SAC CONSULTING

SRDP Farm Advisory Service

NE Organic Discussion Group

Newsletter

December 2021

Welcome to the December edition of the Newsletter.

Again, the weather has turned mild. I think it is supposed to stay dry for a few days and turn colder again over the next week.

I hope none of you suffered too much damage from storms Arwen or Barra. Arwen certainly reeked a lot of havoc. It was a significant event for the UK seeing some of the strongest winds in over a decade, and has caused 3 fatalities, extensive damage to property, infrastructure, power lines and woodlands across Grampian, Perth & Argyll, Scottish Borders, and Dumfries & Galloway.

The link for the recording of the Balkaskie Farms virtual farm tour meeting we held at the start of November is now available. The link for last year's farm tour meeting at Barnside is also there if you missed them or would like to rewatch. https://www.fas.scot/discussion-groups/organics/organic-farm-tours/

As I said last in last month's Newsletter, I am looking for your thoughts from April 2022 on? FAS funding is still to be finalised, but I would be interested to know what you would like to see included and if you value the Newsletter what would you like it to contain? I want to try and make any events/publications as useful to you as possible so let me know what you think?

Again, this month's the Newsletter contains a mix of articles and news:-

Building on last month's article on the importance of pH to make the most of your grass there is an article on the value of lime and soil sampling.
There is also one on appreciating the value of muck and slurry.
Time is passing so quick so there is also a timely article on preparing for calving.

There is no SRUC Organic Farming MSc Dissertation Summary this month, but we would hope to have at least on more next year.

You have an opportunity to have your say about organic farmers use of social media. Miriam Al-Futaih, who is a PhD student, introduces her study and provides a link to the survey.

At the end there is the usual news section which has a bit about storm Arwen and woodland and an AECS Update. There is also a link to the ORC 40th Anniversary Hub. With Christmas and New Year coming up it is a quieter time for meetings.

As ever, get in touch if you have any questions or want more information.

The value of lime and soil sampling

While organic farmers may revel in not having to pay the £600+/t prices for inorganic NPK fertiliser their non-organic counterparts rely on, due to soaring wholesale gas prices, you are not immune to the knock-on effects. Gas is required to dry lime, so the rising gas prices has led to the price of lime increasing. This has been further compounded by diesel prices also being at very high levels and lime quarries being excluded from the agricultural exemption for use of red diesel. Recent indications from trade are that granulated/prilled lime will increase by around £6/t and there have been quotes of calcium-based lime at over £30/t. Haulage prices have also increased in response to escalating fuel bills and staff shortages. Scaling back on lime due to these high prices may end up being false economy, as yields suffer and as highlighted in Lorna Galloway's article on the value of pH to make the most of your grass last month, this can have detrimental effects on livestock performance, the farm carbon footprint and ultimately profitability.

The under application of lime can have lasting consequences, so it is vital to apply what is needed. However, reductions in overall lime requirements and costs can be achieved by GPS soil sampling and variable rate spreading. Traditional soil sampling methods of walking fields in a W pattern to obtain a representative sample of the field only provides an average value of the field's nutritional status and a general recommendation of the lime that should be applied across the whole field. As a result, pockets of the field with significantly higher or lower pH from the average can be missed. These pockets are easily identified through GPS grid-based sampling of 4 samples per hectare, allowing targeted applications through variable rate spreading to the areas that need it the most and no/lower application rates to areas within target pH. Although the analysis cost of GPS soil sampling is considerably higher than traditional methods, this is offset by only targeting lime to the areas to the areas that really need it.

In addition, there can be wide variation in the price of lime from different sources. When selecting a liming product three aspects should be considered in relation to the price:

1. Fineness/lime particle size

By law, agricultural lime must be of a minimum fineness and can be measured by granulometry. Fineness determines how quickly the lime will reach with the soil to adjust the soil pH, with fine particles dissolving more effectively than coarse particles. Fineness can also influence the distribution of lime by different spreaders, with very fine lime being carried by the air, so less lands on the field you intend to apply it.

2. Neutralising value (NV)

The neutralising value tells you the lime's capacity to neutralise soil acidity. It is expressed as a percentage. This differs from reactivity which quantifies the effectiveness and speed of reaction of a liming material but is also expressed as a percentage.

3. Calcium and magnesium content

The balance between calcium and magnesium levels in the soil has more influence on soil structure than altering soil pH. This is because magnesium can aggregate soil, whereas calcium has the opposite effect by reducing soil compaction to encourage aeration and drainage between soil particles. Generally, Scottish soils have a high

magnesium content due to the underlying soil type, but local and regional variations are possible so soil analysis results should be used to provide an assessment of the magnesium levels in your fields.
Always source lime from an AgLime Quality Standard (AQS) assured producer who should provide analysis of the lime supplied including the neutralising value. Further details on lime selection can be found in the Technical Notes: https://www.fas.scot/downloads/technical-note-tn656-soils-information-texture-liming/ and https://www.fas.scot/publication/technical-note-tn714-liming-materials-and-recommendations/

Laura Henderson, Agricultural Consultant laura.henderson@sac.co.uk

Appreciating the value of muck

With the high price of fertiliser, muck has never been so valuable. While there are limited options available for natural fertilisers for organic farms, knowing the value of your farmyard manure (FYM) and slurry, as well as your soil status is crucial to ensure that any purchased natural fertilisers are necessary and are not applied excessively.
Carry out soil sampling every four to five years and ideally in the autumn or winter. The results will be most accurate when samples are taken at least three months after the last application of slurry, FYM, fertiliser and two years from when lime was last applied. Soils should not be overly dry or waterlogged at the time of sampling.
Standard soil analyses will report pH, lime requirement, and extractable P, K and Mg. Sulphur is also important to test for, considering its essential role in amino acid production, the building blocks for protein that is required for plant development and growth. A deficiency of sulphur deficiency will reduce N uptake, therefore affecting yield. Correcting a low sulphur status will help make the most efficient use of applied N.
Correcting soil pH will bring benefits for grass growth. The difference between a pH of 5.5 and 6.5 could be as much as 40% more grass yield. Late autumn is best time to correct soil pH to allow time for it to penetrate into the soil and raise the pH in preparation for the next grass season. However, it is never too late as long as fields are dry enough. Achieving the optimum pH will enhance the availability of nutrients to the growing crop. Aim for pH 5.9 to 6.2 for grassland and towards the upper end of this range for clover rich swards, and pH 6.3 for arable.
The following Technical Note details typical figures for dry matter and the nutrient content of various manures: https://www.fas.scot/downloads/technical-note-tn736-optimising-application-livestock-farmyard-manures-slurries/ However, it is worth getting your organic manures analysed to know exactly what you are applying to minimise any purchased fertiliser requirements. The cost is around £49/sample to test for dry matter, N and several minerals including P and K.
There can be variation in the analysis of slurry depending on the class of stock it is from and their diet composition. The above Technical Note shows that the difference between slurry from suckler cows compared to finishing cattle is vastly different, with

slurry from finishing cattle being richer in N, P and K, with over twice as much N in slurry from finishing cattle.
At typical application rates of FYM and slurry the following nutrients are provided. Note the nutrient availability percentage.

Organic manure	**Nitrogen (N)**	**Phosphate (P_2O_5)**	**Potash (K_2O)**
Cattle Slurry (6% DM) - total NPK (kg/m^3)	2.6	1.2	3.2
Total NPK applied in 30m^3/ha (kg/ka)	78	36	96
Nutrient availability (%)	40	50	100
Old Cattle FYM (25% DM) – total NPK (kg/t)	6.0	3.2	8.0
Total NPK applied in 30kg/t (kg/ha)	180	96	240
Nutrient availability (%)	5	100	100

It is important to minimise nutrient losses as much as possible during the spreading and incorporation of manures into the soil. The method of slurry application can greatly influence N losses. Application by trailing shoe or band spreader will increase the N value by 3 units per 1000 gallons compared to a splash plate. Losses of N in the form of ammonia will be higher when spreading slurry in dry, warm sunny conditions, and so spring rather than summer applications can raise the N value by a similar amount. It is estimated that about 40% of available N can be lost after surface application and so ensuring rapid incorporation into tillage land can help limit these losses (within six hours of application for slurry and 24 hours for FYM).
Bear the value of your muck in mind if you are doing any muck for straw deals. According to AHDB, the value of nutrients from “typical” cattle muck has almost doubled when based on an application rate of 40t/ha, which was worth £263/ha in spring 2020 and £451/ha in autumn this year.

Lorna MacPherson**,** Dairy Consultant lorna.macpherson@sac.co.uk

Preparing for spring calving 2022

Whilst it may feel like calving time is still a long time away, a little preparation done in the coming weeks should hopefully ease the pressure come calving time, and potentially save a calf.

Cow Management
Ideally cows will have been body condition scored at the point of housing and split into groups of lean / young cows and fitter cows to allow adjustments to their diets to help them reach the optimum BCS of 2.5 for calving, with the aim of that BCS being reached 30 days pre calving and then allowing the cow to maintain condition thereafter.

Whilst it may be tempting to restrict a cow's feed / silage to reduce BCS beware of restricting feeds in the weeks approaching calving as the majority of calf's growth occurs in the final 10-12 weeks of gestation, so as the calf grows so does the cow's nutritional demands. It is essential to feed to maintain BCS in the last 30 days of gestation. Good nutrition maximises calf vigour, colostrum quality and peak lactation. Poor nutrition of the cow can affect the calf's absorption of immunoglobulins from the colostrum.
Ensure mineral status of the ration is appropriate and perhaps discuss with nutritionist/vet to ensure ration is adequate for pre calving minerals. It may be worthwhile doing a blood test on a sample of cows to access their mineral status.

Shed preparation
As calves are born without any immunity there is a high risk of disease spreading as newborn calves lie down with a wet navel in bedding. To reduce the risk of disease outbreaks in the calving shed and pens it is advised to muck out, wash and disinfect (with a suitable product from the list that complies with Organic standards) in advance of the calving period, once calving has started, the pens and calving area should be well bedded with dry bedding.
Start to build up calving pens early in case of an early calving, consider building in an escape route from these pens to allow a swift exit if a cow turns on you quickly.
If problems arise at calving and the cow requires assistance, time is often limited and so it is best to be organised for all eventualities in advance. So, look out calving jacks, ropes, halters etc, clean them and check that they are up to the job and don't need replaced.
Prepare a list and order the necessary supplies from your vet or animal health supplier of Iodine, ear tags, castration and disbudding equipment, lubrication and artificial colostrum.

Hopefully a little time spent on preparation now will bring some rewards at calving time.

Lesley Wylie, Beef Consultant, SAC Consulting lesley.wylie@sac.co.uk

Have your say!
Organic Farmers Use of Social Media

A warm hello & welcome to **the organic farmers use of social media** survey

This survey is part of a PhD study being undertaken by Miriam Al-Futaih at the University of the West of England, Bristol.

Miriam completed a Master of Science in Organic Farming from SRUC. Her MSc project was on organic farming and wild bee conservation, which investigated the factors influencing the uptake of wild bee conservation measures by small- and medium-scale organic farmers in North Rhine-Westphalia, Germany.

Miriam is doing her PhD at the faculty of Health and Applied Sciences and she is member of the Science Communication Unit at UWE Bristol. Her study examines the different ways knowledge is exchanged between farmers and other farmers, advisors & researchers in organic farming and assesses the role of social media in supporting the sharing and exchanging of knowledge between these actors.

The information gathered through this study will contribute to the current research and will help in identifying effective methods and tools for communication that improve the production, sharing, and use of local ecological, practice- based and scientific knowledge of organic agriculture, which will also provide support in the shift to more sustainable farming practices.

All information you provide during the research project will be kept strictly confidential. The data collected are processed, stored and shared in accordance with the European Data Protection Regulation. This means that your data will not be identified in any reports or publications and any data extracts will be carefully reviewed to ensure you are not identifiable. You will be provided with a summary of the results of this project if you wish. Please add your email address into the survey to enable this.

The survey will take approximately **10 minutes** to complete, and it is entirely your choice as to whether to complete it or not. You may ask for your contribution to be withdrawn from the study by the **31 March 2022** and you will be asked for a memorable word within the survey to facilitate this. If you have any questions on the survey or would like more information on the study, please contact: Miriam Al-Futaih via email: miriam2.al-futaih@live.uwe.ac.uk or telephone: 07425320657.

Please click the link below to go to the survey website (or copy and paste the link into your Internet browser).

Survey link: https://uwe.eu.qualtrics.com/jfe/form/SV_40ftXhI0jEwZXym
**The survey is available until the 28th of February.*

Thank you for your time and for participating to this survey.

Storm Arwen and Woodland

Scottish Forestry, working alongside CONFOR and other industry bodies are working to assess damage utilising satellite data and helicopter surveys, but early estimates suggest we may have seen between 1 and 1.5 million cubic metres of timber toppled in Scotland, and up to 500,000 m^3 in Northern England. This volume, if correct, would account for in region of 20% of the annual timber harvest, and as such, will likely have a significant effect on the markets, on short term contractor availability, and on processing times with Scottish Forestry as work for clean-up and recovery begins in earnest.

There is a useful information note on the FAS website Forestry Information Note: Storm Arwen Update - Felling Permission and Windblown Trees | Information helping farmers in Scotland | Farm Advisory Service

AECS Update

The opening and closing dates for the 2022 round have been announced. The main scheme (which includes organic conversion and maintenance) opens on the 24th January 2022 and closes on the 29th April 2022. There are different dates for collaborative projects, standalone slurry storage and improving public access.

The guidance is presently being updated and will be available by the opening date but it is thought the changes to scheme guidance should be fairly minimal.

Importantly SGRPID have said “If you receive a 2021 round contract for part of your holding, you will not be disadvantaged if you then apply in 2022 for other parts of the holding.”

For more detail see Agri-Environment Climate Scheme

ORC 40th Anniversary

Our final Research Digest is fittingly on 'The Organic Principles: The foundation of ORC’s work and the organic movement'

40th anniversary communication hub

I wish you all a Merry Christmas and a successful and peaceful 2022.