first milk
'the farmers' business'

My Farm Focus

March 2020

First4Milk commitment helps promote sustainable dairy

The First4Milk programme demonstrates our commitment to responsible sourcing. It is a natural extension of the work First Milk has been doing with major customers for some years and reflects our changing world in which consumers are increasingly interested in how food is produced. First4Milk promotes the important role dairy farming has in delivering environmental and social benefits through its three key themes – People, Animals and Earth. We have pledged to play our part in producing sustainable, healthy and nutritious food, while preserving and enhancing the environment and respecting the people and animals involved in the supply chain.

The First4Milk programme set out ambitious targets across the business, including reductions in energy and water use, a 65% relative reduction in CO2e and the elimination of direct waste to landfill. The programme's performance-improving initiatives focus on using technology to collect, analyse and use data, best illustrated to date by the success of the First4Milk app, used by the majority of members.

Despite many such initiatives across the dairy and livestock industries, livestock-based food production remains under the spotlight and research into consumer attitudes about dairy farming shows they are particularly concerned about animal welfare, access to pasture, antibiotic use and dairy bull calves. We are proud of the leading standards on First Milk members' farms and know members exceed many of the national targets and outcomes in these areas. But we need to demonstrate we are addressing these areas of public concern proactively in order to prosper long-term. This means being explicit about what is already being achieved and working together to promote dairy farming.

First4Milk continues to be the framework for our targets and activities in sustainable practices. Over the next few weeks we will be announcing how we are developing this framework further.

The Importance of Soils

Soil is one of the most important resources on a farm. It provides the basis for forage and crop production and therefore the associated livestock production. Nonetheless, as recognised in the newly proposed Agriculture Bill, soil is also valuable in providing Natural Capital, in the form of carbon capture and water management to reduce the risk of flooding. Sarah Bolt, membership development manager at Kingshay, explains the how and why of soil testing.

With soil health and fertility key for all farmers, the new bill looks to reward landowners for protecting and improving soil quality, such as reducing erosion, compaction and the decline of soil organic matter. With strong links between soil organic matter, soil functions and agricultural sustainability, farmers will benefit too.

Kingshay is currently working on a 'Soil Organic Carbon Research Project' which aims to help build the carbon sequestration picture by better understanding current levels of soil organic carbon under grassland across the UK. Twelve First Milk farms have taken part in this research and we are very grateful for their participation. A more detailed analysis of the results will be conducted, including an overview of the national results, but an initial summary of the First Milk farms' results is given on the back page.

Farm management practices can change the chemical, biological and physical balance of soils over time. Checking your soils regularly provides an insight into potential remedial actions which should improve farm profitability.

When was the last time you checked your soils?

Compacted soil can result in reduced plant growth and lower crop yield, impeded drainage and increased soil erosion. Forage grown in compacted soil can also have a reduced mineral uptake leading to dietary imbalances when fed. Maintaining a healthy soil structure will increase forage yield and quality, benefiting livestock health.

Many practical aspects of soil evaluation can be assessed in the field. *Grab a spade and walk the fields now!* Dig out one spade-sized block of soil to a depth of approximately

30cm, by cutting down three sides and then levering the block out to observe the undisturbed side of the soil. Gently break up the block, to assess for compaction:

HOW FAR DO THE ROOTS PENETRATE?

Roots will easily extend to over 30cm in a healthy soil. If the grass roots are matted beneath the surface, compaction may be a problem.

WHAT SIZE AND SHAPE ARE THE AGGREGATES?

A well-structured soil has a good crumb structure. A compacted soil will have larger, blockier aggregates.

IS THERE ANY EVIDENCE OF EARTHWORMS?

You should have lots of dark coloured earthworms in a variety of sizes.

DOES THE SOIL SMELL HEALTHY?

If there are any signs of compaction, remedial action will be required.

DID YOU KNOW?

Under the Farming Rules for Water (April 2018) you are required to soil test each field on your farm at least every five years. **This means that on average 20% of your farm area should be soil tested each year.**

"The nation that destroys its soil, destroys itself"
Franklin D. Roosevelt

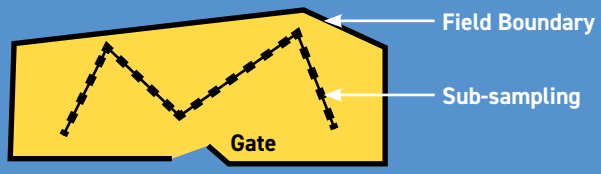
These rules aim to promote good practice in managing fertilisers and manures. A standard soil analysis will test for phosphorus, potassium, magnesium and pH. Understanding the chemical analysis of your soil aids fertiliser planning. As a result, input costs may be reduced as nutrient requirements can be more easily matched to nutrient supply.

If you don't have access to a soil analysis service, soil packs and a foot-operated soil sampling tool can be sourced online from Kingshay at **www.kingshay.com/shop**.

Sampling methodology

It is important to take a representative sample from the field area following these guidelines:

- Avoid sampling after applying fertiliser or FYM
- The sample should represent no more than 10 hectares (25 acres)
- Follow a 'W' pattern across the field. Avoid headlands, gateways and any odd patches. Take 20 or more sub-samples



- At each spot (sub-sample) clear the surface of pasture to bare the soil. Use a stainless-steel trowel or soil sampling tool
- Sample to a depth of 10cm on grassland, 15cm on arable soils
- Collect the sub-samples in a clean plastic bucket. When all 20 (or more) sub-samples have been taken, mix together and remove any large stones before sending to the laboratory for analysis

A complete soil sampling procedure is supplied with Kingshay soil analysis packs.

Analyse your soils regularly to maximise productivity

For more information about soil sampling, contact Kingshay on **01458 851555** or **contact.us@kingshay.co.uk**

How to increase soil carbon

- Prevent fields having bare soil during the winter
- Use direct drilling or min-tillage as much as possible
- Before planting maize, think carefully about whether the field and its soil are suitable
- Maintain and protect hedges and farm woodland
- Improve pasture management to extend grazing season, e.g. use cow tracks
- Consider how to restore land in poor condition and use soil testing to find fields with the lowest carbon
- Use artificial fertiliser appropriately. Only apply where indicated by soil testing results
- Make best use of manure and avoid over application on fields closest to buildings

First Milk farm results

Responsible Sourcing Manager, Lee Truelove, gives an initial analysis of the First Milk farms' Soil Organic Carbon Project results.

Soil tests	pH	P index	K index	Mg index	Carbon %	Organic matter %
Average	6.0	2.7	1.7	2.9	3.9	6.7
Min	5.3	0.0	0.0	2.0	3.0	5.1
Max	6.7	4.0	3.0	4.0	5.3	9.2

It appears some of the pH values are lower than optimum and some farms would benefit from lifting their P and K indexes. For this exercise we were particularly interested in the level of carbon stored in grassland soils. The average carbon content of soils on these farms was 3.9%, equivalent to 152 t/ha carbon stored, based on a topsoil depth of 30 cm. An increase of 0.34% carbon content on these farms would increase carbon storage by 13 t/ha and, if this was done across 100 hectares, it would offset the carbon associated with milk production from 1 million litres.

Welfare outcomes

Last year, we described the work we are doing around animal welfare to benchmark our member farms using the Red Tractor Assurance welfare outcomes data. The Red Tractor figures are derived from a random sample of ten cows scored for lameness, body condition score, lesions and swellings, hair loss and cleanliness. We created a combined welfare outcomes score based on every farm's most recent farm assurance audit. These measures are an important indicator of cow welfare on First Milk farms.

Up to June 2019, this combined score showed 90% of members had no issues raised, 8% had some minor issues to address and 2% needed to put in place an improvement plan. We hope by sharing this information, it enabled members to benchmark their own results against national averages.

We have just reviewed the data up to December 2019 and this shows how the wet autumn and winter have thrown up challenges around cow cleanliness on some farms. We appreciate how difficult this winter has been but encourage members to ensure they have sufficient stocks of dry bedding to keep their cows as clean as conditions allow.

Here's hoping for some dry spring weather as soon as possible!

Dates for your diary – March member meetings

Come and hear what's happening in the business; we're keen to share our plans and listen to your views. First Milk is your business and we value your input.

Date	Time	Venue
Tuesday 10th March	11am	Carmarthen Golf Club, Blaenycoed Road, Carmarthen, SA33 6EH
	7.30pm	Wolfscastle Country Hotel, Wolf's Castle, Haverfordwest, SA62 5LZ
	7.30pm	The Fenwick Hotel, Kilmarnock, KA3 6AU (M77 Junction 8)
Wednesday 11th March	7.30pm	The Bentley Brook, Fenny Bentley, Ashbourne, DE6 1LF
	7.30pm	Woodlands Hotel, Woodlands Avenue, Newbridge, Dumfries, DG2 0HZ
Thursday 12th March	7.30pm	The Hired Lad, Penrith Auction Mart, Penrith, CA11 0DN (M6 Junction 40)

For more information contact the membership team on 0141 847 6800 or membershipteam@firstmilk.co.uk

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