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Nutritional effect of organic matter, bio-organics and inorganic fertilizers on growth and yield attributes of *Abelmoschus esculentus* L.

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A field experiment was conducted during 2010-2012 at University Agricultural Research Station to determine the nutritional status of organic matter like groundnut cake and bio-organics such as *Azotobacter chroococcum* and *Azospirillum brasilense* singly and in various combinations along with different recommended doses of inorganic nitrogen on the growth, yield and productivity parameters of okra (*Abelmoschus esculentus* L.). The growth as well as yield attributes such as height of plants, fresh as well as dry weights, number of branches, per cent pollen fertility, green fruits/plant, green fruit yield/plant and chlorophyll content increased significantly in all the treatments as compared to the untreated control which seems to be due to their potentiality of nutrients. The highest improvement in growth and yield attributes was observed when these bio-organics *A. chroococcum* and *A. brasilense* were added concomitantly in various combinations. *Azotobacter* was found to be less effective than *Azospirillum*. The soil application of groundnut cake, bio-organics and 100% recommended dose of nitrogenous fertilizers results an improvement in plant nitrogen, phosphate and potash, and residual available soil nitrogen, phosphate and potash. All these nutrients greatly influenced the soil fertility and increased the metabolic activities of plants, and hence the biomass of plants. This type of study is to increase the growth, yield attributes and productivity to develop organically based farm produce. This sustains the biomass production without harming our natural bio-resources. Such organics and bio-organics as components of ecosystem can be used as economical and eco-friendly alternative to synthetic pesticides and hazardous chemical fertilizers.

Biography

Safiuddin Ansari has completed his MPhil at the age of 24 years from Aligarh Muslim University, Aligarh and likely to submit his PhD within very short period at the same University. He has published more than 8 papers in journals of national and international repute. He attended several national and international conferences and presented research paper of his interest.

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