Extended Abstract
Please do not add your name or affiliation

Paper/Poster Title:	**Irish Farmers' position on Greenhouse Gas Emissions: An insight into representation, perceived trust and worry**

Abstract prepared for presentation at the 96th Annual Conference of the Agricultural Economics Society, K U Leuven, Belgium

4th – 6th April 2022

Abstract	***200 words max***
This research brings unique questions to the fore and analyses the influences behind an Irish farmer's level of climate action. With a particular focus on emotive factors, this work allows for a cross sector analysis in Ireland and highlights the role of differing farming motivations on the uptake of low-carbon practices. Therefore, this work is crucial to the future uptake and continuing progress which agriculture across Europe is making towards low emission food production. Discussions which specifically relate to trust among society, level of personal worry and the feeling of being represented/understood can provide a valuable insight into farmer behaviour and decisions relating to the adoption of mitigation practices. This research showcases matters such as trust, representation, level of worry and climate awareness among Irish farmers. The work shares valuable insight into the differences observed between farmer demographic, farmer characteristics, farm size, farm type and regional location. The key findings from this work are of particular interest to policy makers, agricultural economists, agricultural advisors, extension services and fellow researchers.	

Keywords	Greenhouse Gas Emissions, Irish Agriculture, Agricultural Extension Services, Low Emission Food Production, Behavioural Economics, Climate Change Impacts and Mitigation, Technology Adoption.
JEL Code	Q160 Agricultural R&D; Agricultural Technology; Agricultural Extension Services

Introduction	***100 – 250 words***

A wide range of abatement strategies to reduce GHG emissions have been identified (Lanigan and Donnellan, 2019). The uptake of these practices are likely to be influenced by a variety of farmer and farm specific factors. The potential to mitigate emissions through the adoption of more efficient farm management practices may also be hampered by farmers' awareness and attitude towards climate change and agriculture's role in contributing to GHG emissions (Tzemi and Breen, 2018).

In terms of reducing GHG emissions, farmers rated personal beliefs (75.6%) and public acknowledgment (68.9%) as very motivating (Jantke et al., 2020). Beliefs may vary according to the level of trust, and can in turn have a significant direct effect on the perceived risks from climate change (Arbuckle, Morton and Hobbs, 2013).

While Lowenstein et al. (2001) argued that where the individual feels threatened, these feelings of concern and worry can motivate individuals to take specific self-protective measures. Therefore, there is a need to explore the factors that influence farmers attitudes towards agriculture's contribution to climate change and their role in addressing this challenge, including their perceptions of the trust that society has in them to produce food sustainably as well as the level of stress/ worry that climate change causes for them.

Methodology	***100 – 250 words***

As part of this research, nine questions were included in the supplementary survey of the Teagasc **National Farm Survey (NFS)** for 2021. The questions were structured using a standard likert scale of one to five where 1 meant the farmer in question 'strongly disagreed' and 5 meant that they 'strongly agreed' with the statement in which they were asked.

The NFS has been conducted by Teagasc on an annual basis since 1972. The survey is operated as part of the Farm Accountancy Data Network of the EU and fulfils Ireland's statutory obligation to provide data on farm output, costs and income to the European Commission. A random, nationally representative sample, of between 1,000 and 1,200 farms depending on the year, is selected annually in conjunction with the Central Statistics Office (CSO). Each farm is assigned a weighting factor so that the results of the survey are representative of the national population of farms. The NFS supplementary survey was in the field from October 2021 until December 2021.

The data from four statements focusing on matters such as trust, representation, level of worry and climate awareness among Irish farmers. Survey responses will be analysed on the basis of farmer demographic, characteristics as well as farm size, farm type and regional location.

Results	***100 – 250 words***
The NFS data collection was completed in December 2021 and analysis of data has just begun. Survey responses to statements will be compared on the basis of farm type, farmer age and regional location. The results will examine the extent to which farmers feel **trusted** by wider society to mitigate GHG emissions and whether or not farmers feel well represented in the national climate change discussion. The survey will also examine to which extent farmers feel concerned about lowering their GHGF emissions and their farm's respective environmental impact. Finally, conclusions relating to farmers awareness of the challenges in mitigating GHG emissions and how active they are in reducing their emissions will be drawn.	

Discussion and Conclusion	***100 – 250 words***
This research provides an in-debt insight into how informed Irish farmers feel about GHG emissions and whether or not they feel represented in the climate change discussion. Making an assessment of GHG emissions and abatement technologies from the grassroots, this project highlights the varying levels of worry, trust and awareness across different farm types in Ireland. **Discussions which specifically relate to trust among society, level of personal worry and the feeling of being represented/understood are important considerations in the challenge to reduce agriculture's impact on GHG emissions that have merit greater examination.** For agricultural extension services and policy makers in particular, the research findings will help those communicating with farmers be more aware of the pressures and emotions felt by the farmers they are working with. This work forms part of a wider ERA-NET funded EU-wide project called MilKey. The aim of the project is to carry out a whole system analysis of sustainable and GHG optimised milk production systems taking into consideration the 3 pillars of sustainability; economic, environmental and social.	

If this paper is not accepted for the AES 2022 Conference, please consider it for as a poster application. Thank you.