Review of: "A Study for Estimation of Greenhouse Gas Emissions of Cotton in Central Greece"

Taeyoung Kim[1]

1 Korea Institute for Industrial Economics and Trade

Potential competing interests: No potential competing interests to declare.

I've reviewed the paper you provided. Unfortunately, it seems that the paper requires comprehensive revisions. Instead of detailed comments, I'll provide feedback on overall aspects that need to be addressed:

The logical coherence in the Introduction is lacking. While the paper aims to measure GHG emissions in the Cotton industry, it's hard to find a clear justification for why GHG emission measurement is necessary. The Introduction mainly discusses the severity of climate change in general. It should establish a logical progression from the seriousness of climate change to its impact on agriculture, the importance of the agricultural sector in climate change mitigation, and the significance in the context of the Greek agricultural industry.

The contribution of this paper is difficult to empathize with in the Introduction. Instead of being a paper focused on finding effective methods for greenhouse gas reduction, it primarily measures the greenhouse gas emissions in the cotton industry. The rationale for specifically measuring emissions in the cotton industry, when emissions can already be estimated using greenhouse gas emission coefficients by sector, is not clear. This aspect needs improvement.

Weather data for three regions is presented in the Material and Methods section, but the purpose of providing this data is unclear. The intention behind presenting this data needs to be clarified.

The explanation of the crop cultivation phase in the Cultivation Practices section is not justified. The necessity of this explanation should be clarified.

It's unclear whether the data collected from 12 farms represents the three selected regions adequately. Without proper representativeness, the analysis in this paper lacks meaningful validity.

Data Collection involves categorizing data into five groups, yet basic statistics about the collected data are not presented. Providing information about the collected data is necessary.

While using the Cool Farm Tool to measure GHG emissions, there is no explanation about how this tool performs its calculations. A detailed explanation of the estimation method is required. Furthermore, unnecessary statements about using this tool to increase GHG emission reduction incentives should be omitted.

Conducting regression with only 12 samples raises concerns about the reliability of the results.

The conclusion of this paper attempts to propose strategies for efficiently reducing GHG emissions based on the preceding emission estimates. However, it's not clear how these conclusions can be drawn from the previous results. The analysis results should provide insights beyond identifying which sectors emit more greenhouse gases; it should indicate which efforts can lead to effective reductions.

In conclusion, the paper requires comprehensive revisions.