Do Air Root Pruning Pots Accelerate Success in a No-Till Garden?

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The purpose of my project was to determine which eco-friendly growing system would produce the best vegetable transplants for a no-till garden. I chose recyclable air root pruning pots and biodegradable peat pots because these growing systems address consumer demand for product-stewardship or environmentally-conscious products. The study evaluated the subsequent growth of three vegetable species Solanum lycopersicum, Capsicum annuum, and Solanum melongena in a no-till garden after being propagated in specialized containers which allow for air root pruning compared with biodegradable peat pot production which does not. Results show that both growing systems produced healthy transplants. Peat pots produced plants with greater height growth and greater shoot fresh weights and dry weights. Air root pruning pots produced plants with greater root fresh weights and dry weights. Once the plants were transplanted in the garden, height growth was about the same for S. lycopersicum and C. annuum. Height growth was greater in S. melongena grown in air root pruning pots. Air root pruning growing systems cost about 5 times more than peat pot growing systems, so the use of air root pruning technology for vegetable transplant production may not be cost effective based on these results. If I were to do a continuation of this project, I would expand my project to include fruit production results.

Awards Won: