

Effect of Root Ultra on the growth and development of vegetable and ornamental plant species

Independent Research Trials 2022–2023

Trial Objectives

The objective of the trial was to determine the effect of Root Ultra on the growth and development of selected vegetable and ornamental plant species under greenhouse conditions.

Root Ultra is a seaweed based organic supplement intended as a seed soak and pre-transplant treatment, and can be applied to a wide range of plant species.

Trials were carried out over the summer period in a naturally ventilated greenhouse under standard growing conditions for each species.

Methods

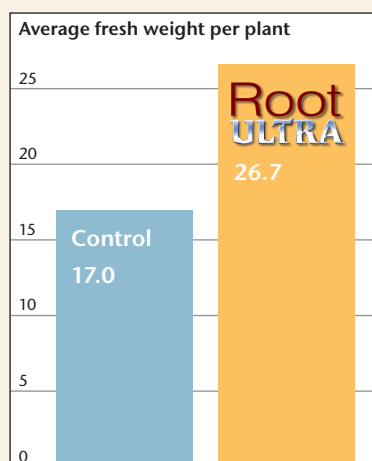
Two week old seedlings of lettuce (variety Veredes Green Oakleaf) and three week old seedlings of tomato (variety Saxon F1 hybrid) were transplanted into pots containing a substrate mix of one third potting mix (containing slow-release fertiliser), one third perlite and one third vermiculite. The plants were randomly assigned to the following treatment groups:

- (i) Control (water application only).
- (ii) Root Ultra at 10 ml per litre of water.

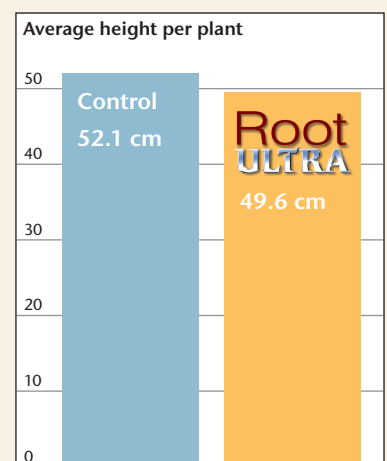
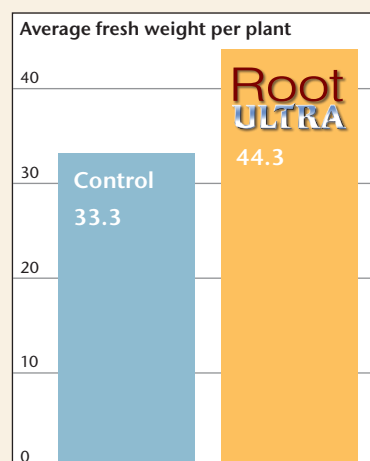
The Root Ultra treatment plants received two pre-transplant drenches in the seed tray before transplanting. Both groups were watered as required to run-off, but the Root Ultra treatment group was treated with every watering. All plants were fed with a balanced, dilute hydroponic nutrient solution. At harvest, plants were removed from their pots and root systems assessed. Fresh weight data and plant height (tomato only) were recorded and the resulting data statistically analysed. All differences shown are statistically significant.

Results

Lettuce



Tomato



Conclusions

The treatments of Root Ultra applied to both species pre- and post-transplant resulted in a higher weight at harvest.

The tomato plant height was greater in the control treatment than the Root Ultra treatment, but this was due to the thinner, stretched nature of plants in this treatment which is not desirable for tomato transplants where sturdy, compact plants are preferred.

Contd. overleaf...

The compounds present in Root Ultra appeared to boost early plant growth in both species immediately after transplanting compared to the control treatment which only received water during this initial phase of establishment.

Root Ultra produced visually greener, larger leaves across both species, with thicker stems visible on the tomato plants.

