



SPENT MUSHROOM SUBSTRATE AS A GROWING MEDIA FOR CHILI (*Capsicum annum*) SEEDLINGS

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Abstract: Mushroom can be cultivated with different substrates, while the disposal of Spent Mushroom Substrate (SMS) is one of the major problems found in this cultivation. Improper methods of SMS disposal may contribute to several environmental problems like soil and water pollution. Considering the availability of macro and micro nutrients in SMS, an efficient solution should be needed to overcome these issues by utilizing such nutrient rich SMS for growing crops. Therefore, the study was carried out at In-Service Training Institute, Bindunuwewa with the aim of evaluating the growth performance of chili seedlings in SMS. Five treatments with different ratio of SMS to coco peat were tested as T1 (1:4), T2 (1:1), T3 (3:1), T4 (SMS alone), and Control (Coco peat alone). The experiments were laid in Randomized Complete Block Design with three replicates. The germination percentage was calculated after eight days of seeding and, the height of the crop and numbers of leaves were also recorded in fifteen days of interval from the germination. Further, the fresh weight of the crop was measured after two months. According to the results, the control performed well for all the parameters measured, such as germination percentage (95%), crop height (4 cm), numbers of leaves (8), and fresh weight of the crop (11 g) while the lowest performance was observed in T4. Based on the study, it can be concluded that the usage of SMS is not suitable for the growth of chili as its nutrient content may be insufficient to support the growth performance of chili. Therefore, it is recommended to analyze the nutrient availability of SMS to use it as a growing medium for any other crops.

Keywords: Germination, Growth Performance, Nutrient Content, Pollution