

Resistance Breeding: Floral Malformation of Mango

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Abstract—Mango (*Mangifera indica* L) is one of the most popular tropical fruits in the world and malformation is a major constrain in mango production worldwide causing heavy economic losses depending on cultivar type and susceptibility. It is an intricate disorder first reported by Watt in 1891 from Darbhanga, Bihar, India. Now it is widely reported in mango-growing countries India, Egypt, South Africa, Brazil, Sudan, USA, Israel, Mexico, Bangladesh and Pakistan. The present investigation was carried at Horticulture Research Center (HRC), Pattarchatta of Udham Singh Nagar on twenty mango cultivars during 2013 and 2014 to evaluate the disease incidence and per cent disease index (PDI) for developing the resistant cultivars in mango breeding programmes. Floral malformation of mango caused by *Fusarium moniliforme* fsp *subglutinans* has become crux amongst biotic diseases of mango. The 30 randomly selected panicles from 20 cultivars with three replications during 2013 and 2014 were selected. The disease incidence was more in the commercially successful cultivars like Amrapali (15.50%), Dashehari (11.55%) and was minimum in local variety Neelum (2.63%) in both the years. The maximum PDI was found in cultivars Amrapali (2.75%), while minimum PDI was observed in cultivar Neelum (1.63%) in both the years. During both the years the commercially grown cultivars like Amrapali and Dashehari were found to be more susceptible and the local cultivar Neelum was least susceptible against the disease, indicating the role of local cultivars in incorporating floral malformation resistance in future mango breeding programmes.

Keywords: Mango, malformation, cultivars, resistant, susceptible, PDI.