B-124 Effect of bat manure on tomato cultivation in the upcountry

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The application of a mixture of organic and inorganic fertilizers for vegetable cultivation is a common practice in the upcountry. At present, organic manures such as poultry and cattle manures are transported over long distances for use in this region, and hence, they are rather expensive. However, bat manure is available in surplus in some areas in this region. Therefore, bat manure can be used as an alternative to other organic manure sources by resource poor farmers in backward villages in the upcountry. Hence, use of available local organic manures such as bat manure will be a viable option to increase the productivity of vegetable crops. An investigation was conducted to find out the suitability of bat manure as an organic manure compared with poultry manure, cattle manure and compost with and without chemical fertilizers for tomato cultivation at Bandarawela. No organic manure, poultry manure, cattle manure and compost were factorially combined with and without chemical fertilizers and tested in a Randomized Complete Block Design experiment with 3 replicates. The chemical fertilizer rates used were 90 kg N/ha, 100 kg P_2O_5/ha and 80 kg K_2O/ha.

Organic manure application increased the tomato yield significantly over the control. The highest crop yield (34.9 t/ha) was obtained with the application of poultry manure followed by bat manure (26.2 t/ha), compost (21.0 t/ha) and cattle manure (20.4 t/ha). The application of chemical fertilizer also significantly increased the tomato yield. Results of this experiment revealed that the application of bat manure was superior to cattle manure and compost as a source of organic manure for tomato cultivation. These findings demonstrate that bat manure appears to be a suitable source of organic manure for tomato cultivation. Hence, local farmers can increase their profits by utilizing bat manure (which need not be transported over long distances), as an organic manure for vegetable cultivation.