

DEVELOPMENT OF ORGANIC POTTING MIXTURE FOR CARROT (*Daucus carota*) IN PROTECTED AGRICULTURE

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Abstract

Daucus carota, commonly known as carrot, is an important vegetable crop grown and consumed in numerous countries worldwide. The carrot is a root vegetable, typically orange in colour, though purple, black, red, white, and yellow cultivars exist, all of which are domesticated forms of the carrot. This study aims to develop an organic potting mixture for in protected agriculture. The research was conducted at the Sustainable Agriculture Research and Development Center, Makandura. The experiment was carried out as a completely randomized design (CRD) with seven treatments with three replicates. The treatment was designed using T1- the Control (coir dust only), T2- Coir dust: vermicompost powder (1:1), T3- Coir dust: vermicompost powder (1:2), T4- Coir dust: vermicompost powder (2:1), T5- Coir dust: vermicompost powder: Partially Burn Paddy Husk (PBPH) (1:2:1/2), T6- Coir dust: vermicompost powder: Partially Burn Paddy Husk (PBPH) (1:2:1), T7- Coir dust: vermicompost powder: Partially Burn Paddy husk (PBPH) (2:1:1). The parameters such as height of the plant, width of the plant, number of leaves, pH, EC, N, P & K of potting media were measured. The results indicated that the significant effect of media (T3) was observed in mean plant height (21.8 cm), number of leaves (5), root length (45.6 cm), fresh leaf weight (96.7 g), and total weight (135 g). According to the findings, T3 was the most suitable organic potting media for carrot in protected agriculture. In this study, the individual usage of coir dust did not show that much improved growth and yield than the other potting media on *D. carota*. The entire research proved that the combination usage of coir dust and vermicompost improved the plant growth as well as the yield. Therefore we would like to suggest to small-scale farmers and growers to prepare the potting media by using coir dust and vermicompost for the *D. carota*.

Keywords: Coir dust, *Daucus carota*, Vermicompost

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