

Masters in Agricultural Innovation Support (MAIS) 2023 PROJECT SUMMARY

1. Project Details

Project title

Understanding the key actors in the farmer's support network for decisions regarding animal health

2. Project background

Irish agriculture is challenged to reduce its GHG emissions, with a target to reduce emissions by 25% by 2030, and to achieve climate neutrality by 2050. Teagasc Research (Lanigan et al., 2018) has identified a range of technologies and measures which, if adopted by farmers, can lead to a reduction in GHG emissions. One of the measures included is a suite of animal health interventions. Animal health is recognised as a key enabling measure in the drive to reduce agricultural GHG emissions through improved efficiency^{1,2}.

Decisions to change animal health management practices are complex, with potentially multiple actors (vet, adviser, technical sales representative, and other actors) and systemic-type changes. Utilisation of funded health supports³ by the farmer and recommendations by their health team could see a reduction in GHG emissions through improved health.

Research has successfully used a farmer-led multi-actor farm health team to improve herd health management in the Horizon 2020 DISARM project⁴. Within Ireland, the multi-actor approach is used to improve mastitis management on dairy farms⁵. The Teagasc-led AMU-farm project explores how herd health management consults can be utilised through effective communication between farmers, farm advisors and veterinary practitioners to reduce antimicrobial use on farms⁶.

3. Project aims and objectives

The aim is to understand how farmers currently address herd health issues, including the role of multi-actor networks in supporting herd health actions, and to propose knowledge exchange activities to improve their uptake.

Specific objectives are to:

- establish the performance of Signpost Farms over a range of herd health practices, including herd health planning;
- identify the actors in the "herd health support network" on these farms, including their roles in supporting positive herd health practices;
- understand the connections between farmers and these actors in the area of animal health advice;
- use an open innovation approach to engage these actors on selected Signpost Farms, facilitating communication and knowledge exchange;
- Use the Multi-actor Toolbox³ in developing tailored action plans to improve the uptake of animal health measures;
- use the findings to propose strengthened extension approaches to better support farmers to improve herd health and reduce GHG emissions.

4. Suggestions for methodology

Plan, implement and evaluate.

- AHI, ICBF and Teagasc will establish the current herd health performance of all livestock Signpost Farms, including their adoption of recognised herd health measures and identify each farm's "herd health support network"
- Select a number of Signpost Farms to participate in the pilot intervention, including their Teagasc Adviser, veterinarian, and other relevant actors.
- Establish the multi-actor team
- Working together, the multi-actor team will discuss the current herd health practices before co-designing a plan for each farm. The Teagasc Adviser and Masters' student, will act as facilitators, playing key roles in activating and mobilising the multiple actors during the intervention and making use of the Multi-actor Toolbox.
- At the end of the study, the role of the multi-actor approach will be evaluated in terms of a change in the knowledge, attitudes and behavioural intentions of the farmers in relation to the target herd health measures.

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

The new Teagasc Strategy places sustainability "front and centre of all Teagasc activities". Enabling farmers to mitigate GHG emissions is central to Teagasc Knowledge Transfer to 2030. The Signpost Programme was established to lead and support farmers in climate action. Recently, Teagasc launched its Signpost Advisory Programme to build on the progress made with the Signpost Farmers, and to engage all farmers in climate action. The Teagasc GHG MACC¹ identifies animal health a key mitigation action, while also recognising the challenge of delivery on farms.

By adopting a multi-actor approach, farmers are centrally involved. This replaces the "traditional" diffusion of innovations model with an "interactive innovation model" involving a bottom-up approach and linking farmers into a multi-actor network. The knowledge exchanged will generate new insights and mould existing tacit knowledge into usable solutions, fostering improvements in herd health that will be applicable nationally.

¹ <https://www.gov.ie/en/publication/c73a3-food-vision-2030-a-world-leader-in-sustainable-food-systems/>

² <https://www.gov.ie/en/publication/7bd8c-climate-action-plan-2023/#>

³ <https://animalhealthireland.ie/training/tasah-veterinary-training/>

⁴ <https://disarmproject.eu/search-resources/farm-health-toolbox/>

⁵ https://animalhealthireland.ie/assets/uploads/2023/01/AHI_Stakeholders-Winter-FINAL.pdf?dl=1

⁶ <https://www.veterinaryirelandjournal.com/large-animal/327-the-map-model-approaching-behaviour-change-conversations-on-farm>

¹ <https://www.teagasc.ie/media/website/publications/2018/An-Analysis-of-Abatement-Potential-of-Greenhouse-Gas-Emissions-in-Irish-Agriculture-2021-2030.pdf>