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

Amjid Khan[1]

1 Oklahoma State University

Potential competing interests: No potential competing interests to declare.

I have completed a thorough review of the manuscript titled "A Study for Estimation of Greenhouse Gas Emissions of Cotton in Central Greece." This paper assesses the primary components and driving factors of GHG emissions associated with cotton cultivation in Greece, utilizing statistical data from 2020 and 2021 and employing the CFT tool. Please find my recommendations below:

Comment 1: On Page 4, within the "Geographical locations and climate of the study area" section, the Latitude and Longitude range of the study area is missing. I suggest including a GIS map of the study area, which should encompass the cotton farms in Greece.

Comment 2: On Page 4, in Table 1, it is important to provide the source of the climatological data used.

Comment 3: On Page 4, in Table 2, you should specify the extent of variation in farm size from 2020 to 2021, as it appears to be increasing in all three locations (Kopaida Sterea, Elatia Sterea, Farsala Thessaly) from 8.97 to 9, 7.58 to 7.87, and 8.57 to 8.62.

Comment 4: On Pages 4 and 5, I recommend consolidating the paragraphs related to planting and harvesting into a single section. Currently, only limited information is provided under the Harvest section.

Comment 5: On Page 5, under "Fertilizer Application," you mention a common fertilization application of 300-450 kg N-P-K 20-10-10 per hectare at sowing and an additional 250-350 kg N-P-K 20-10-10 per hectare during flowering. Since you used three test sites in this study, it is strongly advisable to provide the fertilizer applications for each of the three sites individually. Additionally, include details about fertilizer usage in various growth stages of cotton (seeding, flowering, cotton boll formation, etc).

Comment 6: On Page 5, where you mention, "The average yield was 4.46 tons per hectare in response to the average fertilizer dose of 703 kg per hectare," it's essential to provide the yield data for each of the test sites.

Comment 7: On Page 6, where you state, "PH range between 7.3 to 8.5," please explain how you obtained these soil pH values. Also, clarify whether this pH range represents the minimum and maximum values for all three sites.

Comment 8: On Page 6, in Table 4, adhere to the standard journal format. In this table, the headings are in capital letters, whereas in others, they are in small letters.

Comment 9: On Page 7, when discussing the use of the Cool Farm tool for calculating GHG emissions, it's important to provide a rationale for why this tool was chosen. Additionally, include a comparison of the advantages and disadvantages of this tool compared to other available tools, such as DND.

General Comment: Please specify how many field visits were conducted for the 12 fields (4 farms for each site). Provide the dates of the field visits and include photographs of the field conditions. Also, discuss the potential directions for future research in the discussion section.