Masters in Agricultural Innovation Support (MAIS) 2023
PROJECT SUMMARY

1. Project Details	
Project title	**Farmer awareness, attitude to and use of available technologies in the management of Riparian Buffer Zones (RBZ) on farms as a mitigation action for improving water quality**

2. Project background

Ireland has legally binding EU targets to meet to ensure all our waterbodies achieve Good or High status by 2027. Agriculture is identified as the biggest significant pressure on water quality in Ireland. Increased levels of phosphorus and nitrogen detected in our waters are leading to declining water quality. Good management practice around riparian buffer zones is crucial to breaking the pathway for nutrients, particularly phosphorus, from entering our waterbodies. The ASSAP is a free and confidential advisory service available to farms in priority areas for action where advisors provide advice on targeted actions to help improve water quality. ASSAP advisors have identified problems with riparian buffer zones as the second most common issue impacting water quality on farms assessed.

The study proposes to look at current on farm practices in relation to riparian buffer zones and to establish the willingness of farmers to implement a range of additional riparian buffer zone measures where deemed appropriate. It proposes to look at farmer's attitudes to and awareness of riparian buffer zone, and the barriers to implementation.

The study also proposes to take the available technologies for e.g. Pollution Impact Potential (PIP) maps, overland flow pathway maps and delivery point maps, and evaluate farmer's use of these technologies to identify risky areas on farms with the potential to impact water quality.

3. Project aims and objectives

The objectives of the project is:

1. To get a clear understanding of farmer awareness of riparian buffer zones
2. To get a clear understanding of farmer attitude towards riparian buffer zones
3. To establish the existing level of use of riparian buffer zones on farms
4. To assess farmers awareness of available technologies (PIP maps) to assist in the identification of high risk areas on farm
5. To identify the barriers to farmers implementing enhanced riparian buffer zone measures (awareness/cost/labour/reduced productivity, etc.)
6. To ascertain the willingness of farmers to adopt a range of enhanced riparian buffer zone measures in high risk areas identified using PIP maps
7. To evaluate the effectiveness of targeted environmental schemes, (e.g. ACRES or the Water EIP) in the adoption of riparian buffer zones

4. Suggestions for methodology

The MAIS student will work in conjunction with the ASSAP advisory service. The methodology will include:

- An assessment of farmer awareness, attitude, use and management of riparian buffer zones (in association with ASSAP) on 100 farms
- An assessment of farmer awareness and use of PIP maps and other similar technologies
- Identification of the barriers that prevent the implementation of riparian buffer zones
- To establish farmers willingness to implement riparian buffer zones in high risk areas of their farms
- To evaluate the influence of environmental schemes on farmers attitudes towards riparian buffer zones
- Development of a draft assessment procedure and plan for the location of riparian buffer zones in high risk areas of the farm for use by farmers
- Development of draft farmer/advisor support materials for the implementation of riparian buffer zones

5. How this project links to the Teagasc KT Programme objectives and best practice in innovation support, advisory and education?

The ASSAP program works with farmers to develop a tailored plan for each farmer to help support them in continuing to farm productively while having minimal impact on water quality. Riparian Buffer Zones, their structure, location and management is an integral part of this ASSAP plan.

Evaluating farmer knowledge, attitude and existing practices around RMZ will help ensure ASSAP and Teagasc KT advisers are best placed to assist farmers in implementing solutions on their farms to reduce nutrient losses from agriculture.