

Effect of spacing and organic manures on seed of coriander (*Corianderium sativum* L.)

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ABSTRACT

An experiment on the effect of spacing and organic manure on seed yield of coriander (*Corianderium sativum* L.) was carried out during *rabi* season of 2003-04 at Department of Horticulture, M.A.U., Parbhani. Amongst different spacings, the treatment S₁ (30 x 20 cm) recorded maximum number of leaves per plant, height per plant, number of umbels per plant, number of umbletts per umbel, number of seeds per umblett, number of seeds per plant, seed yield per plant, test weight and germination per cent. While seed yield per plot and seed yield per hectage was maximum in spacing (30 x 10 cm). Among the organic manures M₁ (FYM 20 tonnes per ha) recorded maximum height per plant, number of leaves per plant, number of umbels per plant, number of umbels per umbel, number of seeds per umblett, number of seeds per plant, seed yield per plant, seed yield per plot, seed yield per hectare, test weight and germination per cent. The interaction effect of spacing and organic manures was found to be non significant.

Key words : Coriander, Seed, Spacing, Manures.

Coriander (*Corianderium sativum* L.) is an annual herb belonging to the family umbeliferae having good medicinal value and also used as a circulative. In India, the leaves are appreciated for their favouring properties and are incorporated into many dishes. The seeds are important ingredient of curry powders usually contributing the greatest quantity of all the spices, next to the turmeric. India is the worlds largest producer of coriander grown on an area of 5.21 lakh hectares with an annual production of 3.08 lakh million tones with an average yield of 575 kg per ha (Anonymous, 2000). The area under coriander as rainfed as well as irrigated crop is increasing rapidly around cities, towns and rural parts of the state. The demands for improved seed varieties of coriander are also increasing from the farmers side. Very scanty research work on the aspect of seed production in coriander particularly on the aspect of spacing organic amendments and their interaction has been undertaken in Maharashtra State of Marathwada region.

MATERIALS AND METHODS

An experiment was carried out at the Department of Horticulture, Marathwada Agricultural University, Parbhani during the *rabi* season 2003-04. The experiment was laid out in the factorial randomized block design with three levels of spacing *viz.* S₁ (30 x 20 cm), S₂ (30 x 15cm), S₃ (30 x 10 cm) and three levels of organic manures *viz.* M₁ (FYM 20 tonnes per ha), M₂ (vermicompost 3 t per ha) and M₃ (biomeal 2 t per ha) thus there were total nine treatment combinations replicated thrice. The field

was brought to fine tilth by ploughing and harrowing. Flat beds of 3.0 x 1.8 m size were prepared with addition organic manures and irrigation channels of 0.6 m width were opened at conventional intervals. The seeds of variety DWD-3 were sown by opening small furrow of 3 cm depth at a distance of S₁, S₂ and S₃ mentioned above. The observation regarding growth and seed yield character were recorded and data were analysed statistically.

RESULTS AND DISCUSSION

Vegetative characters such as height of plant and number of leaves of 90 DAS were greatly influenced by spacing and organic manure. Maximum mean height of plant (47.43 cm) was recorded in treatment S₁ (30 x 20 cm) and 46.07 cm in treatment M₁ (FYM 20 tonnes per ha) (Table 1). Minimum height was recorded in M₃ and S₃ at DAS the interaction effect was non significant. The increment in the height in case of wider spacing can be explained on the basis that plants growing at wider spacing could get more space for their root and shoot development and with the availability of more space in the soil plants obtain more nutrients and water for their vegetative growth. The results are in conformity with the findings of Baswana *et al.* (1938).

More number of functioned leaves per plant (9.06 and (7.95) was recorded in treatment S₁ (30 x 20 cm spacing) and in treatment M₁(FYM 20 t per ha) at 90 DAS, respectively. The interaction effect was found to be non significant. The minimum (46.06 and 7.09) number of functioned leaves were obtained in treatment of