

2021 KT Walsh Scholarship (MAIS) Project Summary

1. Project Title and Associated Programme

KT Programme	KT
Project title	A KT toolkit to improve fertiliser spreading on grassland farms

2. Project background

The precise application of fertiliser is critical to improving nitrogen use efficiency on grassland farms in Ireland. With projected chemical fertiliser reductions of 20% under the EU Green Deal & Farm to Fork strategy and chemical fertiliser responsible for 40% of nitrous oxide emissions on Irish farms, the challenge is significant. This is compounded by changes in fertiliser types and an increase in fertiliser spreading complexity.

There is a need for improved accuracy in fertiliser spreading to ensure all products (including protected urea) are spread evenly across wide bouts now used, while protecting hedgerows and watercourses. Modern spreaders require careful setting and adjustment depending on the product being used and the spreading width. There is evidence that this is not being achieved even on machinery-aware tillage farms. Recent research at Oak Park (Ward and Forristal) has indicated that headland spreading in particular can be very uneven, indicating poor system set-up and operation.

Few advisors would be confident in advising farmers/contractors on the need for careful setting of spreaders, or for oversight of contractors. There is a need to improve spreading precision to improve fertiliser efficiency and protect the environment. The development of an advisory KT toolkit on spreading advice is essential to impact on fertiliser efficiency & meet future policy targets.

3. Project aims and objectives

- To develop an advisory approach to improving the precise application of fertilisers.
- To improve the application of fertilisers at farm level, improving efficiency and reducing negative environmental impacts.
- To upskill advisors in a key fertiliser efficiency and environmental area
- To develop a tool kit of advisory supports.
- To improve headland management of fertiliser application.
- To develop and equip a post graduate student with unique skills that would benefit the future advisory programme.

