

MNH-886(Bt.): A Cotton Cultivar (*G. Hirsutum* L.) for Cultivation in Virus Infested Regions of Pakistan, Having High Seed Cotton Yield and Desirable Fibre Characteristics

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Abstract : MNH-886(Bt.) is a upland cotton cultivar (*Gossypium hirsutum* L.) developed through hybridization of three parents [(FH-207×MNH-770)×Bollgard-1] at Cotton Research Station Multan, Pakistan. It is resistant to CLCuVD with 16.25 % disease incidence (60 DAS, March sowing) whereas moderately susceptible to CLCuVD when planted in June with disease incidence 34 % (60 DAS). This disease reaction was lowest among 25 cotton advanced lines/varieties tested at hot spots of CLCuVD. Its performance was tested during 2009 to 2012 in various indigenous, provincial, and national varietal trials in comparison with the commercial variety IR-3701 and AA-802 & CIM-496. In PCCT trial during 2009-10; 2011-12, MNH-886 surpassed all the existing Bt. strains along with commercial varieties across the Punjab province with seed cotton yield production 2658 kg ha⁻¹ and 2848 kg ha⁻¹ which was 81.31 and 13% higher than checks, respectively. In National Coordinated Bt. Trial, MNH-886(Bt.) produced 3347 kg ha⁻¹ seed cotton at CCRI, Multan; the hot spot of CLCuVD, in comparison to IR-3701 which gave 2556 kg ha⁻¹. It possesses higher lint percentage (41.01%), along with the most desirable fibre traits (staple length 28.210mm, micronaire value 4.95 µg inch⁻¹ and fibre strength 99.5 tpsi, and uniformity ratio 82.0%). The quantification of toxicity level of crystal protein was found positive for Cry1Ab/Ac protein with toxicity level 2.76µg g⁻¹ and Mon 531 event was confirmed. Having tremendous yield potential, good fibre traits, and great tolerance to CLCuVD we can recommended this variety for cultivation in CLCuVD hotspots of Pakistan.

Keywords : cotton, cultivar, cotton leaf curl virus, CLCuVD hit districts

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