

Status of Epidemics and Management of *Fusarium* Wilt Tropical Race 4 in the Philippines

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Abstract

Epidemics caused by *Fusarium oxysporum* f. sp. *cubense* Tropical Race 4 (Foc TR4) in Cavendish plantations in the Philippines is a serious threat to the country's banana industry. The Philippines is the major banana exporter in Asia, with its peak recorded export value of US\$ 1.2 billion in 2014. A general disease management approach involves disease scouting and eradication, as well as prevention of spread measures such as quarantine and disinfestations. Such approach, however, is not enough to contain epidemics, especially for small growers, resulting to severe epidemics and abandoned farms. Some shifted to other low-income crops. Resistant Cavendish has been a long-sought strategy to manage Foc TR4. In partnership with government institutions and banana growers, Bioversity International conducted a series of field evaluations of resistant Cavendish somaclones developed and shared by the Taiwan Banana Research Institute. GCTCV 218 and GCTCV 219 proved the most suitable options. In commercial trials, they remained resistant even after 4 ratoons. GCTV 218 (moderate resistance) has bigger bunches and good fruit quality and is thus preferred by growers. GCTCV 219 (high resistance) is recommended for the rehabilitation of severely affected farms, especially for small growers. GCTCV 219 has a sweet fruit, but its agronomic characteristics are inferior to GCTCV 218. GCTCV 218 is now widely commercially adopted. Using the GCTCV resistant variety is a breakthrough in mitigating the threat of TR4, allaying the fatalistic predictions of Western scientists that the traded Cavendish will soon disappear in the market because of Foc TR4. In the absence of varieties from other breeding programs, the GCTCVs seem to be the best options farmers could have to save their livelihoods.