

# Soil and Nutrient Network



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Helping farmers improve soil and nutrient management

## Revisiting our Soil Nutrient Network host farmers

The Soil Nutrient Network was established in 2016 through a range of host farms across Scotland. The hosts farm would be part of a "Nutrient Network" of farms demonstrating the benefits of soil analysis, nutrient budgeting and the principles of soil management for enhancing productivity, reducing pollution and enhancing biodiversity. A series of on farm meetings were held at each farm over the two year period where external speakers and local farmers could get together to discuss how we address our soil management practices.

In 2021 we revisited 4 of the Soil Nutrient Network farmers to discuss the impact being part of the project has had on their soil management, productivity and business. We have highlighted some of the key messages the host farmers took from the Soil Nutrient Network through a series of videos and case studies.

### Host Farm — Waternish Farm

Waternish Farm on the Isle of Skye is run by Robert and Lucy Montgomery. The Montgomery's takes managing farm wildlife and biodiversity very seriously, combining biodiversity management with their cattle enterprise. Waternish plays host to a small herd of Aberdeen Angus cattle and a diverse mix of bird species with bird species drawn to the area because of the abundance of insect life and seeds in a biodiverse habitat. Farming practices at Waternish are centred around encouraging high nature value areas, participating in Scottish government funded Agri-environmental schemes. From their cattle enterprise, calves are sold in September to reduce the number of cattle on the farm over winter and silage made on the farm is all cut in September to benefit corncrakes. In addition other fields are managed to benefit wading birds.

Waternish farm uses its abundant wildlife as part of its diversification, operating walking farm tours and afternoon tea. 23 of the recorded species at Waternish are on the red list of species and 41 are on the amber list.

### Lessons learnt at Waternish

As host farmers for the Soil Nutrient Network soil samples were taken from every field on farm to assess pH, phosphate, potash and magnesium levels in the soil. Results showed very low pH and phosphate levels across the whole farm. This has an impact on productivity and on biodiversity. After participation in the Soil Nutrient Network some areas of focus at Waternish were highlighted:

- All fields have a low pH at Waternish affecting grass growth
- Corncrakes and wading birds like long grass so optimum pH assists with creating a habitat for those birds
- Clover plants do not like low soil pH so raising soil pH will encourage a diverse sward

Potash levels were high across the farm enabling a holiday to be taken on applying potash and the savings on potash to be used on applying the lime and phosphate which are necessary.

For more information on the Soil and Nutrient Network see [www.fas.scot](http://www.fas.scot). For dates of SNN events, find us on Facebook or follow us on Twitter @FASscot.



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# Skye Soil and Nutrient Network

## Diverse habitats and a diverse business

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Since their time as a Soil Nutrient Network host farm the Montgomery's have applied lime to fields, raising soil pH to overcome the issues of low nutrient availability, yield loss and species diversification which are typical in fields with a low pH. They have also adjusted the management areas for Corncrakes as they try to prevent compaction from machinery harvesting silage later in the season. The Montgomery's have also reduced their use of inorganic fertiliser and instead are making greater use of farm yard manure. An increased soil pH and use of organic manures has many benefits for soil health such as increasing soil organic matter levels and water retention ability of soils, however with rising fertiliser costs this will also improve profitability and resilience of their business.

A critical feature to the success of managing diverse habitats is through collaboration with neighbouring crofts and farms. The Soil Nutrient Network project captured the importance of collaboration for important species through Waternish Farm participation in the Skye Crofting and Corncrake Partnership that allows crofters and farmers and conservationists to work together at a landscape scale for these important birds.

Investing in the health of our soils is a long-term project but healthy soils are pivotal to our ability to provide diverse habitats and a thriving eco-system. The Skye Soil Nutrient Network facilitator, Janette Sutherland reflected on the lessons from the Nutrient Farm for participants in this video [Reflections on the Skye Nutrient Network Farm programme | Information helping farmers in Scotland | Farm Advisory Service \(fas.scot\)](#)

The key messages from the Skye Soil Nutrient Network project were:

- Check what index your farm is for the soil phosphorus sorption capacity and adjust your fertiliser applications accordingly
- Remember the strong connection between healthy soils and invertebrate populations for birds such as corncrakes. Waternish Farm has begun surveying invertebrates to gain a better understanding of this aspect of their farm
- There is value in surveying and recording what wildlife you have on your farm—for inspiration see these videos [Using Trail Cams & how they can benefit your business | Information helping farmers in Scotland | Farm Advisory Service \(fas.scot\)](#) & [Recording wildlife on your farm or croft | Information helping farmers in Scotland | Farm Advisory Service \(fas.scot\)](#)
- Consider predators that may be an issue for your target species
- Collaborate with neighbours and organisations to widen the impact of your management practices

### Conclusion

Healthy soils are the basis of all strong food webs. If you are interested in enhancing wildlife on your croft or farm make sure you consider your soils both chemically, structurally and biologically.

We would like to thank the Montgomery family for their participation in the Soil Nutrient Network project.

### Useful Information

- Visit our webpage [www.fas.scot](http://www.fas.scot) for more information about the Soil & Nutrient Network and soil health and management.
- Visit [Waternish Farm - Isle of Skye](#) to find out more about diverse activities from conservation, agri-tourism to sheep dog trials held at the farm.