

Evaluation of Bollworm Tolerance in F1 and F2 BT Cotton under Unprotected Condition

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Abstract : Field experiment was conducted during kharif 2005, at the experimental farm of the Department of Genetics and Plant Breeding, College of Agriculture, Marathwada Agricultural University, Parbhani, Maharashtra. F1 and F2 hybrids of 23 Bt and 5 non-Bt hybrids were grown in a randomized block design with two replications. The results showed that among F1 hybrids, open boll damage due to bollworm complex was not noticed in 4233 Bt and 4247 Bt cotton hybrids which were found significantly superior over MECH 6301 Bt (3.2 %), 4255 Bt (3.28 %) and it was at par with rest of the hybrids. Among F2 hybrids minimum open boll damage (3.10 %) was noticed in Proagro 144 Bt, which was found significantly superior over rest of the hybrids except 4234 Bt (4.17 %) and 4254 Bt (4.98 %) which were at par with each other. In respect of seed cotton yield, among F1 hybrids maximum yield (15.51 q/ha) was recorded in 4233 Bt which was found significantly superior over rest of the hybrids except 4237 Bt (15.24 q/ha). Among F2 maximum yield (15.44 q/ha) was recorded in 4233 Bt which was found significantly superior over rest of the hybrids except 4258 Bt (15.41 q/ha), 4239 Bt (15.098 q/ha) which were at par with each other. Thus F2 Bt cotton express Bt protein in segregated pattern in which bollworm attack was more as compared to F1 which affects yield as well as quality of lint.

Keywords : Bt cotton, bollworms, F1 and F2 generations, unprotected condition

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