

Prevalence of Pathotypes of Red Rot Pathogen

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Abstract—*Sugarcane is affected by several diseases, the most important being red rot caused by *Collectotrichum falcatum* Went is the most serious and destructive disease, responsible for considerable yield loss and also for the elimination of many commercial varieties. At present, in Bihar most of the varieties under cultivation do not possess the level of resistance to red rot. Variability in *Collectotrichum falcatum* has been the main cause of deterioration of several sugarcane varieties considered resistant at the time of their release. The reason may be either the gradual buildup of the pathogen in a specific area or the presence of different pathotypes. Breakdown of red rot resistance in popular varieties was primarily due to the appearance of new pathotypes in the red rot pathogen. Knowledge of pathogenic variability is essential for a systematic varietal resistance testing. Therefore, the present study was carried out to identify the prevalence of different pathotypes of red rot pathogen in Bihar. In pathogenic variability study, a differential interaction between the varieties and isolates of red rot pathogen was observed. Fourteen sugarcane differentials were inoculated with two pathotypes CF 07 and CF 08 and ten isolates collected from different cane growing areas of Bihar. On the basis of four years (2012-15) observations, differentials Bo 91, Baragua and SES 594 showed resistant reaction, Co 1148, Co 997, CoJ 64, CoC 671 and Khakai produced susceptible reaction, while, differentials Co 419, CoS 767, Co 7717, CoS 8436, Co 62399 and Co 675 showed differential reaction against all the test isolates.*

Keywords: *Sugarcane, Red rot, Pathogen, Variability and Differentials.*