

How Various Bt-Cotton Hybrids affect Biological Parameters of *Eariasvittella* (Fabricius)

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ABSTRACT

Six hybrids namely BIO 6488 Bt, BIO 6488 BGII, BIO 6488 non-Bt, RCH 134 Bt, RCH 134 BGII and RCH 134 non-Bt were used to study their effects on various biological parameters of *Eariasvittella*. First and third instars were used to determine the larval period and their survival and growth, pupal period, pupal weight and adult emergence when squares/bolls were provided for feeding from 60, 90, 105 and 125 days after sowing (DAS) of crop. Survival of first instars was very low when fed on 60 and 90 DAS. However, larval survival increased at 105 and 125 DAS. In case of third instars, growth of larvae were minimum on both Bt and BGII hybrids at 60, 90 and 105 DAS but increased when larvae were fed with Bt-cotton hybrid leaves fed on squares/bolls from 125 day-old plants. Similar trends were observed in pupal weight and adult emergence on Bt and BGII hybrids. Larval period increased on both Bt and BGII hybrids when used 60, 90 and 105 DAS but reduced at 125 DAS. Similar trends were observed in pupal period on both Bt and BGII hybrids. It was obvious that older plants were comparatively less effective, which suggests a decrease in toxic expression, but over all control of the pest was still significant.

Keywords: Bt-cotton, *Eariasvittella*, biological parameters, BGII