

## Effect of Different Potting Medium on Growth and Yield Performances of Capsicum under Organic and Inorganic Management

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A pot experiment was conducted to evaluate the effect of different potting medium on growth and yield performances of capsicum (*Capsicum annum* var. Hungarian Yellow Wax) under organic and inorganic management conditions. The experiment was carried out in Completely Randomized Design (CRD) with six replications. Four potting medium combinations were used as treatments [cattle manure: topsoil 2:1 (T<sub>1</sub>, T<sub>5</sub>), compost: topsoil 2:1 (T<sub>2</sub>, T<sub>6</sub>), leaf mould: topsoil 2:1(T<sub>3</sub>, T<sub>7</sub>), top soil (T<sub>4</sub>, T<sub>8</sub>)] under organic and inorganic managements respectively, for Capsicum. For inorganic management, all other management practices were uniformly performed based on the recommendations of Department of Agriculture and for organic management, farmers' adopted practices were followed. Growth parameters such as leaf number, number of branches and plant height were measured biweekly interval commenced from 2 weeks after transplanting and yield parameters such as fruit weight, fruit length, fruit circumference and average yield per pot were measured after harvesting. ANOVA was performed to find significant differences between treatments using SAS 9.1 package and means were compared by Duncan Multiple Range test at p value of 0.05. There were significant differences observed in growth parameters viz. plant height and leaf number among the treatments. The highest plant height and leaf number were observed in compost: topsoil combination under inorganic management and the lowest were observed in leaf mould: topsoil combination under organic management. There was no significant difference observed in number of branches among the treatments. There were significant differences in yield parameters such as fruit length, fruit circumference, individual fruit weight and average fruit yield per pot among the treatments. Fruit length, fruit circumference and individual fruit weight were highest in compost: topsoil combination under organic management and the lowest in leaf mould: topsoil combination under organic management. The highest average fruit yield per pot was observed in compost: topsoil combination under inorganic management and the lowest was observed in leaf mould: topsoil combination under organic management due to the production of higher number of fruits in inorganic management. It can be concluded that under organic management, rooting medium combination of compost: top soil at the ratio of 2:1 can be recommended for small scale pot cultivation due to eco-friendly cultivation and under inorganic management, incorporation of compost with top soil can be recommended for profitable commercial level cultivation in the field.

**Key words:** Capsicum, Potting media, Growth, Inorganic, Organic, Yield