

## Geographical variability in susceptibility of cotton bollworm (*Helicoverpa armigera*) to Bt toxin across northern Karnataka cotton ecosystem\*

Yenagi B.S.<sup>1</sup>, Assistant Professor of Agronomy, Patil V.C.<sup>2</sup>, Prof. and Head, Biradar D.P.<sup>3</sup>, Editor Publication Unit and Prof., Khadi B.M.<sup>4</sup>, Director

Department of Agronomy, College of Agriculture, University of Agricultural Sciences, Dharwad - 580 005, Karnataka, India.

<sup>1</sup>Corresponding author: Dr. B.S. Yenagi, Department of Agronomy, College of Agriculture, UAS, Dharwad - 580 005 e-mail: [bsyenagi@yahoo.co.in](mailto:bsyenagi@yahoo.co.in).

<sup>2</sup>Department of Agronomy, UAS, Dharwad - 580 005 (KRN).

<sup>3</sup>Agronomy, UAS, Dharwad - 580 005 (KRN).

<sup>4</sup>Central Institute for Cotton Research (CICR), Nagpur (MS).

\*Part of the approved PhD thesis submitted by the senior author to the University of Agricultural Sciences, Dharwad-580 005, Karnataka, during July-2006

Accepted: 22 February, 2010.

### Abstract

To know the resistance development in *Helicoverpa armigera* (Hubner) to different Bt-cotton ecotypes in northern Karnataka namely Dharwad, Haveri (Tq: Ranebennur), Bijapur, Raichur and Belgaum (Tq: Bailhongal), *H. armigera* populations were collected and studied in laboratory. The populations from Raichur and Haveri were found tolerant to the *Bacillus thuringiensis* toxin (RF: 5.56 and 4.77, respectively). LC<sub>50</sub> values resulting from mortality of different populations ranged from 0.149 to 0.828 mg/ml. The Dharwad strain was the most susceptible (LC<sub>50</sub>=0.149) and Belgaum and Bijapur populations were similar to each other at resistance folds of 1.17 and 1.25, respectively. Geographic populations of Haveri and Raichur recorded 4.77 and 5.56, fold resistance, respectively.