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Growth performances of knolkhol (*Brassica oleracea* Var. gongyloides) as affected by different potting media and organic liquid fertilizers

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The study was conducted at the Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya to study the growth performances of knolkhol with different potting media and liquid organic fertilizer. Three different potting media [coir dust, sand: coir dust (1:1) and topsoil: coir dust (1:1)] and three types of liquid organic fertilizer [Municipal Compost Tea (MCT), Farm Compost Tea (FCT) and Cow dung Tea (CT)] were taken to test the growth performances of knolkhol.

Growth media were mixed into the correct ratios and black horizontal polythene bags (0.75×0.25×0.10 m) were filled. In each horizontal bag six planting holes were prepared in 12.5 cm spacing. Three replicates from each treatment were taken for the experiment accordingly with Completely Randomized Design (2^n). Variety Early White Viena was taken and direct seeded. Excess seedlings were thin out by leaving one seedling per planting hole after one week of planting. The tea of each organic fertilizer was prepared by soaking 100 g of each one for 24 hours in 1 liter of water and filtrate was taken as the liquid organic fertilizer. The 50 ml of organic fertilizer was applied per plant once in two day intervals. Number of leaves per week was recorded as growth parameter in weekly interval. Eight weeks old plants were harvested to record the fresh weight of the knolkhol. ANOVA was used to analyze data using MINITAB.

The highest fresh weight (431.6 g) was recorded in the treatment comprising topsoil: coir dust (1:1) growth media with Farm Compost Tea (FCT) followed by topsoil: coir dust (1:1) with Cow dung Tea (CT) (237.8 g) (significant at $p<0.05$). The lowest fresh weight (16.2 g) was observed in the treatment of coir dust with Municipal Compost Tea (MCT) at 5% probability level. Poor and late plant growth of knolkhol was observed during the entire growth period in most of the treatments.
According to the observed results, in organic vegetable cultivation topsoil: coir dust (1:1) growth media with farm compost tea can be used to obtain the highest yield of knolkhol.

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