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Management of chilli fruit borer, *Helicoverpa armigera* with emamectin benzoate 5 % SG (Volax)

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Emamectin benzoate (Volax) is a novel insecticide with potent efficacy against many species of lepidoptera. The active ingredient belongs to the naturally derived chemical group of avermectine, causing paralysis of lepidoptera larvae due to the activation of chloride channel at nerves level. It penetrates leaf tissues (translaminar activity) and forms a reservoir within the leaf which provides residual activity against foliage feeding pests that ingest the substance when feeding. The mechanism of action is unique in the panorama of insecticides. This class of pesticide consists of homologous semi-synthetic macrolides that are derived from the natural fermentation products of *Streptomyces* bacteria.

The experiment was conducted at the Agricultural Research Station, Annigeri (UAS, Dharwad-Karnataka-India) during 2010-11 and 2011-12. Emamectin benzoate 5% SG (Volax) @ 12 g a.i /ha has recorded lowest larval population of *H. armigera* after both the sprays with 0.16 and 0.07 larvae per plant respectively. Emamectin benzoate at 10 g.a.i /ha (0.30 and 0.18 larvae per plant) was equally effective in managing the pest and on par with 12 g a.i /ha and both the standard checks. During the second year, similar trend was observed in the efficacy of the treatments against the pest. Lowest fruit damage was registered in the treatments with emamectin benzoate at 12 g.a.i /ha (3.23%) followed by 10 g.a.i /ha (3.74%) where both the treatments were on par with standard checks. Similar trend in the efficacy was observed during the second year of investigation where, emamectin benzoate at 12 and 10 g.a.i/ha has recorded lowest fruit damage (3.61 and 4.53 per cent) and remained on par with proclim (4.20%) and spinosad (3.91 %).

The dry chilli yield during both the years was significantly highest in the treatment with emamectin benzoate (Volax) at 12 g.a.i /ha (10.10q/ha) which was statistically superior over other treatments followed by emamectin benzoate at 10 g.a.i /ha (9.65q/ha) and the standard checks.

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