Evaluation of nursery techniques and medium sterilization methods for Greenhouse tomato (*Lycopersicon esculentum* Mill)

A D A K Nanadasena[2] and W A P Weerakkody[1*]
[1] *Department of Crop Science, Faculty of Agriculture, University of Peradeniya, Peradeniya*
[2] *Faculty of Agriculture, University of Rajarata, Puliyankulama*

Nursery management of tomato is severely affected by water and media borne diseases under protected cultivation. Although sanitary procedures are followed by farmers at various strengths, seedling mortality and crop failures affect the productivity significantly. Therefore, three sterilization techniques, steaming, fumigation and solarization, were compared with a none-sterilized control, using fresh and used growth media. In addition, three sources of popular growth media and two methods of fertigation were also compared for raising healthy and vigorous tomato seedlings.

All the sterilization methods gave more than 90% post-transplant success with the fresh (unused) coir dust media. However, the plants in solarized used coir medium were relatively low in survival and vegetative growth after transplanting. The disease control with unused coir dust was better than that with used coir dust as a nursery medium. Seedling growth in export quality coir dust and normal coir dust media treated with Albert's fertilizer was better than that in paddy husk mixed coir dust. Plant growth was vigorous under spray method than floating method.

It was revealed that steaming, fumigation and solarization were equally effective for sterilisation of coir dust based growth media for prevention of medium-borne diseases in greenhouse tomato plants under the agro-climatic conditions in the mid-country wet zone. Under situations where medium sterilisation is not possible, use of fresh coir dust can be recommended as a nursery medium for tomato. Coir dust medium with spray fertigation was identified as the most appropriate nursery technique for raising healthy and vigorous tomato seedlings.

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