

# Farmer led innovation in the use of multi-species swards on Northern Ireland farms

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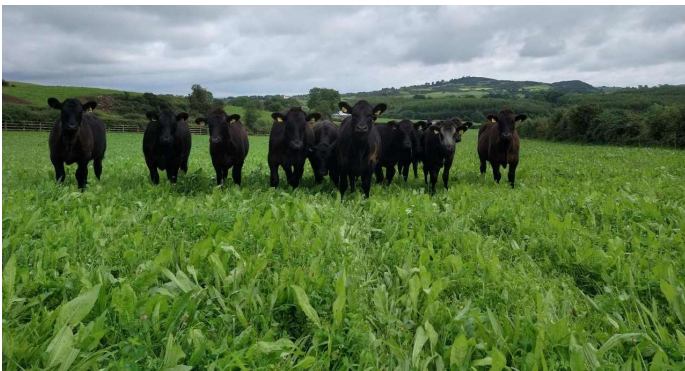
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## Introduction

- Increasing evidence to suggest that the use of multi-species swards (MSS) could address challenges faced by Northern Ireland (NI) ruminant livestock farmers.
- Many suggested benefits from incorporating a mix of grass, legume and herb species into grazing platforms, such as
  - Deep rooting properties (drought resilience)
  - Improved soil health
  - Reduction in the requirement for manufactured nitrogen fertiliser input.
- However, there is a considerable lack of information surrounding the management of MSS on commercial farms in NI.

## Project 1

The first project (undertaken as part of the SUPER-G project) involved the establishment of MSS on seven dairy, beef and sheep farms across NI containing perennial ryegrass, white clover, chicory and plantain alongside a control mix containing perennial ryegrass and white clover only. The swards were established during autumn 2019 and spring 2020. The farmers provided sward management information, including pre-and post-grazing sward covers and organic and artificial fertiliser application rates. In addition, botanical assessments, herbage quality and mineral samples were taken three times per year.



## Project 2

Six farmers, with assistance from AgriSearch, applied for funding for a European Innovation Partnership operational group to further investigate the feasibility of MSS for beef and sheep production. The operational group sought to specifically examine the challenges in establishing and successfully managing MSS and, crucially, communicating both the benefits and challenges to other farmers. A series of "meet the farmer" videos were recorded to introduce the farmers involved in the project, explain their interest in MSS and outline initial experiences in establishing the swards. This was then supplemented with a farm walks held in September 2021 & June 2022.



## Results – Management

- The farmers involved quickly realised that a change of mindset was needed to manage these swards
- They take longer to establish than a conventional reseed and require different management techniques.
  - Less artificial N fertiliser
  - Higher entry and residual sward heights.
  - Longer rotation lengths
- Field selection is also important. Candidate fields should have a good soil nutrient status and a low weed burden



## Results – Performance

While still early in the project, the farmers involved have observed the MSS to perform better than perennial ryegrass monocultures especially during drought events. Initial findings from the 2021 grazing season show that the MSS sown as part of the SUPER-G trial (Project 1) had a 7.4% higher dry matter yield than the control mixture of perennial ryegrass and white clover, while using 11.2% less nitrogen. Initial herbage mineral analysis from the SUPER-G farm sites also show that the MSS have considerably higher mineral content which merits further investigation.

## Conclusions

- Farmers learn best through peer learning alongside support from research scientists.
- These projects have highlighted the level of interest in this topic in NI with excellent interaction and attendance at all associated knowledge exchange events.
- All the farmers involved in the EIP group are intending to establish additional MSS in the future
- Operational group demonstrates how a mutual support network can be created, whilst also inspiring many other farmers in NI to establish their own multi-species swards.#
- Further institute based research on MSS is needed



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