific. Pictures included in the action plan of the soil profiles had arrows highlighting the areas of interest allowing you to easily refer back to what had been discussed,"* Mr Dening commented. He is also seeing results from using the aerator. *"Last year we used it in the spring on the grazing ground before we let the cows out; in hindsight this year we will use it in the autumn once the cows come in, so as to let the pasture have time*

*over the winter to benefit. We use a plate meter to monitor grass growth on the farm, last year the only difference in management was the use of the aerator, and we managed to have an extended grazing season, despite the conditions. The job doesn't take long to do, and it doesn't use a lot of diesel to complete."*

As well as an aerator, Mr Dening was successful in getting a grant for a GPS guidance system for the tractor. The GPS system has helped to eliminate overlapping in field work and as such has reduced costs in terms of oversupply of nutrients and fuel use as well as making best use of labour.

*"The S4P experience was great,"* Mr Dening concludes. *"It was a good opportunity to see what was going on in the soil, and has given us a lot to think about, and a greater appreciation of the effect of farming operations on the land. In the future we will be considering changing how we apply slurry perhaps using a trailing shoe machine to make the best use of the nutrients found in the slurry and to use slurry more efficiently."*

If you would like to know more please visit the Swarm Hub by clicking on the links below:

[Soil structure](#)  
[Soil testing](#)  
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