

Review of: "Tomatoes Unveiled: A Comprehensive Exploration from Cultivation to Culinary and Nutritional Significance"

Zubaida Yousaf¹

¹ Lahore College for Women University

Potential competing interests: No potential competing interests to declare.

The manuscript contains an elaborate literature review. This is a well-written manuscript that only needs to undergo a few minor changes.

With all factors considered, the data in the work provides insightful knowledge on tomatoes. However, the study omits information regarding growing methods, dietary composition, therapeutic applications, pigment extraction, etc. Better citations can assist the current work in gaining a better perspective on scientific advancement; this is the main area that needs improvement. Better citations will also enable the writers to present more thorough and reliable information about tomatoes.

1. *Throughout the manuscript, there are several language mistakes.*

2. The abstract lacks the following points:

Please focus the abstract on your study. In particular, the last two sentences are vague.

- Abstract needs language improvement.
- Abstract lacks clarity. What does the author want to address in this review?
- The abstract should start with the taxonomic classification of tomatoes.
- Global consumption, cultivation, and utilization of tomatoes.

1. Introduction

Correct the taxonomic position of tomatoes.

The manuscript lacks the cultivation details of tomatoes. The title includes the cultivation, but there are no details of cultivation throughout the manuscript.

Soil type, temperature, etc.

2. Nutrient Profile and Antioxidant Properties

The Nutrient Profile and Antioxidant Properties section is incomplete. Sentences lack clarity and should be structured properly.

- Medicinal uses are not included in the nutritional profile and antioxidant properties.
- Nutrient profile should include:
 - the extraction and identification of bioactive compounds,
 - identification of micro- and macronutrients present in tomato fruits by previous studies,
 - the role of bioactive compounds in scavenging free radicals.

How tomatoes lower the risk of cardiovascular diseases and other diseases mentioned in the manuscript? Which bioactive compound defends the medicinal use of tomatoes? Discuss the mechanism of action?

1. Diverse Industrial Utilization of Tomatoes

Industrial utilization of tomatoes needs to be structured properly. Some suggestions are discussed below:

Food Processing

This section should also include the extraction of pigments from the tomato or the effect of various techniques on the extraction of pigments from tomato fruits.

Agricultural Research

Research gaps and factors affecting the crop are missing in this section.

Biotechnology Industry

Biotechnological techniques to get secondary metabolites from the tomato are not mentioned in the manuscript. Such details should be included in the present study.

You may consult the following reference for details on this point:

Minutolo, M., Chiaiese, P., Di Matteo, A., Errico, A., & Corrado, G. (2020). Accumulation of ascorbic acid in tomato cell culture: Influence of the genotype, source explant, and time of in vitro cultivation. *Antioxidants*, 9(3), 222.

Alseekh, S., Tohge, T., Wendenberg, R., Scossa, F., Omranian, N., Li, J., ... & Fernie, A. R. (2015). Identification and mode of inheritance of quantitative trait loci for secondary metabolite abundance in tomato. *The Plant Cell*, 27(3), 485-512.

1. Tomato-based products 5. **Processing Tomato Seed Oil**

Overall, this section is clear and well-written. Insufficient information about previous study findings is presented for readers to follow the present study rationale. Some previous studies should be included to follow the present study rationale.

