

Executive Summary of the research Project Funded by SAURES in the year January, 2016-December, 2017

GROWTH AND YIELD OF ZUCCHINI SQUASH (*Cucurbita pepo* L.) AS INFLUENCED BY PRUNING AND VERMICOMPOST

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Executive Summary

Squash (*Cucurbita pepo* L.) is one of the most nutritive and delicious vegetables; its origins are central Mexico, Peru, and the United States. Squash belongs to the family of Cucurbitaceae and genus of Cucurbita. There are two main types of squash: winter squash and summer squash. Zucchini squash is a summer variety and contains more vitamin A, as well as a significant amount of vitamins C, E, and B₆, niacin, thiamine, and antioxidant compounds. Multiple health hazards and irreparable environmental pollution have occurred from the use of inorganic fertilizers. Modern agricultural practices, such as organic or ecological or sustainable agriculture, are being developed to reduce the adverse effects of synthetic fertilizers and pesticides on human health and the environment. The research was conducted at the horticultural farm of Sher-e-Bangla Agricultural University, Dhaka. The present research was undertaken with the aim of justifying the effect of morphological and physiological properties in organically produced zucchini squash. The experiment consisted of two factors: three levels of pruning (P_0 = no pruning, P_1 = primary pruning at 20 days after transplanting (DAT), and P_2 = secondary pruning at 30 DAT) and four levels of vermicompost application (V_0 = control, V_1 = 5 t/ha, V_2 = 10 t/ha, and V_3 = 15 t/ha). The experiment was laid out in a Randomized Complete Block Design (RCBD) with three replications. The results demonstrated that morphological parameters, reproductive components, and yield were significant differences among the treatments. Increased male and female flower production were recorded from primary pruning with 10 t/ha vermicompost treatment plots compared with control treatments. Finally, increased fruit number, individual fruit weight, fruit length, fruit diameter, total yield was reported from the same treatment combination (P_1V_2). Taken together, 10 t/ha vermicompost with primary pruning appear to provide maximum output in terms of yield compared with other treatments.

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