

Additional Comments:

Lines 45 and 49: The Grafting technique is repeatedly stated.

Lines 53 and 55: Using "first, second, third," etc., instead of "firstly, secondly, thirdly," is generally preferred in formal and academic writing.

Line 54: Change "soil diseases" to "soil-borne diseases".

Line 55: Fusarium is not a disease but an agent for causing Fusarium wilt disease.

Line 65: Change "In world practice" to "Globally". Check grammar.

Line 75: Kindly provide a reference for the detoxification of heavy metals.

Line 70 & 76: Repetition of the same information, condense it to one.

Line 85: "Galili G et al., 2002" initial "G" should be removed.

Lines 105 to 122: According to Lee et al. (2010), scion seeds should be sown 5-7 days earlier than rootstocks; however, you have not mentioned whether they were planted together or at different times.

Line 112: "the plants were illuminated with LED lamps" change it to "the plants were exposed to LED illumination"

Line 117: Rewrite the sentence.

Line 121-122: Change it to "Neutralized peat (pH 6.0, Kekkila™ Finland) was used to facilitate the continued vegetative growth of both grafted and control plants."

Line 202 & 204: Kindly write the geographical coordinates in standard format.

Line 276: Which leaves (top or middle) and stem samples (which part?) were taken?

Line 319 & 323: Can be clubbed together.

Result:

Line 217-225: should be the part of materials and methods.

Line 234: Change "C. repo" to "C pepo"

Line 228-236: The text repeatedly states that *C. maxima* outperformed the other species in multiple parameters. A more concise summary could improve clarity while still emphasizing the key findings.

The text repeats the conclusion that *Cucurbita maxima* has the highest amino acid content (lines 311–318) in nearly identical phrasing. Condensing these parts would improve clarity and reduce redundancy

The description of the detection and quantification process (lines 279–291) is mixed with results. It might be clearer to briefly summarize the method here and then focus on the outcome of the measurements.

Line: 237-397: Although discriminant analysis and clustering are described, and to support the observed differences in amino acid and IAA contents, numerical summaries (e.g., mean values, error margins, p-values) are not mentioned in the text. Including these would provide a clearer picture of the statistical significance of the observed differences. Conveying whether the differences between groups are statistically significant would strengthen the conclusions.

The text frequently refers to figures and tables (e.g., Fig. 1a, Fig. 2a, Table 2), and while this is acceptable, the main text should more clearly summarize the key findings from these visuals without forcing the reader to continuously shift between the text and the visuals.

The result and discussion section lacks explicit mention of statistical significance (e.g., p-values). Although Figure S3, Table 2, Table 3, Figures 3–4, are cited, the text might more explicitly integrate these visuals. For example, summarizing key findings from the heat map in relation to the PCA could help guide the reader. Similarly, the narrative relies heavily on visual data (e.g., Figures 6 and 7) without summarizing key statistical trends explicitly in the text. A summary stating “statistically significant differences ($p < 0.05$) were observed...” where appropriate would reinforce the claims.