

Management of phytophthora root rot disease of avocado

Cultural practices:

1. Start off seedlings should be clean and free of the disease / pathogen
2. Scout 2-3 times a week for initial symptoms and timely control
3. Practice field hygiene
4. Avoid planting in wet areas or low lying areas
5. Ensure the area has good drainage
6. Plant avocados on raised mounds
7. Do not over irrigate /avoid waterlogged conditions
8. Use high soil organic matter (well decomposed manure). This slows down disease progression
9. Increase calcium, magnesium and potassium. This creates unfavourable soil conditions for the pathogen and reduces infections
10. Burn infected plant residues to reduce the disease inoculum in the field
11. Weed the orchard or around plants since some weeds serve as alternative hosts

Chemical management

1. Spray the foliage of affected plants and also drench soils around the root region with metalaxyl based fungicides e.g Ridomil Gold MZ 68WG, Agrixyl 407 SL or Envy 72 WP
2. Inject Potassium phosphonate to the trunks of affected trees and also apply it to the foliage after every 1-2 years



Inducing resistance of trees through injecting potassium phosphonate to the trunks

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INTEGRATED MANAGEMENT OF PHYTOPHTHORA ROOT ROT DISEASE OF AVOCADO



Introduction

Phytophthora root rot is the most serious disease of avocado. It is caused by a water mold pathogen called *Phytophthora cinnamomi*. It affects avocado at all stages from seedlings to mature trees. The pathogen infects through roots and survives in plant residues and soil for a long time as resting spores. It has a wide host range including macadamia. Waterlogged soils favor the disease. The disease kills avocado trees gradually leading to losses of up to 100%

Phytophthora root rot disease of avocado (*Phytophthora cinnamomi*)



Yellowing and leaf fall of an avocado plant infected by Phytophthora root rot disease

(Source: Ruth Amata KALRO)



Defoliated avocado plant affected by phytophthora root rot disease (Source: Ruth Amata KALRO)



Dieback of stems of avocado plants affected by phytophthora root rot disease (Source: Ruth Amata KALRO)



Gradual decline of avocado trees in the orchard leading to 100% loss

(Source: Ruth Amata KALRO)

Symptoms of phytophthora root rot disease of avocado

- Yellowing of leaves
- Dieback of stems starting from the top of the plant backwards
- Death of young tender roots progressing to older roots
- Drying and death of entire avocado tree