Factors influencing Nutrient Management Practices on Agricultural Catchment Farms

Michele McCormack Cathal Buckley

Abstract

The Agricultural sector will play a key role in reaching the goals set out in The Water Framework Directive 2000/60/EC (WFD). Although some progress has been made the 2015 deadline for reaching the goals of maintaining "high" status waterbodies and increasing the status of all other water bodies to at least "good" water status has passed without success and the timeline for these objectives moved forward to the next two cycles 2021/2027. Now more than ever policymakers need to understand the motivations of key participants of which farmers play an important role. This study investigates whether the use of a Technology Acceptance Model (TAM) can be useful in predicting farmer acceptance of two nutrient management practices, soil testing and nutrient management planning which have the potential to contribute to water quality improvements. Factor analysis on a survey of farmers involved in Teagasc Agricultural Catchments Programme (ACP) reveals two specific variables which are hypothesised to be fundamental determinants of user acceptance, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). Both variables are found to be significant in predicting farmer intention to use and are subsequently included in a model to investigate key drivers of convergence to optimal soil phosphorus levels. The research suggests that farmers who converge to optimal P levels (soil P index 3) from soil P index 4 perceive soil testing and nutrient management planning "useful" and "easy to use" but there is no significant relationship on farms operating below optimal levels of soil P index 1 and 2.