

Effect of various organic manures on growth and yield of raddish

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ABSTRACT

An experiment entitled 'Effect of various organic manures on growth and yield of Radish' was carried out during kharif season of 2005-06 at University Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (M.S.) The experiment was laid out in Randomized Block Design with four replications. In all seven treatments were imposed. The results of the present investigation indicated that the vegetative growth in term of height of plant and number of leaves and yield per plot and per hectare was found highest in treatment with vermicompost @ 16.67 q.ha⁻¹.

Key words : Radish, Vermicompost, yield.

Among the root vegetables, Radish (*Raphanus Sativus* L) is the important vegetable crop. It is consumed as raw as well as a salad. It is rich in calcium, potash, phosphorus and vitamin C. In recent years use of organic manures like FYM, Vermicompost, Neem Cake for improving the productivity of crops and maintaining soil fertility and productivity of soil is gaining prominence. The organic manuring has positive influence on soil texture and water holding capacity (Kale *et al.*, 1991). In this connection to give more emphasis on organic vegetable production which minimizes cost of production, increases quality of product and maintain the soil fertility, the present investigation has been planned to study the effect of various organic manures on the growth and yield of radish.

MATERIALS AND METHODS

The experiment was conducted at Main Garden, University Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola during Aug-Sept. 2005. The soil of experiment site was uniform in texture and was leveled.

The investigation was laid out in Randomized Block Design with seven treatments and four replications. The details of treatments are given below.

Treatments :

1 RDCF	(T1) -	N ₅₀ , P ₂₅ , K ₀ Kg ha ⁻¹
2 Neem cake	(T2) -	9.61 q/ ha ⁻¹
3 Vermicompost	(T3) -	16.67 q/ ha ⁻¹
4 FYM	(T4) -	10.00 t/ ha ⁻¹
5 City solid waste	(T5) -	28.57 q/ ha ⁻¹
6 Compost	(T6) -	10.00 q/ ha ⁻¹
7 Control	(T7) -	No organic or chemical

The good, bold seed of radish variety Pusa Chetki was sown on 22nd August 2005 at a distance of 30x20cm. Before 15 days sowing of seed the various organic manures were applied randomly. Irrigation, thinning, gap filling, weeding, earthing up and plant protection measures were followed timely. The observations on vegetative growth attribute like height of plant, number of leaves were recorded at the interval of 10 DAS till 40 DAS. The observations on yield per plot and yield per hectare were recorded.

RESULTS AND DISCUSSION

Plant height :

It is clear from Table 1 that 10 DAS, 20 DAS, 30 DAS and 40 DAS, the height of plant was statistically significant in treatment T₃ i.e. application of vermicompost 16.67 q/ha⁻¹ and the lowest plant height was observed in treatment T₇ i.e. absolute control at various stages of growth.

Number of leaves per plant :

Data presented in Table 2 indicates that at all days of sowing i.e. 10 DAS, 20 DAS, 30 DAS and 40 DAS, treatment T₃ i.e. application of vermicompost at the rate of 16.67 q ha⁻¹. statistically produce maximum number of leaves per plant. The lowest number of leaves per plant was noticed in treatment T₇ i.e. absolute control.

In general all vegetative attributes exhibited maximum value in vermicompost treatment. It may be due to beneficial effect of richness of vermicompost in respect of N, P, K, Ca, Mg and micronutrients over other organic manures. The similar results have been reported by Sood and Lal (2004) in potato.

Yield per plot and yield per hectare :

Data presented in Table 3 revealed that maximum