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## Effectivity of different media carriers on tomato production in greenhouse conditions\*

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### Abstract

Hydroponics agriculture is the science of growing plants in inert media such as coco cake/powder, gravel, sand, peat, vermiculite, pumice, or sawdust, rather than soil. Essential nutrients for normal growth of plant are provided through irrigation. Conventionally, growing media (coco cake) imported from Sri Lanka are used for off-season vegetable production in greenhouse conditions. Unavailability of indigenous media carrier at the farm level has forced researchers to developed new media carriers. Keeping in view the above-mentioned problem, an experiment was conducted on developing and testing the feasibility of different types of media carriers for tomato production at Institute of Hydroponic Agriculture Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi, Pakistan. The experiment was run for two growing seasons and included three different treatments (media carrier) viz.  $T_1$  (bottle),  $T_2$  (slab), and  $T_3$  (pipe). The comparison of these media carriers was made on the basis of plant height, stem diameter, number of flower trusses, number of clusters, nodal distance, total number of fruits, and total yields of the plant. The experimental results show that the media carriers have a significant ( $P < 0.05$ ) effect on the tomato plant and its yield. It was concluded from the experiment that treatment  $T_2$  with slabs as media carrier had the best performance in terms of all the above-mentioned parameters for the tomato growth under greenhouse conditions in both years.

**Keywords:** hydroponics, greenhouse, media carrier, tomato plant, yield

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