

2024 Masters in Agricultural Innovation Support

Project Summary

1. Project Title and Associated Programme

Project title	Farm safety interventions to help advisers promote livestock safety
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2. Project background

In Ireland NFS estimate that 4,500 serious farm injuries occur of which 47% are livestock related (McNamara et al., 2023). Moreover, the data indicates that farm accidents associated with livestock are steadily rising, having risen as a proportion of all farm accidents from 27% to 47%, for 2001 to 2021.

Fatal farm accident data related to livestock for the 10-year period 2013-2022, indicate a reduction in bull related incidents (24%), an increase in cow-related incidents (33%), while the remaining 47% were associated with contact or attacks by cattle.

Over 25% of the fatalities that occurred to older farmers (65years +) in the last 10 years were associated with livestock, so livestock safety issues related to this age cohort will be given particular attention in the proposed study.

The Health and Safety Authority are anxious to know more about the causes of Farm Accidents involving livestock and are willing to consider 50% funding of a MAIS Masters related to this issue.

In addition to fulfilling H.S.A. requirements for new knowledge, the finding of the study would be of value to Teagasc Advisory and Training programmes to help and encourage farmers improve livestock facilities and practices to cut injury levels.

3. Project aims and objectives

The study aims and objectives are:

- To investigate and establish both the level and the multi-factorial causes of livestock accidents on Irish bovine farms.
- Conduct a survey of advisors in a number of Teagasc regions to capture information on advisor knowledge of the level and range of livestock accidents by livestock type that occur on farms, i.e. bull attacks, cow/ calf incidents along with cattle incidents.

- Recruit a sample of farmers (c20) who suffered livestock accidents and conduct a detailed voluntary case-study with each farmer to identify key factors involved in their accident.
- Seek to have one-third of case studies conducted among farmers aged 65 years or older.
- Use Fault Tree Analysis (Kingman and Field, 2005) to establish logic diagrams and linkages between the causes of accidents identified.
- Use findings to develop sample KT Health and Safety resource materials.

4. Suggestions for methodology

To establish both the level and the multi-factorial causes of livestock accidents on bovine farms the study will seek to deal with the range of livestock accidents by livestock type that occur on farms, i.e. bull attacks, cow/calf incidents along with cattle incidents.

The research would involve;

- Conducting a survey of advisors related to livestock accidents in a number of Teagasc regions.
- A sample of farmers (c20) who suffered livestock accidents would be identified and recruited with the support of KT advisors. A detailed voluntary case-study would be undertaken with each of these farmers to identify factors involved in their accident. About one-third of case studies would be conducted among farmers aged 65+.

Most accidents have multiple causes with both psycho-social and infrastructural causes. Accordingly, the technique of Fault Tree Analysis (Kingman and Field, 2005) would be used to establish logic diagrams and linkages between the causes of accidents identified.

5. Expected impact of the project

Improved knowledge transfer: This project will help fill the current OHS knowledge transfer deficit related to livestock safety by identifying best practice approaches for accident prevention. This will be followed by implementing these approaches to support advisor / farmer engagement in livestock OHS Adoption.

Improved efficiency: The plans will provide resources to highlight common issues to aid advisors/ H.S.A inspectors to engage farmers in livestock OHS which integrates with the overall farm management.

Enhanced quality of service: Study case studies will provide a new evidence base to develop supports and materials to engage farmers in OHS with livestock at meetings, discussion groups and large events.

Improved extension service: The findings from this project will provide a template and resources to help improve OHS knowledge and engagement among both advisors, inspectors, farmers and educators with livestock.

Publications: An article for Teagasc media and a paper for submission to an extension journal.

6. Other relevant information

- The knowledge gained from this study will support the Teagasc – H.S.A Joint Prevention Initiative by making new knowledge available on the communications interface between Advisors and Farmers to target OHS adoption.
- New knowledge will be gained for undergraduate and postgraduate teaching as part of the Teagasc – UCD Collaboration.
- The study will support continued Irish leadership in relation to OHS extension and adoption.