

# Torr Climate Change Focus Farm meeting



Joint discussion group meeting with the Soil Association held at Torr Farm on Friday 15<sup>th</sup> March 2013 from 10.00 until 14.30 by kind permission of Ross and Lee Paton.

## **Meeting Theme – Soil, Muck and Money; Nutrient management event**

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No one wants to spend more money than you need to; the theme for this joint meeting was to take a back to basics approach to look at soil condition and identify how to get the most from nutrients on the farm. Looking after the basics in soil and nutrient management could improve business efficiency, lead to significant cost savings, protect water quality and contribute to mitigating climate change.

This joint meeting organised by the Farming for a Better Climate and the Soil Associations Future Proofing Scotland's Farming initiatives was chaired by Gillian Reid (SAC Consulting) and Lyn Mathieson (Soil Association).

After a welcome and introduction by both Lyn and Gillian, James Bretherton from AgScope was the first of the mornings speakers who successfully enthused the discussion group about soil, highlighting how soils contain the farms 'hidden livestock' with billions of different microscopic organisms of many different species, many of which we know nothing about.

### **Soil health and quality**

Soil dictates what you can and cant do on the farm. James stated that you must think of soil as a living thing; you can compare it to the cows rumen in that it relies on having a healthy population of bacteria to function effectively. A healthy soil can improve the palatability of grass, improve ME levels, improve drainage and lead to a warmer soil with improved grass growth and healthy worm populations. The role of the earthworm shouldn't be understated; they help with soil drainage and aeration which in turn could lead to a warmer soil. Ideally you would want to see around 6 to 10 worms in a cubic foot of topsoil. Eblex figures suggest that a well performing soil can give up to 2 tonnes/ha extra DM compared to a poor soil.



James went through the main components of soil and the importance of soil testing to know soil status; as with most things, balance is the key. Its not just pH, P and K status you need to consider, need to also look at the balance of other plant nutrients in the soil, such as calcium, magnesium and potassium.

Livestock poaching, heavy machinery, over application of slurry and over cultivation of soils can all lead to a poor structured, anaerobic soil which will need remediation. Often a physical intervention is needed here. Aerators, when used in the right conditions, can improve soil life levels, break up machinery or livestock pans and help to improve grass palatability and spring growth.

Your soils can affect livestock health; a soil with a degraded mineral content will have difficulty in supplying these minerals to grass, which in turn could affect livestock health. Could health problems in livestock be stemming from stressed soils on the farm?

### **Know your starting point; test your soils**

Soil testing can help you understand where your soils are starting from and help you decide how much additional fertiliser you need to apply to meet crop nutrient requirements. Using examples from Torr, Bill Crooks from SRUC highlighted the benefits of nutrient budgeting using the freely available PLANET Scotland program and how it can provide you with a nutrient budget for the farm, effectively targeting inputs to maximum benefit.

Ross Paton had used the PLANET software for Torr, and found it gave some useful data enabling him to better target slurry and lime applications. PLANET can help you to set targets, calculate nutrient requirements, adjust for soil status, plan and record how you will meet the requirement (suitable for record keeping in NVZs) and help you measure and understand successes.

### **Value of slurries and manures on farm**

Audrey Litterick from Earthcare Technical highlighted the value of slurry, manures and compost on the farm, and how muck and composts can enrich soil organic matter and shouldn't be considered a waste. Used with care, manures can help to save money and help to maintain soil quality. In order to get the best out of these organic fertilisers, you need to understand lab analyses and work out their fertiliser value. If you don't want to use a nutrient budgeting programme, Audrey explained how you can calculate nutrient requirements with your soil test results and SAC Technical Note TN622. This can help you to put a financial value on slurries and manures; they may be worth more than you think.



### **Making best use of nutrients; minimising pollution risk**

Applying slurry and manures when there is crop demand is the best way to maximise financial gains. However if applied at the wrong time or if poorly applied, this could increase emissions from the farm whilst runoff could affect surrounding water quality, representing a financial loss to the business. SEPAs Jackie McColm gave an overview of the requirements under the Diffuse Pollution regulations, highlighting that most of the regulations are basically good practice. Jackie suggested steps farmers could consider to reduce pollution risks from the farm. For example, having adequate storage on farm allows you to spread when the nutrients will be of most benefit to the growing crop and avoid being forced to spread in less than ideal weather conditions.

Out in the field, slurry spreading using an umbilical system and trailing shoe was in full swing; Ross explained some of the pros and cons of using this system. James Bretherton was also on hand to take a look at soils in a recent grass/clover reseed. James encouraged the group to get out with a spade and take a look at soils on the farm. Number of earthworms and soil smell are two ways you can get a quick indication of soil health; lack of earthworms or a stale or sour smelling soil indicate a soil under stress. James advised a compare and contrast method; sampling soils by the hedge or fence line in the same field could give you an idea of how your soils could be performing.

#### Key messages:

- **Take a second look at soil health - From influencing the palatability of grass to improving field drainage, a good healthy soil can provide a range of functions; it is the farms greatest resource but can be easily overlooked.**
- **Don't undervalue the nutrients you have on the farm. A nutrient budget can help you make the most of these nutrients and better target bought in fertilisers.**
- **Remember poorly applied slurries and manures can be a significant risk; rules under both GAEC and Diffuse Pollution General Binding Rules exist.**

By the end of the day the message was clear; taking a second look at soils and nutrients could save you money in the long run and have more benefits than you think.

Gillian noted that this was the last of the Climate Change Focus Farm meetings at Torr, but there would be an open summer event to look at all the measures Ross has put into practice over the three years of the programme.

Both Gillian and Lyn closed the meeting and thanked the speakers and the group for their participation.

#### Do you farm and would you like to attend to future meetings?

The meetings provide sensible ideas for the farm business, from invited speakers and other farmers, to improve efficiency whilst reducing the loss of greenhouse gases. It's free to come along and you will be able to influence future topics, speakers and location of meetings.

The SAC facilitators role at Torr is shared by David Keiley and Gillian Reid. For details of the next Torr event you can contact either David at the SAC Dumfries Office on 01387 261172 or email [david.keiley@sac.co.uk](mailto:david.keiley@sac.co.uk) or Gillian in the SAC Perth Office on 01738 636611 or email [Gillian.reid@sac.co.uk](mailto:Gillian.reid@sac.co.uk)

If you want to keep up to speed with what's happening at Torr but don't want to attend all the meetings, ask to be added to the Torr email list; you will receive notification of future events and meeting notes. You can also follow us on Twitter @SACFarm4Climate

Visit the website at [www.farmingforabetterclimate.org](http://www.farmingforabetterclimate.org) or email a general enquiry to [climatechange@sac.co.uk](mailto:climatechange@sac.co.uk)

