NEMATODES AND BANANA (Musa Spp)

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Banana constraints

- Weevils
- Fusarium wilt
- Bacterial wilt
- Nematodes
Nematodes

- *Radopholus similis*
- About 50% yield loss
Nematode damage on *Musa*

- Reduced water and nutrient uptake
- Reduced tolerance to other stresses
- Reduced/Poor yield

**Most banana damaging nematode species**

- Burrowing nematode: *Radopholus similis*
- Root-lesion nematodes: *Pratylenchus coffeae & goodeyi*
- Spiral nematodes: *Helicotylenchus Multicinctus & dihystera*
- Sedentary nematodes: *Meloidogyne* spp (*incognita, javanica, arenaria, hapla*)

**NB:** More than 150 other nematode species have been occasionally found on banana roots and some causing damage
Above ground symptoms

- Plant toppling
- Stunted growth
- Chlorosis
- Lengthening of crop cycle
- Reduction in size and number of leaves
- Reduced bunch weight
- Reduction in production life of plantation
Plant toppling

Root necrosis
Toppling vs snapping
Stunted growth & chlorosis
Reduced bunch weight
Below ground symptoms

Root and corm damage

- Lesions
- Necrosis
- Cracking
- Galling
- Root termination
Corm damage

Mild corm damage

Severe corm damage
Root lesions
Root lesion
Root necrosis
Root cracking
Root galling
Root termination
Nematode control measures

• Clean planting material
• Chemical control
• Resistant cultivars
• Botanicals

Hot water treatment
Nematode control (cont’)

Soil treatment
Botanicals

Tithonia diversifolia

Crassocephalum spp.

Tagetes spp.

Neem
Conclusion

• Root damage can be seen as small dark purplish-red lesions on the outer parts or roots.

• Lesions may also enlarge into purplish-black necrotic areas which extend throughout cortex but not the stele.