By the time you read this, harvest will be complete and next year’s winter crops will be in the ground. But as I wrote this, harvest was only just getting underway and so the outcome is largely unknown, apart from having a decidedly shaky start!

However, what is known, is that between writing and reading your soils will have taken more punishment than at any other time of year, so the next few weeks is an ideal window to assess the status of your soils’ health.

Despite my urging them to focus on office-bound business issues, the Scottish Arable Business Groups decided they wanted to get out into the field, so last summer they got out their spades and dug some holes. We decided to tackle it at farm level, i.e. what each and every farmer can do themselves without involving diggers and specialists. These can be brought in once you know you have a problem.

There are some simple steps to follow:

- Before getting in to the field proper, dig a spadeful of soil from the field boundary – under the hedge or alongside the dyke or fence. This is your benchmark, where the soil has been untouched by machinery or any applications.
- Dig a spadeful in a typical part of the field and compare to the benchmark.
- Examine the soil
  - Smell it! Believe it or not it should have a loamy or “earthy” smell, which the soil from your boundary will have. Low OM soils will have virtually no smell whilst compacted or waterlogged soils will have a “sewage” smell.
- Assess the worms – both numbers and condition. If you have livestock and condition score your cattle, then apply the same principles to the worms. If you have a healthy soil then you should find more than eight worms in your spadeful. Less than four and you need to think about why.
- Assess the soil structure and how easily it crumbles. A VESS (Visual Evaluation of Soil Structure) chart is a good guide. There’s a good one on sruc.ac.uk
- Look for any compaction, especially around working depths of any fixed leg equipment, for example the bottom of a power harrow or plough.

So, no excuses. Anyone can carry out a basic assessment of their soil health status and if you find any issues, then bring in the experts to help you fine tune your understanding and formulate an action plan, ideally after some appropriate laboratory analysis.
Soils and collaboration continued...

The new Monitor Farms have also been looking at soils over the summer, both in arable and grassland situations. As the individual projects settle in to their own areas under the guidance of their management teams, the programme approach is beginning to take shape with the first collaborative venture started between the Lochaber hill Monitor Farm and the Angus arable Monitor Farm.

The lambs bred on the slopes of Ben Nevis have been moved down for finishing on the fertile fields of Angus, where they will tidy up stubbles before grazing off a mix of cover and catch crop. The sheep will then be slaughtered locally with the results of the improved performance shared between the two businesses. It's a clear message of collaboration to the industry going forward.

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The Oat Processing Group

Case Study

Supplies: The Quaker Mill in Cupar
Founded: 2002
Membership: 100+
Annual tonnage: Approx. 65,000 tonnes
Case Study Farmer: John Weir, Lacesston Farm, Cupar

Founded 15 years ago, OatCo now boasts over 100 members from the Highlands to Northumbria, all supplying the Quaker Mill in Cupar with high quality oats. Originally the group was set up to strengthen the farmers’ negotiating position, as GrainCo’s Simon Thomson, who facilitates the group, explained:

“Having a large pool of tonnage gave the group a better negotiating position to secure a premium, but it also ensures a better quality product for the customer as Quaker can ensure they are getting the right specification for their needs.

“Producer Groups are a model which Quaker also use in the US and Canada, hence they’re quite comfortable with the concept. It allows them to gather data and better understand their product. Over the last five years the contracts have been tailored to ensure Quaker gets the highest possible quality from the OatCo growers through their premium specification. Unlike in the malting barley sector, there is no requirement for farmers to grow specific varieties, however they may be asked to try out new varieties and report back on their performance.”

John Weir, who farms at Lacesston Farm near Cupar, joined the OatCo group three years ago after he decided to drop oilseed rape as a break crop and switch to winter oats. For John, the arrangement works well for both parties.

John said: “It ensures everything works far more smoothly; we grow the proper varieties, to the right specification and have agreed delivery times.

“It’s all about finding common ground, sitting down together and thrashing out what can be achieved. We have two meetings a year, one in the spring where we discuss how the year has gone and a summer trials visit where we look at new varieties, discuss what they would like us to try and what we could do differently in the field to improve the quality of the oats for our end market.”

“John believes the producer group model could be replicated elsewhere in the agricultural sector.

He said: “I think there could be mileage is using the model in the wheat sector working with local distilleries. We supply a lot of wheat for spirit and ensuring that provenance and specification could make it a more attractive prospect.”
The Lothians Monitor Farms – run jointly by Quality Meat Scotland (QMS) and AHDB Cereals & Oilseeds and hosted by Bill Gray and Peter Eccles – have prioritised enhancing the natural environment on farm without compromising on yield.

Both farms already have a number of wild and semi-wild areas such as grass margins, woodland and hedgerows, and these areas are often home to a huge range of beneficial insects, birds and plants. However the Monitor Farm project will allow more to be done on both farms. Currently Prestonhall Farms, managed by Bill Gray, is focused solely on arable farming with approximately 120 hectares for spring barley, 160 hectares 70 hectares oilseed rape and 60 hectare oats. On the edge of many fields are grass margins which are the focus of a study by Scotland’s Rural College (SRUC).

“The college will be working with us to monitor the activity on our field margins to get a better idea of the diversity and levels of insect life we have,” Bill said, “and once we understand that we will look at making changes to see if we can attract more species onto the farm.”

Over at Saughland, Peter Eccles too will be looking at how to encourage more species variety on farm. It is predominantly a livestock enterprise with 2,500 sheep (Scotch Mule Texels crosses and Romney Aberfield crosses) and 55 suckler cows, mainly Angus, Hereford, and Limousin crosses.

“We’re looking at options such as providing early spring nectar sources by planting pussy willow and cherry trees which flower early in the season, providing a source of nectar for emerging queen bumble bees,” Peter said. “We’d also like to enhance the habitat for skylarks through the creation of ground nesting sites in cereal fields. Skylarks just a need a small patch of land left uncultivated which offers them a suitable area to lay their eggs.”

Of course, at the end of the day both Prestonhall and Saughland are businesses, and Bill and Peter are very aware that their wider aspirations on enhancing the environment, must go hand in hand with productivity and profitability.

Guided by their management team the two are considering how best to utilise precision technology to improve their yields.

Bill is looking to improve Prestonhall’s soils with targeted inputs of nutrients like nitrogen, phosphate and potassium while Peter will be collecting regular data on the growth of his sheep using electronic identification technology to better target deworming medications.

Farming might be going through a challenging time, but Bill’s and Peter’s collaboration will help ensure their businesses, and their environment, are sustainable long term.

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Find out more

- AHDB Cereals & Oilseeds soil research: [cereals.ahdb.org.uk/soil](cereals.ahdb.org.uk/soil)
- Cover crops: [cereals.ahdb.org.uk/covered](cereals.ahdb.org.uk/covered)
- Download Soil Biology & Soil Health Partnership: [cereals.ahdb.org.uk/publications](cereals.ahdb.org.uk/publications)
Farm Excellence Platform

Monitor Farms are part of AHDB’s Farm Excellence Platform. It is a new approach to harness the proven benefits of farmer-to-farmer learning by focusing activities on an individual’s needs, improving regional coverage and access to information, accelerating innovation via on-farm trials and developing new partnership approaches.

The Monitor Farm Scotland programme is funded by £1.25million secured from the Scottish Government’s Knowledge Transfer and Innovation Fund. It is run jointly by Quality Meat Scotland (QMS) and AHDB Cereals & Oilseeds.