

## ABOUT LOCHABER MONITOR FARM

Farm name **Strone Farm, Banavie, Fort William, PH33 7PB**

Meeting Number **05 – Soil Health**

Meeting Date **Thursday 7<sup>th</sup> September 2017**

Next Meeting **Thursday 16<sup>th</sup> November 2017**

Strone Farm is run by Chris and Malcolm Cameron as a family partnership and in total the business farms 1,788 hectares.

**Cattle:** 40 Limousin cows producing store calves. Cows are in-wintered.

**Sheep:** 500 Cheviot ewes, producing store lambs. Mainly Lleyn tups and hoggs kept as replacements. Ewes lambed away.



### Aim of Meeting:

- Explore how soil health influences grass growth
- Options for improving soil structure
- Understand essential soil nutrients

One challenge for the group is to come up with solutions to the problem of fields not being able to handle cattle for a long grazing season. We can get grass to grow, but are finding it difficult to utilise that grass.



*Some of the participants who took part in the 'bury your underwear' trial*

## FARMERS UPDATE

- A field at Clunes was reseeded in the spring. The seed used was Mingarry and half the field was seeded at a rate of 1.5kg/acre and the other half 2.5kg/acre.
- All baling has finished and the total number of bales is up by 60 on the year.
- Wedder lambs were all sold to the Angus Monitor Farm in mid August – with an aim to get back some feedback and information on how these lambs perform from store to finish.
- The lambs were sold straight off the summer grazing in Inverness. The average weight of the lambs was 33kg and they sold for £50/head.
- Cast ewes were also sold to Mill of Inverarity Farm for £40/head.

## KEY MESSAGES

The key messages delivered from this meeting on soil health were:

- Get soils analysed to understand your nutrient balance.
- On Strone Farm the focus should be on Potash, which is consistently low or very low
- Dig soil pits to identify compaction layers, drainage issues, rooting issues
- Look at root growth as a measure of soil structure
- Keep good records of past treatments and results as soil and grassland management is a long term process and it can take years to correct a deficiency or soil structure issue



## AREAS OF DISCUSSION

### **Bury your underwear experiment:**

Around 10 sets of soil plugs and buried underwear were brought back in by our volunteers. As well as a soil judging competition, Bill Crooks lead a very interesting and practical discussion looking at individual soil plugs and commenting on soil texture, soil structure, the soil analysis results and some mitigation to improve soil structure.

Bill also gave a presentation on soil health – see separate summary. This is a complex area and you really needed to be there to get the full benefit of Bills in-depth knowledge and enthusiasm for the subject.

## Visit to the field at the back of Strone Farm

The group visited this field in the afternoon. It was chosen as it is a field that used to be dry all year round, but within the last 2 or 3 year has become wet and prone to poaching, even with a small number of livestock. Soil pits and soil cores were taken and the group were challenged to come up with solutions to the issues found.

## FACTS & FIGURES DISCUSSED

Bill Crooks from SRUC presented a huge amount of technical information and there was a good discussion and questions from the group.

### What is good Soil Quality?

- More productive - Nutrient status / pH / drainage and structure
- More biodiversity - Organic content ( amount and type), plant (crop) diversity
- More sustainable - Storing carbon, Minimum tillage

Bill Crooks suggested that: “A quality soil is one that is being managed in such a way that it meets the needs of today without impacting the needs of the future. Todays need is profitable crop production. What is tomorrows need?”

### Key characteristics to protect Soil Quality

- Long Term “Humic” organic fraction
- Topsoil layer

### Soil Structure

All biological and chemical reactions occur on surfaces; Root uptake, Decomposition, Storage and Exchange of nutrients (cation exchange capacity)

Most biological activates and organisms that are beneficial to soil quality require oxygen (anaerobic)

- Well structured soils have more surfaces
- Well structured soils allow more oxygen in



## OPPORTUNITIES/CHALLENGES

The community group were split into smaller groups and asked to come up with topics that they wish to explore in more detail on a soil health and grassland theme:

- Explore nutrient and fertiliser balance (N, P and K), in an extensive grazing situation
- Look in more details at cost effective drainage options in the wet west, including maintenance of existing systems
- Using nitrogen fixing crops to reduce need to apply bagged N fertiliser
- How to make best use of marginal in bye fields and hill parks
- Magnesium status in soil is low for most of those who buried their underwear – is this an issue for the livestock or the grass? Investigate further to understand the importance of low Mg.

## ACTIONS FROM MEETING

The actions for Chris and Malcolm to take away from this meeting are:

To correct the issues found on the Back of Strone Field, the Monitor Farmers could:

- Correct / explore drainage –there may be an old drainage system in part of the field.
- Try a deep rooting crop to break through the compaction layer.
- Address Surface compaction – use the aerator, but only in dry conditions
- Plough and leave to sort naturally – effectively leave fallow for a year?

General – over whole farm

- Focus on getting potash (K) back into the soil at Strone.

### LOCHABER MONITOR FARM MANAGEMENT GROUP

Paolo Berardelli (Chair)  
John MacAulay, Peter Kennedy,  
Ewen Campbell, James Colston,  
Kenny Lang

### FACILITATOR CONTACT DETAILS

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