Effects of Copper Treatment on Root Growth of Horticultural Crops. (S08-yeoung195212-Poster)

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Abstract:

Within the conventional pots and plug trays, the roots of the seedlings were curled up and matted. After transplanting, the seedlings suffered from rooting delay and had difficulty in nutrient uptake. This study shows that seedling raising containers prepared from plastic resin in combination with a growth regulating agent(copper sulfate) allow the seedling to have substantially developed and healthy rootlets. The seedling raising containers were tested for the growth and development of horticultural crops. Root length of cultivars grown in treatment was 8cm shorter than in a control, resulted in decreasing the amount of circled and matted roots formed in the control. Seedlings grown in the copper coated plug tray showed development of fibrous roots which play important roles for nutrient uptake. A mild copper toxicity in root tips grown in copper treated plug tray was found but phytotoxicity symptoms to copper in shoots were not evident. The plant height seemed to be significantly retarded by copper coating. The containers regulating root circling may be useful for growing bedding plants.

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