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Resistance to Cotton Leaf Curl Virus (CLCuV) in a Mutant Cotton Line

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Pages: 175-181

Plant Pathology and Nematology

Full Text PDF (97K)

Cotton leaf curl virus (CLCuV) is one of the major biotic constraints of cotton production in Pakistan. Cultivation of resistant cotton genotypes is the most effective method of reducing yield losses due to CLCuV. PIM-76-8/5 is a new CLCuV-resistant line developed through the use of induced mutation. It exhibited a highly resistant response when artificially inoculated by grafting and produced yields significantly greater than the susceptible cultivar S-12. PIM-76-8/5 was field immune when naturally infected by the whitefly (Bemisia tabaci Genn.), the vector of CLCuV. At a few locations where a new strain of CLCuV has emerged and all of the previously developed resistant lines are now highly susceptible, PIM-76-8/5 gave a moderate to highly susceptible response. At locations with high levels of whitefly infestation or with artificial inoculation through grafting in this study, PIM-76-8/5 exhibited a high level of resistance against the old strain of CLCuV.

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