Effect of Different Organic Liquid Foliar Solutions on Growth and Yield of Okra

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Abstract

Foliar fertilization effectively augments plant nutrition under unfavourable soil, plant, and environmental circumstances, when compared to chemical fertilizers applied to the soil. A field experiment was carried out to evaluate the effect of vermiwash and biogas slurry as plant growth and yield enhancers on two okra (*Abelmoschus esculentus*) varieties (Haritha and MI-5). In this experiment, five different ratios of vermiwash and biogas slurry (T1-1:0, T2-0:1, T3-3:1, T4-2:2, and T5-1:3) were used. To study the effect, data on the medium, including pH, EC and organic carbon available phosphorus, potassium, and nitrogen were analysed as per the standard procedures. All other management practices were carried out according to the recommendation of the Department of Agriculture. Data on plants such as plant height (cm), number of leaves per plant, leaf length (cm), stem width (cm), number of flowers per plant, pod length (cm), pod diameter (mm), individual pod weight (g), and number of pods were recorded. The results of this study revealed that T1 and T3 showed better performance in number of leaves in both varieties. T1 was identified with higher leaf length, width and plant height in both varieties. Comparing all the treatments, T1 was observed with the highest stem diameter in both varieties. Similarly, in yield attributes, T1 produced a highest pod length of 21.1cm in Haritha and 17. 3cm in MI-5, T1 also produced a highest pod diameter of 2.1cm, with a Pod weight of 37.2g, including 7 pods in Haritha while the highest pod diameter of MI-5 was 2.2mm, with a pod weight of 39.2g, including 6 pods. As revealed from the results, the application of foliar solution (T1) from the age of 2nd week has been evidenced with better performance in almost all the parameters measured. The findings of this study can be recommended to farmers as the use of chemicals is associated with health hazards.

Keywords: *Abelmoschus Esculentus, Vermiwash, Biogas Slurry, Organic Farming*