

Research Article

**CRY TOXIN EXPRESSION IN DIFFERENT PLANT PARTS
OF *Bt* COTTON AT DIFFERENT PHENOLOGICAL
STAGES**

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ABSTRACT

Using a commercially available QL 96 ELISA plate kit the concentration of delta endotoxin in various plant parts at different phenological stages was determined in twelve BG-II cotton hybrids, namely Ajeet-155, JKCH-2245, RCH-3863, NCS-866, MRC-7373, JKCH-99, MRC-7387, NCEH-21, ANKR-3324, NCSI-1904, NCHB 9902. Cry1Ac and Cry2Ab protein levels were determined from samples of flowers and fruiting parts (Rind, locule, seed, locule wall and seed) at 40, 75, 100 and 125 DAS over two consecutive years 2018-19 and 2019-20. Cry1Ac protein content and expression was highest at 100DAS in locule, seed and rind; followed by rind and locule wall and seed in green bolls at 125 DAS; followed by seed, locule, rind and flowers at 75 DAS; followed by flowers at 40 DAS in all the tested twelve Bollgard-II hybrids. Cry2Ab protein content and expression was highest at 125DAS in locule wall and seed and rind, followed by seed, locule and rind in green bolls at 100 DAS, followed by seed, locule, rind and flowers at 75 DAS, followed by flowers at 40 DAS in all the tested twelve Bollgard-II hybrids. Cry1Ac protein expression was less in comparison to Cry2Ab.

KEYWORDS: Cry1Ac, Cry2Ab, Toxin expression, ELISA, *Bt* cotton Hybrids, Phenological stages.