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### Application of *Bacillus thuringiensis* and *Bacillus cereus* in the Field to Control the Lepidopterial Pest

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**Abstract :** An insect can develop evolutionary resistance to a strain of *Bacillus thuringiensis* or *Bacillus cereus* if the relationship between the two occurs continuously. The solution to this problem is to look for strains of bacteria that have never been exposed to target insects. The aim of this study was to determine the efficacy of *B. thuringiensis* in *P. xylostella*, *C. binotalis* and *S. litura*; and *B. cereus* in *P. xylostella*. The experimental design is a complete random factorial design with five replications. Two levels of cabbage varieties namely Grand 11 and Ishito, and three levels of agents namely *B. thuringiensis*, *B. cereus* and sterile water (control). The responses of the Grand 11 and Ishito varieties to the attack of *P. xylostella*, *C. binotalis* and *S. litura* were the same. *B. thuringiensis* was effective in controlling *P. xylostella*, *C. binotalis* and *S. litura*, while *B. cereus* was only effective in controlling *P. xylostella*. Population density of *P. xylostella* sprayed with *B. thuringiensis* on Ishito varieties was significantly different from Grand 11, while in other interactions the same.

**Keywords :** *Bacillus thuringiensis*, *Bacillus cereus*, *Xylostella plutella*, *Crocidolomia binotalis*, *Spodoptera litura*.

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