

# Field Evaluation of Microbial Control Agents Against Spotted Pod Borer *Maruca vitrata* on Blackgram.

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## ABSTRACT

Field efficiency of nine microbial bioinsecticides *Bacillus thuringiensis* isolates (16, 49, 51, 52, 55, 493, HD1, Dipel, *M. anisopliae*) and spinosad 45 % SC were evaluated against *M. vitrata* infesting blackgram during *rabi* season of 2020-21. The results revealed that spinosad 45% SC followed by Dipel, *Metarhizium anisopliae*, *Bt* isolate HD1 and *Bt* isolate 493 were found to be the most effective in reducing the larval population and also in per cent reduction of the bud, flower and pod damage of blackgram. The maximum increase of seed yield (166 kg) of blackgram over control was recorded in spinosad 45% SC. The next effective treatments were Dipel, *M. anisopliae*, *Bt* isolate HD1 and *Bt* isolate 493. The treatments of spinosad 45% SC and Dipel gave the highest ICBR of 1:7.24 and 1:6.75, respectively followed by *M. anisopliae* (1:6.24) *Bt* isolate HD1 (1:5.62) and *Bt* isolate 493 (1:4.70). Thus, three sprays of microbial bioinsecticides, at the time of bud initiation, flowering and pod developmental growth stages were found efficacious on the field management of *M. vitrata* on blackgram with higher yields.

**Keywords:** *Biopesticides, native Bacillus thuringiensis isolates, Metarhizium anisopliae, Maruca vitrata and blackgram.*