



Prescription nutrition an essential part of major new NUE-Leg project

- DEFRA awards £3.3 million for major on-farm trial and research project
- Project seeks to significantly reduce the dependence on mineral nitrogen fertilisers
- Origin Enterprises to provide crop nutrition and digital expertise

DEFRA has awarded £3.3 million in funding to a major on-farm trial and research project that seeks to significantly reduce the dependence of UK grassland farming on mineral nitrogen fertilisers.

Called 'NUE-Leg', the project has drawn together scientific expertise and global leaders in plant breeding and soil microbiology, agronomy, carbon emissions and the farming and food supply chain.

Origin Fertilisers brings to the consortium crop nutrition expertise, alongside colleagues in Origin Digital who will create the digital platforms required to allow farmers and growers to maximise the potential of the project.

The 'NUE-Leg' project will create conditions in commercial farm settings that will enable clover to fix up to 300kg of nitrogen per hectare per year, a large portion of which will be available for grass growth. At these levels, additional mineral nitrogen fertilisers needed for grass growth can be eliminated or significantly reduced, which will place greater emphasis on the importance of other minerals to create a balanced, nutritious crop.

A key part of the project is to identify the specific nutritional requirements of these new legumes and to develop prescription nutrition programmes using Origin's Nutri-Match service, as Peter Scott, Technical Director at Origin Fertilisers, explains:

"There is a lot to learn in the project about the specific nutrient requirements of these new legume varieties both individually and within grass swards across a range of different soil types.

"Although the legumes will meet all or most of the nitrogen requirement, we also need to consider the other nutrients required to optimise yield, nitrogen uptake and conversion into protein and the mineral profile required for a high value forage and more sustainable livestock production."

Origin Fertilisers will use its extensive knowledge and expertise in prescription nutrition to match soil and crop requirements with nutritional inputs. Fertiliser programmes will be developed for both the crop establishment and maintenance phases. Peter explains that prescription nutrition enables farmers to balance the full spectrum of nutrient requirements:

"Nutrients such as phosphate, potassium, sulphur, calcium and magnesium will be required in varying amounts to meet crop needs. Other nutrients such as sodium will play a role in increasing crop palatability and intake. Micronutrients are essential in the fixation of

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atmospheric nitrogen by legumes, and we will be developing metallo-catalysts to optimise this process.

“As the sole fertiliser business in the project, our role is to identify the optimum nutrient profiles for these new legumes to provide the balance between optimised crop growth, livestock production and environmental enhancement.”

Alongside them, Origin Digital will create the digital platforms that farmers can use to understand their farm nutrient profiles and requirements, choose the best clover varieties tailored to their soil and farm requirements, and even determine the percentage of clover in their grass through taking a photo on their smartphone.

Devlyn Hardwick, product manager at Origin Digital, said: “By creating digital tools that help farmers apply the advances in prescription fertilisation and clover breeding in a way that’s tailored to their fields, we can support them to get much of the nitrogen their grass needs from the air instead, as well as saving them time by automating the fertiliser planning and monitoring their clover content from their phone.”

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Image: Clover in a sward

Caption: A key part of NUE-Leg is using prescription nutrition to supply the clovers with a balanced profile to meet crop requirements for additional nutrition.



Image: Fertiliser bags

Caption: A wide range of nutrients can be matched to soil and crop requirements.

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Notes to editors:

- Origin Fertilisers is a national manufacturer and distributor of fertiliser with 12 production facilities across Great Britain and headquarters in Royston, Hertfordshire.
- Origin has over 17,000 products to help arable and grassland farmers make better use of fertiliser – both financially and environmentally – by using targeted prescription fertilisers that improve soil fertility and crop productivity. Targeted nutrition (with a known carbon footprint) can have a significant impact on helping farming reach its sustainability goals.
- A team of regional, in-house, nutrition agronomists offer practical advice to growers on ways to optimise their crop nutrition and fertiliser usage.
- Origin Digital provides advanced agronomy decision-support software and ground-breaking remote field performance insight for organisations that partner with farmers as customers or suppliers.
- Both Origin Fertilisers and Origin Digital are part of Origin Enterprises plc, which has leading market positions in Ireland, the United Kingdom, Poland, Romania and Brazil. Origin Enterprises PLC is listed on the XESM market of Euronext Dublin.

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