

# Review of: "Meta-Omics Analyses of Organic and Conventional Fermented Vegetables Reveal Differences in Health-Boosting Potential"

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**Potential competing interests:** No potential competing interests to declare.

I agree with the previous reviewer, Kirstend Brandt, in considering the paper interesting but with some design issues that would require clarifications in order to improve the scientific outcome of the work done.

In general, I liked the idea and the subject of looking at differences in the microbiome associated with different farming approaches, and I think that the authors produced a nice descriptive work on this subject.

There are some main problems related to the sampling design. In particular, the consistency of harvesting methods, washing, and packaging should be explicitly declared; otherwise, there is a difficulty in disentangling the effects of the agronomical history from such post-cultivation processes. Indeed, there is an even greater potential problem: there is no indication that the vegetables from the two farms were the same plant varieties. It is important to clarify this point by declaring that the same varieties/cultivars of vegetables for each species were purchased from the two farms. Otherwise, the results could be biased by a different starting plant material composition on top of the differences induced by both the cultivation and processing methods.

Figure 1 could be improved by completing the schematic representation of the experimental flow and adding the DNA extraction, Metagenomic, and Metabolomic phases to clarify that some of the analyses were done only at day 14.

Another graphical improvement could be made on all figures by enlarging the size of axis labels and making the titles of subsets more evident, and by avoiding the repetition of the same legend for each figure in the same panel (e.g., Figure 6 shows a better size of the titles larger than axis labels, but the y axis should have the same character size as the x axis and avoid repetition of the same label for the three figures that are aligned; it is sufficient to have it clearly indicated only on the left figure).