

# Kevin Maher, Walsh Scholar of the Year, Knowledge Transfer Programme

Kevin's research examined the factors that influence Nitrates Derogation farmers when they use their nutrient management plans as a decision-making tool around fertiliser. Mismanagement of fertilisers leads to leaching of nutrients such as nitrogen (N) and phosphorus (P) into waterways, leading to pollution and loss of biodiversity. Nutrients (nitrates and phosphates) from diffuse agricultural sources remain a critical problem across Europe, and agriculture is the dominant source of N and P contamination in Irish waterways and coastal waters. Leached nutrients end up in rivers, lakes and estuaries, where they can cause a range of environmental problems, such as eutrophication. The objective of this study was to establish the factors that influence Nitrates Derogation farmers using their nutrient management plans (NMPs) as decision-making tools around fertiliser.

#### Data collection

Data from 20 beef farmers from Co. Kilkenny and 20 dairy farmers from Co. Wexford was collected through the completion of phone surveys. The questionnaire established the selected farmers' attitudes towards and use of the nutrient management planning tool and their attitudes to soil testing and a liming programme. A phone survey was the chosen method for data collection due to social distancing restrictions. Survey data was supplemented by data on each of the farmers from existing Teagasc records, including age, land area and nitrogen per hectare (NPH). All the selected farmers were participating in the Nitrates Derogation scheme, as it is a mandatory requirement for these farmers to take soil samples at least once every four years and to develop an NMP for their farms.

### Study findings

The study found that there was a good understanding by farmers of why it was important to follow soil sample recommendations and use NMPs when making decisions on fertiliser application. Almost all farmers claimed to understand the purpose of following an NMP. However, there was a gap between farmers' understanding of why it

was important to follow soil sample recommendations and using an NMP when making decisions on fertiliser applications, and putting these into practice. Opinions and attitudes of farmers towards NMPs were relatively positive. Almost 80 % of farmers felt that following an NMP helps to increase productivity on farms, while just over 90 % felt that following an NMP improves soil fertility. Some 80 % of farmers felt that following an NMP helps protect the environment. Age and farming enterprise type were found to be associated with the uptake of soil sampling and using NMPs as decision-making tools on fertiliser applications. Farmers under 50 years of age were more likely to use soil sample recommendations and NMPs as decision-making tools with fertiliser applications than farmers over the age of 50. Dairy farmers were also more likely to use the NMP for fertiliser decisions compared to beef farmers, as dairy farmers placed a higher reliance on soil sample recommendations and NMPs when making decisions on fertiliser applications.

#### Authors

#### **Kevin Maher**

KT Walsh Scholar (Teagasc Kilkenny and Enniscorthy), now Environmental Sustainability Executive in Food Drink Ireland (Ibec). Correspondence: kevin.maher.1@ucdconnect.ie

## Terry Carroll

Business and Technology Advisor – Drystock, Teagasc, Kilkenny

# Martin Doyle

Environment & Technology Advisor – Drystock, Teagasc Advisory & Training Centre, Enniscorthy. Co. Wexford





