Effect of liquid organic mixture

on growth and yield of Maize (*Zea mays.* L)

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ABSTRACT

Maize is an important cereal crop grown in Sri Lanka and it is highly input responsive. Farmers have to spend more money on fertilization to increase maize production. Hence identification of sustainable and cost effective organic input is vital. An experiment was carried out in the Crop Farm, Eastern University Sri Lanka, Vanthaarumoolai from May to August 2010 to investigate the effect of liquid organic mixture (Jeewamirta) on growth and yield of maize (*cv.* Pacific 984). The experiment was a randomized complete block design (RCBD) with four replicates. Different application frequencies of Jeewamirta were considered as the treatments and treatments were defined as follows: T_1- once a week application, T_2- once in two weeks application, T_3- once in three weeks application and T_4- as control plot. Measurements were taken at two weeks interval and data were analyzed statistically.

The results revealed that there were significant ($p<0.05$) differences in leaf area and plant biomass among the treatments. It was observed that T_1 showed the increasing trend in leaf area and plant biomass compared to other treatments. Highest leaf area and biomass were produced by plants belong to T_1, during reproductive and maturity stages. Significant differences ($P<0.05$) were found in the grain yield and its components. Highest yield was obtained in T_1 and followed by T_2, T_3 and lowest grain yield was obtained in control treatment.

The results indicated that application of Jeewamirta increases growth and yield of maize. Application of Jeewamirta once a week could be a viable technique to increase maize production as a result of higher leaf area and plant biomass during vegetative, reproductive and maturity stages along with increased yield at harvest.

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