

Bio-Efficacy of confidor 200 SL (IMIDACLOPRID) against sucking pests on groundnut

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The field experiment on bio-efficacy of confidor 200 SL against sucking pests on groundnut were conducted at Oilseeds Research Station, Jalgaon during *kharif* 2000 and 2001. Three levels of doses of confidor 200 SL @ 100 ml, 125 ml and 150 ml per hectare in comparison with conventional insecticides, dimethoate and acephate were evaluated for their relative merits at 3, 7 and 14 days after spraying. All the dose of confidor 200 SL tested under field conditions were found to be significantly effective in reducing the nymphal population of thrips species and leaf hopper at 3 days after spraying recording 70-90% reduction in comparison with conventional insecticides, acephate and dimethoate. The infestation level of LH was not desirable at 7th, 14th days after spraying. It appeared that the molecule confidor 200 SL gave significant protection and proved efficient against the sucking pests, thrips and LH on groundnut during *kharif* season under Jalgaon conditions.

Key words : Confidor, Imidacloprid, Sucking pest.

INTRODUCTION

Groundnut crop is affected by wide range of pests. About dozen of pests are economically important in India (Whiteman and Ranga Rao, 1994). The defoliators are predominantly important in southern parts of country. But sucking pest like leaf hopper and thrips are occurred in severe form as a direct pest and they take heavy toll in vector of majority of viral diseases in groundnut crop. Often these pests cause economic damage particularly in dry weather situation and this damage can be high. Of the vector of PBNB under recondition of late sown crops are often badly suffers. The foliar application of imidacloprid and other conventional insecticides were proved to be effective against the sucking pest of cotton, sunflower and other crops reported by various workers. (Bhat *et al.*, 2003 and Anonymous, 2003). The residual toxicity of imidacloprid (Confidor 200 SL) relatively higher upto 30 to 35 days in cotton reported by Anonymous (2003). Nevertheless, this insecticide found to be better and acting in reduction of neurotransmitter substance acetylene choline in nervous systems of insect pests which induces the killing effect. However, the molecule of imidacloprid was most effective against wide range of dipterous, lepidopterous and coleopterous pests (Elebert, 1990). The pest control perhaps is old farming itself and various practices were working on sustainable basis till middle half of 20th century with presence of maximum agricultural output but with fertilizers responsive variety

of the crop, repeated misuse of pesticides has resulted in the practices of thread mill. Therefore, molecule of newer group of insecticide were tried in comparison with conventional insecticides for their relative performance against the vector species on groundnut. The final tools of IPM technology to manage the noxious pest to keep in economic accommodation level and manage involving in other combination of methods in groundnut cropping system.

MATERIALS AND METHODS

A field experiment was conducted at Oilseeds Research Station, Jalgaon using variety JL-24 during *kharif* 2000 and 2001 to test the bio efficacy of imidacloprid (Confidor 200 SL) in comparison with conventional insecticides, acephate and dimethoate against the pest of thrips and leaf hopper. Trials were laid out in randomized block design with three replications. The sowing was completed during the second week of July in measured plot in 5 x 3 m² with row to row distance 30cm and plant to plant distance 10 cm. There were six treatments, out of which one was maintained as a untreated checks. The recommended crop management practices were followed. The observations of nymphal population of thrips and leaf hopper were recorded at peak incidence on 5 randomly selected plant from each of the treatment. Thereafter, subsequent day, spraying of insecticidal treatment were given with the help of knapsack sprayer. The post count observation on