

Seaweed extract benefits petunia, tomato transplants

October 28 2015

Seaweed extracts are used widely in agriculture and horticulture production systems. Benefits of the extracts can include early seed germination and establishment, improved crop performance and yield, increased resistance to biotic and abiotic stress, and enhanced postharvest shelf life. A study in the August 2015 issue of *HortTechnology* determined the effects of rockweed extract, applied as a drench or foliar spray, on plant growth and drought tolerance of tomato and petunia transplants.

According to study authors Yuqi Li and Neil Mattson, rockweed (RWE) concentrate contains macro and micronutrients, amino acids, vitamins, cytokinins, auxin, and abscisic acid-like growth substances, which affect the properties of growing media, [plant growth](#), and crop yield. To determine if rockweed could be beneficial to petunia and tomato, the researchers tested RWE applications on transplants in greenhouse experiments at Cornell University.

"In this study, drenches significantly affected substrate pH and EC and several measured elements. RWE drench increased substrate Na^+ , K^+ , Cl^- , and NO_3^- -N. The opposite trends were found for Ca^{2+} concentrations," the authors said. Analyses showed that RWE foliar sprays were not effective for improving [drought tolerance](#) of petunia and tomato, whereas substrate drenches significantly improved drought resistance of both.

"Results of the study suggested that RWE substrate drenches at 5-10

mL·L⁻¹ are appropriate for the improvement of postharvest life of petunia and tomato transplants; however, monitoring of [substrate](#) pH should be done," said the authors. They added that rockweed foliar sprays can improve growth of both plants.

More information: The complete study and abstract are available on the ASHS HortTechnology electronic journal web site:

[horttech.ashspublications.org/ ... nt/25/4/505.abstract](https://horttech.ashspublications.org/...nt/25/4/505.abstract)

Provided by American Society for Horticultural Science

Citation: Seaweed extract benefits petunia, tomato transplants (2015, October 28) retrieved 26 April 2024 from

<https://phys.org/news/2015-10-seaweed-benefits-petunia-tomato-transplants.html>

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