# Article information:

Identifying effective agricultural management practices for climate change adaptation and mitigation: A win-win strategy in South-Eastern Australia - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0308521X22001639>

# Article summary:

1. This study used APSIM to simulate the effects of different management practices on GHG emissions and agricultural systems profitability under climate change in southeastern Australia.

2. Retaining all crop residues could turn the soil from a carbon source to a carbon sink, and benefit gross margins.

3. The wheat-wheat-canola rotation with full residue retention was shown to be a win-win solution with both large potential of GHG abatement and high gross margin compared with other rotations.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “Identifying effective agricultural management practices for climate change adaptation and mitigation: A win-win strategy in South-Eastern Australia” is an informative piece that provides insight into how different management practices can affect greenhouse gas (GHG) emissions and agricultural systems profitability under climate change in southeastern Australia. The authors use APSIM to simulate the effects of three crop residue retention rates (10%, 50% and 100%) and six representative crop rotations on GHG emissions and gross margins across 204 study sites in southeastern Australia from 1961 to 2092.

The article is generally reliable, as it provides detailed information about the methods used, data sources, results, conclusions, and implications for policy makers. The authors also provide a comprehensive discussion of the trade-offs between food security, GHG emissions, and farmer prosperity that are associated with altered management practices. Furthermore, they acknowledge sources of uncertainty in their estimates of GHG emissions and gross margins under climate change such as variation in climate, soil type, management, etc., which adds credibility to their findings.

However, there are some potential biases that should be noted when considering this article’s trustworthiness. For example, the authors focus solely on the benefits of certain management practices without exploring any potential risks or drawbacks associated with them. Additionally, while they acknowledge sources of uncertainty in their estimates of GHG emissions and gross margins under climate change such as variation in climate, soil type, management etc., they do not provide any evidence or data to support these claims or explore possible counterarguments. Finally, while the authors provide detailed information about their methods used and data sources used for this study, they do not provide any information about who funded this research or what potential conflicts of interest may exist due to funding sources or affiliations with certain organizations or companies related to agriculture or climate change mitigation/adaptation strategies.

In conclusion, while this article is generally reliable due to its detailed information

# Topics for further research:

* Agricultural management practices for climate change adaptation
* Trade-offs between food security and GHG emissions
* Potential risks of altered management practices
* Sources of uncertainty in GHG emissions estimates
* Funding sources for agricultural research
* Conflicts of interest in agricultural research

# Report location:

<https://www.fullpicture.app/item/73c27da6cd37a591d450dfe943259827>