



Achieving Farm Nutrient Balance

- We can do it together



Implementing Farm Nutrient Balance

We call on all involved in the food chain to commit to managing the nutrient cycle on UK farms, to build on past progress and to show results by 2030.

We will do this by taking a more integrated approach to soil and crop and animal nutrition as the foundation to sustaining future food production, meeting environmental targets and net zero carbon commitments.

We all agree, the key is to put the focus back on the soil, on the crop and on the animal – targeting overall health and condition, correcting nutritional imbalance or deficiency, and employing all technologies and knowledge to deliver recognisable improvements. The benefits can be measured using these Key Performance Indicators (KPIs).

“Our goal is for farmers and farm advisers to be able to define these, make a benchmark calculation, agree their farm targets, and commit to deliver these improvements by 2030”

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| Nitrogen Use Efficiency* (NUE) for crops | Feed Conversion Ratio* (FCR) for livestock | Farm Nutrient Balance* (FNB) for the whole farm |



* (NUE) ratio between amount of crop harvested and amount of N applied. * (FCR) ratio of animal feed input to meat/milk/eggs output. * (FNB) estimate of N and P in feeds, fertilisers, and any imported manures/organic materials minus N and P in harvested crops, liveweight and milk exported.



The shared challenge

The UK has many geographical advantages and relatively plentiful resources and natural habitat. That said, we have to work together to make the natural environment and food systems resilient for this and future generations.

At the heart of the matter is the nutrient cycle. We tap into it and continually replenish it to feed crops, grass and animals which we all depend on for nutritional food and energy. It is the key to life, but it also affects water and air quality and there is a direct link between nitrogen needed to form plant and animal proteins and carbon emissions.

We have made considerable progress so far

In the last 30 years, the combined efforts of UK farmers, the supply industry and government intervention has helped halve the UK agricultural balance for phosphorus and reduce by a third the nitrogen balance, whilst improving farm output.

Between 1999 and 2014 the inclusion of nitrogen in animal feeds has reduced by 5.6% and phosphorus by 22.2%. Precision formulation and feeding is further reducing nitrogen and phosphorus lost in manures.

Due to the environmental implications of these two important nutrients, policy makers have and will continue to place focus upon them. Yet the answers don't lie in these per se but in the way all other factors affect their conversion into food, from soil health and pH, the presence of enough sulphur, potassium and calcium etc to animal health. In short the resilience of the whole farm system is needed to support a more sustainable N and P balance.

Our ambition is for:

- Healthy soils, animals and rural eco-systems
- Optimal returns on farm investment
- Optimal productivity for farming systems
- Lower carbon (methane and nitrous oxide)
- Lower nitrogen and phosphorus emissions
- Lower ammonia
- Increasing biodiversity



Further guidance on our Nutrient Management KPIs

- defining them, making benchmark calculations, agreeing own farm targets and committing to their delivery is available via Championing the Farmed Environment www.cfeonline.org.uk and through any of the signatories to this joint ambition.

We now share a joint ambition to achieve nutrient balance across all farm types - and to deliver it

We ask:

1 Government to recognise this commitment to leadership across the supply chain in its future policy making.

2 Government to support our fertiliser and feed producers with suitable UK energy and emissions trading schemes to facilitate their routes to de-carbonise fertiliser production and energy use at feedmills.

3 For the provision of carbon/environmental footprints for fertilisers and feeds by producers to inform the process of reducing the footprint of UK produced food.

4 Farmers, who require support with running their businesses, to use accredited advice to get the most out of their on-farm resources and bought-in goods and services.

5 Our farmers to place soil health and whole farm nutrient plans, including recycled sources, at the centre of their farm business to drive change and realise all the benefits available.

6 All parts of the food chain to make every nutrient and micro-nutrient in soil and animal feeds matter.

7 The whole food chain to consider new seed varieties, cropping patterns and animal genetics making advances in nutrient management possible.

8 For all recycled nutrients to be recovered effectively using Best Available Techniques.

9 For soil health and balanced fertility to support even greater Nitrogen Use Efficiency, improve Farm Nutrient Balance for Nitrogen and Phosphorus and to optimise animal Feed Conversion Ratios.



There is a joint will in our partnership across the foodchain to deliver

