

Panama wilt of banana orchards in Sindh Province, Pakistan

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Extensive surveys of various locations of Sindh comprising Thatta, Hyderabad, Tando AallahYar, Matiari and Nawabshah (Benazirabad) were conducted during year 2013-2014. A total of 26 banana orchards, showing typical symptoms of banana wilt as well healthy ones were surveyed. The roots and soil samples from the banana rhizosphere were collected for the isolation and identification of suspected pathogen, *Fusarium oxysporum cubense* and the burrowing nematode (*Rhadopholus similis*) that are causing the Panama wilt in banana plantations. The soil and roots samples were processed by sieving and decanting techniques (Barker, 1985). Based on morphological characteristics, the phytonematodes were identified up to generic level (Siddiqi, 2000). Soil analysis showed significant difference in the nematode population dynamics and the wilt pathogen in all the surveyed banana growing areas. The fungal pathogen, *Fusarium oxysporum cubense* were isolated from 70.0% surveyed locations, while the banana nematode (*Radopholous similis*) was isolated from 57.0% locations. Previously it was reported that a banana crop of Sindh already been devastated by a widespread epidemic of banana bunchy top virus (Soomro *et al.*, 1992).

The panama wilt caused by soil borne fungus *Fusarium oxysporum cubense* and the banana nematode *Rodopholus similis* are the reasons for the emerging damaging situation in banana orchards in Sindh Province. The management of these limiting factors can be addressed by cultural practices like use of different fertilizers during inflorescence stages for fruit bearing and increased production on banana fruits. The heavy irrigation and application of lime will minimize the fungal spread and nematode population in orchards.

References

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