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Studies on the integrated nutrient management of Brinjal (*Solanum melongena* L.)

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An experiment was conducted to study the efficiencies of selected protocols for integrated management of nutrients in Brinjal (*Solanum melongena* L.)"at Central Research Farm of Bidhan Chandra Krishi Viswavidyalaya at Gayeshpur, Nadia during 2011 with Brinjal (cv. F_1- hybrid VNR -60) as test crop. The experiment has been laid out in a 4 x 4 factorial design with three replications and was conducted with recommended doses of NPK supplemented with selected bio-fertilizers (PSB and *Azotobacter* along with micronutrients (Fe, Zn, B) fertilizers. Integrated management of nutrients through supplementation of NPK by bacterial fertilizers along with micronutrients inputs increased basal girth, plant height, no. of shoots/plant, no. of fruits/plant and average fruit weight significantly over values obtained under administration of the recommended dose of NPK alone. Maximum increments in basal girth, plant height, no. of shoots/plant, no. of fruits/plant and average fruit weight thus obtained remained to the tune of 36.09, 20.84, 43.95, 123.52 and 60.00% respectively over control. Maximum increments in *Brinjal* yields thus obtained remained to the tune of 60 % over control. The economic benefits of different management systems were observed to be to the tune of 19.25-60.00 % more net return over the control counterparts (recommended dose of NPK only). This calls for judicious management of natural resources and evolving cost-efficient technologies which can push up vegetable production at a lesser cost rather than expanding the area.

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Bio-ecology and management of mirid bug, *Poppiocapsidea* (=*Creontiades*) *biseratense* on *Bt* cotton

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Studies undertaken at College of Agriculture and Main Agricultural Research Station, Raichur during 2011-12 on Bio-Ecology and management of mirid bug, *Poppiocapsidea* (=*Creontiades*) *biseratense* (Distant) on Bt cotton indicated that, the female bug inserted the eggs singly or in groups on the petiole, bracts and flower petals. The freshly laid eggs were nacreous white in colour and cigar shaped. Hook shaped egg cap was formed at the anterior end which aided in hatching. The bug had five nymphal instars with a mean nymphal duration of 12.60 days. The total life cycle of male and female was 32.70 and 40.40 days with a mean fecundity of 126.10 eggs per female. The incidence of mirid bug was noticed from September and gradually increased in the month of November and December. Peak incidence of mirid bug was noticed in the month of November and December. In general the incidence of mirid bug was low in the crop sown in July and more in the crop sown in August. However in all different date sown crop the incidence of mirid bug was coincides with the maximum fruiting bodies of the crop. Thirteen Bt and a non-Bt cotton hybrids were screened under field condition for their reaction to mirid bug damage. Based on the overall performance of the hybrids, Brahma, RCH 530 and VICH 303 appeared to be less prone to mirid bug attack. Mirid bug incidence was found to be high on genotypes which have more trichome density. Among the different insecticides and botanicals evaluated for their efficacy against *P. biseratense*, fipronil 5 SC+1 per cent salt at 50 g a.i. /ha, acephate 75 SP+1 per cent salt at 750 g a.i. /ha, and profenophos 50 EC +1 per cent salt at 1000 g a.i. /ha, were found to be superior over other chemicals in reducing the mirid bug population.

Biography

Prakash has completed his BSc (Agri.) from University of Agricultural Sciences Dharwad, Karnataka; M.Sc. (Agri.) from University of Agricultural Sciences Raichur, Karnataka with Gold medal, and now he is a Ph.D. Scholar in Agricultural Entomology at University of Agricultural Sciences Dharwad, Karnataka. He is DST INSPIRE fellow of year of 2012-13.

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