

## Extended Abstract

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Paper/Poster Title	Tackling Emissions, Cultivating Change: A Socio-Economic Approach
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Abstract prepared for presentation at the 98th Annual Conference of The Agricultural Economics Society will be held at The University of Edinburgh, UK, 18th - 20th March 2024.

<b>Abstract</b>	<i>200 words max</i>
<p>This detailed review article highlights the multifaceted contributions of agricultural economists in addressing a critical societal challenge. The review focuses on mitigating agricultural Greenhouse Gas (GHG) emissions, while facilitating the growth of agricultural activities to meet the needs of a rising global population and continued growth in international agricultural commodity trade. The paper examines the range of ways in which agricultural economists can provide crucial answers to societal questions posed by the need for agricultural GHG mitigation. The paper explore how these interventions aim to reduce GHG emissions, while supporting and enhancing agricultural growth. The objective is to prompt a discussion on the status of agricultural economics as a discipline which can contribute solutions to reduce agricultural GHG emissions. This is particularly relevant in the context of the allocation of funding to support associated research.</p>	
<b>Keywords</b>	Agriculture, GHG emissions, Climate change
<b>JEL Code</b>	Q58 - Environmental Economics: Government Policy see: <a href="http://www.aeaweb.org/jel/guide/jel.php?class=Q">www.aeaweb.org/jel/guide/jel.php?class=Q</a> )
<b>Introduction</b>	<i>100 – 250 words</i>
<p>Agricultural production worldwide stands at a crossroads. It faces the dual challenge of meeting the escalating calorific and nutritional demands due to population growth, while simultaneously addressing the need for a reduction in GHG emissions from the sector. In this context, the role of agricultural economists can have considerable value, helping to chart a course towards sustainable agricultural practices to reduce emissions without compromising agricultural growth. This review examines the varied contributions which agricultural economists can make in shaping the evolution of agriculture. By assisting agriculture in navigating competing societal, environmental and economic demands, the paper seeks to highlight that agricultural economists can play a pivotal role in shaping policy frameworks, facilitating behavioural changes and developing strategies that foster sustainable agricultural growth while mitigating GHG emissions.</p> <p>In the context of the continuing evolution of climate policies, this review captures diverse insights from scholarly literature, empirical studies and policy analyses within the domain of agricultural economics. It articulates the contributions of agricultural economists across a number of key areas, delineating their substantial role in influencing such topics as public awareness, policy landscapes, technology adoption,</p>	

behavioural incentives, social equity considerations, global trade perspectives, stakeholder engagement and communication strategies. This comprehensive exploration underscores the indispensable role of agricultural economists as architects of solutions, harmonising agricultural growth with environmental stewardship.

### **Methodology**

**100 – 250 words**

This review synthesises existing scholarly literature, empirical studies, policy analyses and expert perspectives associated with the reduction of GHG emissions. Taking account of a range of insights and perspectives offered in academic research and policy reports, the review employs a systematic analysis and synthesis of findings, structuring the discussion around several key domains where agricultural economists can address societal challenges related to climate change mitigation and sustainable agricultural practices. This methodology ensures a comprehensive and critical evaluation of existing knowledge, providing a cohesive understanding of the diverse roles and contributions of agricultural economists in this field.

### **Results**

**100 – 250 words**

The synthesis of diverse literature and empirical studies within agricultural economics underscores the pivotal role of agricultural economists in addressing the complex interplay between mitigating GHG emissions and sustaining agricultural growth. Several overarching themes emerge:

**Influence on Public Perception:** How agricultural economists can significantly shape public awareness and perceptions surrounding climate change in agriculture through targeted communication strategies and insights into consumer attitudes towards sustainability.

**Policy Navigation:** How the contribution of agricultural economists can extend beyond economic analyses, navigating policy landscapes and advocating for comprehensive strategies that balance GHG mitigation with sustainable agricultural practices.

**Technology Adoption and Adaptation:** How agricultural economists can champion the adoption of diverse mitigation technologies, while exploring adaptation strategies, allowing for an integration of mitigation and adaptation practices.

**Behavioural Incentives and Social Equity:** How insights from behavioural economics can inform strategies for sustained behavioural changes, while advocating for social equity considerations to support marginalised farmers.

**Global Collaboration and Communication:** How agricultural economists can stress the need for international collaboration in policy design and coordination, emphasising the global impact of agricultural policies and the importance of inclusive and effective communication strategies to inform policy makers, farmers and consumers.

**Discussion and Conclusion****100 – 250 words**

The synthesis of literature presented in this review demonstrates the instrumental role of agricultural economists as architects of sustainable agricultural practices, which can support the mitigation of GHG emissions. The capacity agricultural economists to contribute across various domains underscore their significance in addressing the challenges surrounding agricultural growth and environmental sustainability.

The review describes how agricultural economists can help to steer policy formulation by shaping public awareness, advocating for comprehensive policy landscapes and facilitating technology adoption, while envisaging adaptation strategies. Furthermore, interventions relating to behavioural incentives, social equity considerations, global collaboration and effective communication strategies can support a transition towards a more sustainable agriculture sector.

It is concerning that agricultural economists often find themselves overshadowed by agricultural and environmental scientists when it comes to securing research funding relating to the mitigation of GHG emissions in agriculture. This oversight fails to acknowledge the crucial role played by agricultural economists in navigating the intricate socio-economic aspects of sustainability. While hard scientific research undoubtedly holds immense value, the exclusion of agricultural economists from adequate funding deprives the topic of comprehensive insights.

This article aims to spark a critical debate, urging a reconsideration of research funding allocation. It calls for an inclusive approach that recognises the unique contributions of agricultural economists in shaping policies, behavioural incentives, social equity considerations and effective communication strategies. Stimulating this dialogue is imperative to ensure a holistic approach to addressing the challenges of mitigating agricultural GHG emissions and fostering sustainable agricultural growth.