# Article information:

Impacts of co-culture of rice and aquatic animals on rice yield and quality: A meta-analysis of field trials - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0378429022000399>

# Article summary:

1. Generally, higher rice yield and quality occur in CRAAs than in rice monoculture.

2. Co-culture modes, environmental conditions, and agricultural management practices are determining factors in CRAAs.

3. The co-culture of indica rice with fish/waterfowl receiving organic and inorganic fertilizers is the most promising CRAA strategy.

# 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 “Impacts of co-culture of rice and aquatic animals on rice yield and quality: A meta-analysis of field trials” provides a comprehensive overview of the effects of CRAA on rice yield and quality. The authors conducted a meta-analysis on 456 paired-treatment datasets collected from 129 field research publications that compared rice yield and quality in rice monoculture and CRAA. The results indicated a significant contribution of CRAA to improve both yield and quality (P < 0.05). However, the effects varied under different co-culture modes, environmental factors, and agricultural management practices.

The article is generally reliable as it is based on a meta-analysis which is an appropriate method for synthesizing evidence from multiple studies to draw conclusions about the overall effect size or magnitude of an intervention or phenomenon across studies (Borenstein et al., 2009). Furthermore, the authors have provided detailed information about their methods which increases its trustworthiness.

However, there are some potential biases that should be noted when interpreting the results presented in this article. Firstly, the authors did not provide any information about how they selected the studies included in their analysis which could lead to selection bias if certain studies were excluded due to their findings not being consistent with those reported by other studies included in the analysis. Secondly, there may be publication bias as only published studies were included which could lead to overestimation of effect sizes as positive results are more likely to be published than negative ones (Sterne et al., 2011). Finally, there may also be language bias as only English language articles were included which could lead to exclusion of relevant non-English language articles that may have been published in other countries where CRAA is practiced extensively such as China or India.

In conclusion, this article provides a comprehensive overview of the effects of CRAA on rice yield and quality based on a meta-analysis of 456 paired treatment datasets collected from 129 field research publications. While it is generally reliable due to its use of an appropriate methodology for synthesizing evidence from multiple studies, there are some potential biases that should be taken into consideration when interpreting its results such as selection bias, publication bias, and language bias.

# Topics for further research:

* Co-culture of rice and aquatic animals
* Rice monoculture
* Selection bias
* Publication bias
* Language bias
* Meta-analysis of field trials

# Report location:

<https://www.fullpicture.app/item/94e10b469e794724d50b9775a3b04e54>