

USE OF VERMITEA AND DILUTED CATTLE URINE AS A NUTRIENT SOURCE FOR CHILLI (*CAPSICUM ANNUM* L.)

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Abstract: Chilli (*Capsicum annum*) is one the most economically important cash crops grown in the tank cascade systems of Sri Lanka. It is prominent in the diet and add flavour and pungency to various foods. This study was carried out at the District Agricultural Training Center, Thirunelvely, Jaffna, from February to May 2023. The aim of this study was to assess the effect of Vermitea and diluted cattle urine as a fertilizer on the growth and yield of chilli. The research included three replicates and five treatments: T1-Vermitea, T2-Diluted cattle urine, T3- Vermitea: Cattle urine 2:1 ratio, T4- Vermitea: Cattle urine 3:1 ratio and T5- Control. The KA2 chilli variety was cultivated to test the efficiency of Vermitea and Diluted cattle urine organic fertilizer. The data collected for growth performances included the height of the plant, number of leaves, number of branches, leaf length, leaf width, number of flowers, number of fruits, length of fruit and fruit weight per plant and yield performance for different plant parameters. The data were assessed through ANOVA. Among all five treatments, T4 (VT:CU, 3:1) was highly effective among tested organic fertilizers. The T4 treated plants recorded significantly higher values for the number of leaves, number of branches, number of flowers per plant (23.40), number of pods per plant (19.33), and yield per plant (116.6 g) than control (15.87 g). According to these results, chilli could be successfully cultivated with high productivity among five treatments by applying Vermitea: Cattle urine 3:1 as organic fertilizer. Based on the findings of this work, the use of Vermitea: Cattle urine 3:1 as a growth and yield enhancer to improve the productivity of small-scale farmers could be recommended.

Keywords: *Capsicum annum*; Diluted cattle urine; Organic fertilizer; Plant growth and yield; Vermitea