An examination of the factors that influence Nitrates Derogation farmers using their nutrient management plans as a decision- making tool around fertiliser

Kevin Maher

Abstract

Mismanagement of fertilisers leads to leaching of nutrients such as nitrogen and phosphorus into waterways leading to pollution and loss of biodiversity. Nutrients (nitrates and phosphates) from diffuse agricultural sources remain a critical problem across Europe while agriculture is the dominant source of nitrogen and phosphorous contamination in Irish waterways and coastal waters. Leached nutrients end up in rivers, lakes, and estuaries, which 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 as a decision-making tool around fertiliser.

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 the 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 a NMP for their farms.

The study found that there was a good understanding by farmers on why it was important to follow soil sample recommendations and use NMPs when making decisions on fertiliser applications. Almost all farmers claimed to understand the purpose of following a NMP. However, there was a gap between farmers understanding of why it was important to follow soil sample recommendations and using a NMP when making decisions on fertiliser applications and putting this into practice. Opinions and attitudes of farmers towards NMPs were relatively positive. Almost 80% of farmers felt that following a NMP helps increase productivity on farms while just over 90% of farmers felt that following a NMP improves soil fertility. Some 80% of farmers felt that following a 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 a decision-making tool 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.