

Revision of Egusphere-2026-150

In the present study, Cheng and colleagues have investigated the effects of compost on soil's physicochemical characteristics and how both these properties and compost type affect CO₂ emissions after its application. I think the research topic is interesting and the authors have improved the manuscript; however, the manuscript still presents several flaws that jeopardize its suitability to be accepted for publication in its current form.

Major comments:

The material and methods sections seems a little bit chaotic, please provide an order of subsection that makes it easier for the reader to understand, for example, name the subsection 2. 1. "Experimental design" instead of "Soil and compost materials" and reorganize the information etc. Further, please, include references for the physicochemical characterization in section 2.2. Further, regarding the incubation, the authors say that the CO₂ emissions were measured 14 times, but only 12 days appear. The material and method section lack information about how some parameter were assessed such as total P, total K... Further, please explain better the treatments. Section 2.4 is too fragmented to understand

Regarding the figures, they appear too small.

The use of "mechanistic" is still present in the manuscript.

Manuscript would benefit from an English style proofreading, especially in M&M and results sections.

See below other comments.

Line-by-line comments:

Line 294: phosphorus in compost is not primarily mineral, but organic.

Line 321: This cite and reference are wrong, Antonio is the name of the author.