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### Effects of mulches, planting methods and biofertilizers on fruit yield and quality and weed characteristics of organically grown capsicum (*Capsicum annuum* L.)

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An investigation was carried out at the Experimental Farm, Department of Vegetable Science, Dr Y S Parmar University of Horticulture and Forestry, Nauni, Solan (HP) during *Kharif* season, 2012, to evaluate the effect of mulches, planting methods and biofertilizers on fruit yield, weed characteristics and quality of organically grown capsicum (*Capsicum annuum* L.). The experiment was carried out in a Randomized Complete Block Design with factorial arrangements which included 3 levels of mulch (M<sub>1</sub>: No mulch, M<sub>2</sub>: Black plastic mulch and M<sub>3</sub>: Pea residue mulch), 2 levels of planting methods (P<sub>1</sub>: Flat bed method and P<sub>2</sub>: Ridge bed method) and 2 levels of biofertilizers treatments (B<sub>1</sub>: No biofertilizers and B<sub>2</sub>: Biofertilizers) to compare the treatment combinations of the factors. The main effect of the factors revealed that M<sub>2</sub>, P<sub>2</sub> and B<sub>2</sub> treatments recorded enhanced fruit yield, reduced weed growth where M<sub>2</sub> recorded the minimum number of weeds (7.35) and fresh and dry weight of weeds per m<sup>2</sup> (13.18 and 4.50 g respectively), P<sub>2</sub> recorded minimum number of weeds (48.24) and fresh and dry weight of weeds per m<sup>2</sup> (100.45 and 30.51 g respectively) and B<sub>2</sub> recorded the lowest fresh weight of weeds (100.95 g) and increased ascorbic acid content and shelf life of fruits. The interaction effect between the factors revealed that M<sub>2</sub>P<sub>2</sub>B<sub>2</sub> treatment combination i.e., application of black polythene mulch, ridge bed method and application of biofertilizers exhibited significant influence on quality and fruit yield of capsicum with maximum fruit yield (280.45 q/ha) and reduced fresh and dry weight of weeds (12.19 and 4.12 g).

#### Biography

K S Thakur is working as Associate Professor in the Department of Vegetable Science and involved in teaching (UG and PG students), research and extension activities in the field of Vegetable Science for last 13 years. He earned his graduation in Horticulture, M.Sc. (Hort.) and Ph.D. (Hort.) in Vegetable Crops from Dr Y S Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh, India. He is conducting research works since last 7 years on organic vegetable production technologies with special emphasis on nutrient management by use of biofertilizers and organic manures and its application in commercial vegetable production. He has published more than 22 research papers, popular articles and technical bulletins on vegetable crops in international, national and regional journals. He has attended, participated and contributed 11 international, national and state level seminar, symposia, conference, congress and workshop related to sustainable vegetable production technologies.

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### Fixing tolerance limit for *Aspergillus flavus* infection in groundnut

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The relationship of *Aspergillus flavus* infection on seed quality was studied by artificial inoculation of *A. flavus* on seeds of groundnut cultivar VRI 2 collected from three major groundnut growing areas of Tamil Nadu viz., Vridhachalam, Thindivanam, Villupuram. *A. flavus* spores isolated from groundnut kernels were inoculated with 0, 0.25 and 0.5% infection on seed coat of disease free groundnut kernels after initial physiological and seed health evaluation and then stored in cloth bag at ambient condition and evaluated bimonthly. The seeds inoculated with 0.5% infection lost its viability (69%) at the end of storage period. Seeds with 0% infection maintained its viability at the end of storage period (72%). The seeds with 0.25% infection maintained germination up to 71% at the end of storage period. Storing the seeds with 0% infection is not at all possible, thus, the seeds with 0.25% of *A. flavus* infection could be the tolerable limit for safer storage of groundnut seeds.

#### Biography

M Ameer Junaithal Begum M.Sc. (Ag) is currently Ph.D. scholar in Dept. of Seed Science & Technology, TNAU, Coimbatore, Tamil Nadu, India. She pursued her under graduation and master degree in the same university & was awarded with several scholarships for pursuing UG, PG & Ph.D. courses. She has presented several papers in national & international seminars and published several research articles in reputed journals and has authorship for several book chapters & books.

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