

Management of Mango Sudden Death (MSD)



Mango Sudden Death



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Challenge

- During 1995 mango growers of Muzaffargarh first time reported sudden death disease in mango trees
- A subsequent survey by PARC confirmed the disease incidence (20-25%) in mango orchards of Punjab and Sindh
- However, the main challenge was to correctly identify the disease syndrome and develop technology for its management

Interventions

- PARC scientists examined the plant and soil samples from infected farms and confirmed the disease as MSD
- In **2004**, PARC initiated a project “Etiology and Management of Sudden Death Phenomenon in Mango”
- Consequently, the pathogens (*Ceratocystis fimbriata*, *Lasiodiplodia theobromae*, *Nattrasia mangifera*, *Fusarium oxisporium*) were identified to be the cause of MSD.
- During **2005-2010**, PARC worked in collaboration with the provincial research organizations for the development of technology to control MSD
- Different methods of fungicidal application were experimented including foliar application, soil drenching as well as injecting the fungicide directly into vascular bundles
- The use of disease management is in process at largest scale in the selected village clusters under ACIAR-ASLP project

Outcomes

- The injection method proved to be the best for managing the MSDS if the infection is **not more than 25%**
- The technology package includes:
 - Drilling 3-4 holes with the help of manual or motorized drill at an angle of 45°;
 - Inserting a piece of sponge in the hole;
 - Injecting fungicides (Thiophenate methyl) as per recommended dose (5 gm/20 ml water) with the help of 50 cc syringe;
 - Closing the hole with plaster of paris; and
 - Repeating this process in the same hole after recommended interval (15 days) till the symptoms vanish.
- The technology package was demonstrated at 5 orchards in Punjab and 11 in Sindh
- The technology has been successfully extended to 200 mango growers

Way Forward

- Experimenting on more sophisticated form of injecting the new chemistry fungicides through **macro infusion injection**.
- Capacity building of the growers to extend this management technique to the number of growers.
- Publicity through media