

Corm rot: A Menace to Saffron Production

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Abstract—Saffron (*Crocus sativus* L.) is considered as one of the most expensive spices because of its therapeutic and aromatic value. State of Jammu and Kashmir of India enjoys the monopoly of growing saffron crop, though having only 7 per cent of the total global area of saffron cultivation. Out of various biotic stresses, corm rot complex caused by various plant pathogens viz., soil-borne pathogens such as *Fusarium oxysporum* f. sp. *gladioli*, *F. oxysporum*, *F. solani*, *F. equiseti*, *F. moniliforme* var. *intermedium*, *Rhizoctonia solani*, *Rhizoctonia crocorum*, *Phoma crocophila*, *Macrophomina phaseolina*, *Mucor* sp., *Penicillium* sp. and *Sclerotium rolfsii* associated with the disease reported to be responsible for significant reduction in the production and productivity of the crop around the world. The disease is not only responsible for reduction in the yield but it also affects the quality and quantity of daughter corms. Intensive cultivation, poor agronomic practices, mono-culture, drought, lack of resistance sources along with lack of breeding approaches, longer planting cycle and continual use of diseased propagating material in saffron growing areas has led to increased incidence and severity of corm rot disease, which subsequently reduces the production of healthy daughter corms, thus limiting the availability of propagating material for the cultivation of saffron in next season.. Utilisation of race specific and non-specific durable resistance and seedling resistance via gene pyramiding, based on the current virulence scenario of the pathogen, climatic variability and epidemiology of the pathogen should provide sustainable base for management of corm rot of saffron. Corm rot can, however, be successfully managed by the joint collaboration, sharing of information and capacity building.