

### c. Cultural method

- The land areas where the root rot incidence is suspected should be deep ploughed and exposed to the hot sun rays during summer to kill the pathogens in the soil.
- Raise the saplings in the disease free areas to check the spread of disease from nursery to healthy field.
- Uproot and burn the completely dried plants.
- Apply compost/manure sufficiently to increase soil organic carbon.
- Apply soil amendments like neem oil cakes @ 800 kg/acre/year in two split doses.

### d. Physical method

- **Soil solarization:** It is a practice used to manage diseases, weeds, nematodes and insects in soil. The soil surface is covered with plastic mulching sheets, which allows sunlight to pass through and heat the soil.



**Steps followed:** ▶ Plough the field at 30 cm deep ▶ Irrigate ▶ Cover the soil surface with clear plastic of 0.04/0.06 mm ▶ Seal all sides by covering the edges of the plastic with soil ▶ Keep the plastic in place for 10-15 days.

### e. Host Plant Resistance

- Among the presently cultivating mulberry varieties, G4 is moderately resistant to root rot disease.

### Rot-fix manufacturers

- **Kaveri agro products**, Plot No. 12, Metagalli industrial area, Mysuru, Pin: 570016, Karnataka, Contact No.: 09482706193
- **Kamat Chlorotech [Off.]**: #3, 3<sup>rd</sup> cross, P. S. Lane, Cottonpet, Bengaluru-560053, Contact No. 09886255293, 080-41514958, Email: blr.kamatchloro@gmail.com.

[Works]: #256, 257, 267 & 268, 3<sup>rd</sup> Phase, KIADB Industrial Area, Malur, Kolar Dist., Pin: 563160.

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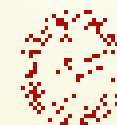
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# Management of Root Rot Disease in Mulberry



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Root rot is a major constraint in mulberry cultivation due to its epidemic nature and potential to kill the plants completely. It is observed that root rot disease is more severe during May and June months, as it is favoured by intermittent pre-monsoon showers and long dry spell. It is also observed that many seri-farmers enquire about the disease management practices during May and June months. Hence it is recommended to take precautionary measures to manage the root rot disease in mulberry.

### Symptoms

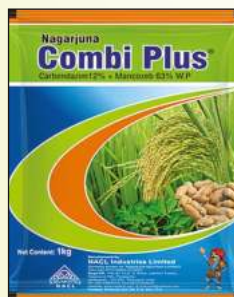
- The initial symptoms of root rot disease are yellowing and withering of leaves, followed by sudden wilting and drooping of branches.
- The affected plants can be pulled out easily due to rotting of roots and the affected roots are brown and later turn to black colour resembling charcoal. The tissues become weak and break off easily.



## Integrated Disease Management Practices

### a. Chemical method

- If symptoms are noticed, prune the plants at 30 cm height, prepare basin of 20-30 cm surrounding the plants and apply 0.5% (5 g/litre of water) **Rot-fix** solution by drenching all along the stems. Cover the soil immediately and press firmly.
- The same should be done to the healthy plants surrounding the infected plant.
- Drench with 0.5% **Rot-fix** solution in the previously infected areas/plants.
- If **Rot-fix** is not available, apply 0.2% solution (2 g/litre of water) of Carbendazim 12% + Mancozeb 63%. [Available as Saaf®/ Companion®/ Combi Plus®/ Kaguya® in the pesticide shops]



- Follow the same application method explained to **Rot-fix**. Safe period is 10 days after application.
- **For new plantation:** Dip the mulberry sapling roots in 0.1% Bavistin (Carbendazim 50% WP) solution or 0.4% (4 g/litre of water) **Rot-fix** solution for 30 min. before planting.
- Alternatively, the pits can be dusted with 10 g of Diethane M-45 (Mancozeb 75% WP) before planting.

### b. Biological method

- Multiplication of *Trichoderma harzianum* + FYM: Mix one kg of *T. harzianum* with 50 kg of Farm Yard Manure (FYM) - sprinkle water to maintain satisfactory moisture.
- Make a heap under shade and cover it with gunny cloth or plant leaves. After 4 days, mix the heap properly and sprinkle water if necessary.
- After 8 days, with the multiplication of *T. harzianum*, the mixture is ready for application in 1:50 ratio which is sufficient for 100 plants (500 g/plant).

