RESEARCH ARTICLE

SCREENING OF NATIVE BACILLUS THURINGIENSIS (BT) ISOLATES FOR THE PRESENCE OF CRY 1 AB & *VIP 3A*

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Abstract: Insecticidal *cry* and *vip* genes from *Bacillus thuringiensis* (Bt) have been used for control of lepidopteran insects in transgenic crops. However, novel genes are required for gene pyramiding to delay evolution of resistance to the currently deployed genes.PCR-based techniques were employed for screening of *cry1Ab* type genes in 96 Bt isolates from diverse habitats in India and 8 known Bt strains. 96 native Bt isolates, recovered from different locations in India and 8 known Bt strains were screened for the presence of cry 1 Ab, cry 1Ac, Cry 3A & vip 3A for Isolation of plasmid DNA from native Bt isolates of Bacillus thuringiensis, Screening for the presence of cry 1 Ab, cry 1Ac, cry 3A & vip 3A gene using PCR amplification and Cloning of partial cry 1 Ab & vip 3A gene using different sets of primers. *Cry1Ab* type genes were more prevalent than *cry1Aa*- and *cry1Ac* type genes. Correlation between source of isolates and abundance of *cry1*-type genes was not observed..

Keywords: *Bacillus thuringiensis*, *Cry1Ab* genes, *Cry1Ac*, *Cry3A*, Vip*3A*, *Helicoverpa armigera*, Insecticidal genes

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