

Effect of different fertilizers, manures and nematicides on number of galls and yield in Arka Anamika at summer season in Terai region of Chitwan, Nepal

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An experiment was carried out at Agriculture and Forestry University, Horticulture farm to determine the effects of different fertilizers on root knot nematode and yield on Okra (var. Arka Anamika) at summer season in inner terai region of Chitwan, Nepal. The treatment was carried out in the completely randomized block design (RCBD) with 7 treatments replicated 3 times. The treatment included: goat manure, sesame (til) cake, mustard seed cake, poultry manure, furacron, vermicompost plus untreated control including only chemical fertilizer (NPK). All treatments provide the sufficient amount of Nitrogen required for the crop as recommended by Nepal Agriculture Research Council. Remaining amount of required phosphorous and potassium was supplied by adding single super phosphate and muriate of potash respectively. The germination percentage was found significantly superior in furacron (93.33%) and followed by goat manure (92.67%), vermicompost (86.67%), sesame (til) seed cake (82.67%), mustard seed cake (81.67%), control i.e. NPK (76.67%) and poultry manure (61%). Similarly, In terms of number of galls, furacron(3.43) was found most effective followed by goat manure (5.60), Poultry Manure (6.63), Mustard Seed Cake (8.47), Sesame cake (9.07), vermicompost (16.60) and control (21.96) at 60 DAS. In terms of yield, poultry manure (20mt/ha) was found superior followed by vermicompost (17.38mt/ha), goat manure (16.72 mt/ha), sesame(til) cake (16.62mt/ha), furacron (14.61 mt/ha), mustard oilcake (12.97 mt/ha) and control (10.51mt/ha). The highest net profit was found in case of Poultry manure while the lowest incremental cost benefit ratio was obtained in furacron followed by goat manure, poultry manure, vermicompost, sesame (til) cake and mustard seed cake. The highest yield (20t/ha) and nematode control was obtained in Poultry manure which is at par with furacron treatment. This experiment suggests the use of either poultry manure or furacron, which will provide more economic return and also decreases the root knot nematode in okra.