

Effect of certain organics and pressmud on growth and yield characters of tomato

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ABSTRACT

An experiment was conducted to study the effect of certain organics and pressmud on growth and yield characters of tomato. The trial was conducted in a Completely Randomized Design with thirteen treatments in three replications. The treatments consisted of application of Farmyard manure 25.0 t/ha, Pressmud 12.5 t/ha and Vermicompost 5.0 t/ha at two different levels (100 and 50 per cent of recommended level) and their combinations along with foliar spray of Panchagavya (3 per cent). The results of the present study indicated that the combined application of Farmyard manure 12.5 t/ha plus vermicompost 2.5 t/ha plus panchagavya 3 per cent as foliar spray resulted in improving the growth characters like plant height, internodal length, number of branches, number of leaves and leaf area and yield characters like number of flower clusters per plant, number of flowers per cluster, number of fruits per plant, single fruit weight and fruit yield per plant in tomato followed by the application of pressmud 6.25 t/ha + vermicompost 2.5t/ha + panchagavya 3 per cent.

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Tomato (*Lycopersicon esculentum* Mill) is one of the most important vegetable crops in the world. Among the different kinds of vegetables, tomato finds an important place in the human diet, because it is rich in ascorbic acid, sugar, calcium and vitamins. Organic manures play a vital role in improving the soil fertility and productivity of soils which has been acknowledged for generations. In recent years, organic farming is becoming more popular in India because people are now aware about the disastrous side effects caused by chemical farming on health and environment and now prefer organically grown foods. The use of certain organics like farmyard manure, vermicompost and pressmud partly substitute chemical fertilizers and also reduce the cost of production. Panchagavya is a single organic input, which can act as a growth promoter and immunity booster. It has a significant role in providing resistance to pests and diseases and in increasing the overall yield. With this background in view, the present investigation was undertaken to study the effect of certain organics like farmyard manure, vermicompost, panchagavya and pressmud on growth and yield characters of Tomato.

MATERIALS AND METHODS

A pot culture study was carried out in the vegetable field unit, Department of Horticulture, Faculty of Agriculture, Annamalai University. Tomato seeds of cv. PKM-1 were used for this study. The experiment was conducted in a Completely Randomized Design with thirteen treatments in three replications. The treatments consisted of application of Farmyard manure 25.0 t/ha,

Pressmud 12.5 t/ha and Vermicompost 5.0 t/ha at two different levels (100 and 50 per cent of recommended level) and their combinations along with foliar spray of Panchagavya (3 per cent). The observations regarding growth characters like plant height, internodal length, number of branches, number of leaves and leaf area and yield characters like number of flower clusters per plant, number of flowers per cluster, number of fruits per plant, single fruit weight and fruit yield per plant were recorded and the results were statistically analyzed.

RESULTS AND DISCUSSION

Data presented in Table 1 showed that the growth parameters viz., plant height, internodal length, number of branches, number of leaves and leaf area were significantly influenced by the application of certain organics and pressmud along with foliar application of panchagavya. The highest plant height (71.40 cm) was recorded in the treatment combination of farmyard manure 12.5 t/ha + vermicompost 2.5t/ha + panchagavya 3 per cent as foliar spray (T_{11}) followed by T_{13} (pressmud 6.25 t/ha + vermicompost 2.5t/ha + panchagavya 3 per cent) which recorded 68.61 cm. The minimum plant height (53.15 cm) was recorded in the control (T_1). Regarding the internodal length, it was maximum in T_{11} (farmyard manure 12.5 t/ha + vermicompost 2.5t/ha + panchagavya 3 per cent) which recorded 6.45 cm followed by T_{13} (pressmud 6.25 t/ha + vermicompost 2.5t/ha + panchagavya 3 per cent) which recorded 5.86 cm. The minimum value of 4.68 cm was recorded in the control (T_1).