

Dear Ms. Vicca,

We sincerely appreciate the reviewer's additional remarks and have carefully addressed them in our revised manuscript. In response, we have:

- Provided detailed responses to the reviewer's comments below in **bold**.
- Added a new table to the Supplementary Materials (Table S2).
- Included additional information regarding the financial support of the study.
- Submitted a revised version of the manuscript with tracked changes and a clean version. All line and page references in our responses correspond to the tracked-changes document.

### **Reviewer Comments and Responses**

- Section 3.2 'Elemental analysis of the plants' is very brief and mainly consists of Table 2 without further elaboration. You should either provide a more detailed description of the results (see further comments) or move the elemental concentrations to the Appendix. Since the % change in plant nutrient concentration is shown in Fig. 5, I recommend moving the elemental concentrations to the Appendix.

- Table 2 appears to duplicate some of the biomass information presented in Fig. 1 and 2. Duplication should be avoided. Instead, Table 2 could present the statistics for the data in Fig. 1 and 2, or the statistics could be incorporated into these figures.

**R: Thank you for your feedback regarding Table 2 and Figures 1 and 2. While these figures and the table present related data, they serve complementary purposes. Figures 1 and 2 display individual data points, allowing readers to assess variability and distributions, whereas Table 2 provides summary statistics (means and standard deviations), facilitating a clearer comparison of overall trends. We believe that keeping Table 2 in the main text improves readability and enhances interpretation of the results. However, to minimize redundancy, we have moved the extended dataset to Supplementary Materials (Table S2).**

**Additionally, we have expanded the description of the results in section 3.2 (P12 L354-360).**

p-values were added to Table 2, but without sufficient clarification. It is unclear what treatment effects these p-values compare or even which variable they correspond to (only shoot biomass?). This requires further clarification. All variables and treatment effects should have specified statistics and p-values. The legend of Table 2 should briefly mention the statistical tests used to obtain the p-values.

**R: We have clarified the p-value information in the Table 2 legend, which now reads:**

**"Table 2. Total elemental analysis of plants (*Cicer arietinum* cv. 'Zehavit'), fertilizers, and dust (ICP-MS analysis). The concentrations of micro- and macronutrients are presented in  $\mu\text{g/g}$  or  $\text{mg/g}$ , respectively, while plant biomass is shown in grams. The p-values refer to biomass comparisons. For  $\text{aCO}_2$  treatments,**

**all groups were compared to the -P control grown under aCO<sub>2</sub>, and for eCO<sub>2</sub> treatments, all groups were compared to the -P control grown under eCO<sub>2</sub>." (P12 L363-366).**

**Additionally, we have added the phrase "P-value Biomass" in Table 2 to further clarify the statistical comparisons.**

In Fig. 5, please change the y-axis label to reflect the variable (rather than just the unit), e.g., "CO<sub>2</sub> effect on plant nutrient concentration (%)".

**R: We have updated the y-axis label accordingly (P20-21 L498-528).**

The table rows contain manuscript page numbers, which should be corrected.

**R: Apologies for the oversight; we have corrected this issue.**

The "Availability Statement" with a signature and text does not align with the manuscript structure. Please remove this information or relocate it to an appropriate section.

**R: We have removed this information from the text (P23 L588-598).**

**In the supplement:**

**Table S2 (P6-7).**