

Dear Reviewer,

We sincerely appreciate your valuable suggestion.

We would like to express our deepest gratitude to all the Reviewers who took the time to provide us with valuable feedback on our manuscript. The comments and suggestions have been extremely helpful in identifying areas for improvement and we are grateful for the support.

We hope that our findings will spark interest among the scientific community and contribute to the development of a technology for growing root vegetables, especially radishes, in controlled environments.

Kind regards,

Authors

1. Table 2, first coulmn of number: uniform the number of decimals.
Usually the american puntaction for the decimal is adopted, so decimal point should be used instead of the comma (European style) in an international scientific article. Check through the article and uniform because both the systems are used depending on the table.

Response 1: We greatly appreciate the reviewer's valuable suggestion. You are absolutely right, we made a technical error when designing Table 2. We have adjusted it:

Table 2. The proportion of commercial root crops and the yield of root crops of two radish cultivars under different lighting treatments.

Lighting treatment	Commercial root crops, %		Yield, kg m ⁻²	
	cv. Pf	cv. P	cv. Pf	cv. P
HPS	95.0 ± 5.0	85.0 ± 5.0	3.7 ± 0.1	2.4 ± 0.2
LED 1	85.0 ± 5.0	75.0 ± 5.0	3.1 ± 0.2	1.9 ± 0.2
LED 2	95.0 ± 1.5	80.0 ± 5.0	3.4 ± 0.1	2.3 ± 0.1
LED 3	95.0 ± 0.0	85.0 ± 5.0	3.6 ± 0.1	2.5 ± 0.1

Note: Data are presented as mean ± standard error of mean (M ± SEM), n=2.
Cv. Pf – cultivar Peterburgskiy fioletovy, cv. P – cultivar Perno.

2. Conclusion section still needs improvements. Please, retrieve and directly report the final overall conclusions and perspectives of your results. In the current forms main results are reported, not main conclusions.

Some expression like (lines 661-663) "Although the differences were not significant, a trend of higher yields was observed in both replications of the experiment." are not appropriated for a conclusion but for

a Result section. And reporting all the significant numerical differences is appropriate for and abstract rather than conclusion.

In addition, the final lines of future perspectives can be made more readable and formal. For example, line 670 "They will also focus.." to who it refers to? it is not clear.

Response 2: Thank you very much for your suggestion.

The conducted studies have shown that sunlike full-spectrum LED lamps are promising for growing radish under CEA conditions. It was revealed that the part of morphophysiological characteristics of both radish cultivars, as well as the reflectivity and diffuse reflectance spectra of the leaves, varied significantly depending on the lighting treatment. It was also found that a higher content of blue radiation in the LED spectrum had a stimulating effect on the development of radish root crops, contributing to an increase in the yield. The highest yield of root crops was obtained under LED 3 treatment with the highest content of blue light in the PAR spectrum. The research suggests that radish plants treated with LED 3 lamp had lower values of radiation reflected from the leaves compared to plants treated with other full-spectrum LED lamps. They also had the highest values of indices that characterize chlorophyll content. Subsequent research will be aimed at creating light environment that support the development of optimal photosynthetic systems of radish plants, which would increase radiation use efficiency. It is also planned to focus on improving methods for noninvasive monitoring of plant physiological status based on recording their optical characteristics.