

YELLOW LEAF DISEASE IN ARECANUT



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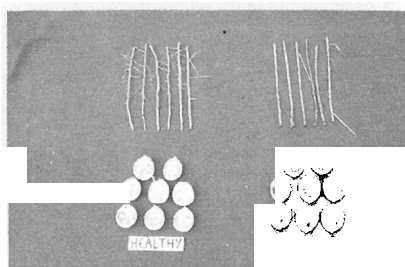
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YELLOW LEAF DISEASE IN ARECANUT

"Yellow Leaf Disease (YLD)" is a major disease of arecanut. It has spread to all the areca growing districts of Kerala, Dakshina Kannada and Chickmagalur districts of Karnataka and a few areas in Maharashtra and Tamil Nadu. The disease occurs in all types of soil and spreads rapidly. Reduction in yield upto 50% within a period of three years after the onset of the disease has been observed.

Symptoms

Yellowing of the leaves is the main symptom (Cover Photo). Yellowing starts from the tip of leaves in the mid whorl which spreads gradually extending from the margin to the middle of the lamina. Portions near the mid rib remain green. In advanced stages, leaves become small leading to reduction in crown size. As the disease advances, yellowing spreads to all the leaves completely and they dry and fall off. In severely affected palms, the nuts become small in size and they shed before reaching maturity. Further, the kernel of affected nuts becomes soft and show blackish discoloration and assumes a spongy texture. In the disease affected areca palms, there is reduction in the rate of production of new roots and the existing roots show decay. The symptoms of the disease are best manifested during the months of October to January. With the onset of summer, the symptoms tend to get masked.



YLD affected nuts and roots

Cause of the disease

The disease is caused by phytoplasma. The plant hopper, *Proutista moesta*, helps in the transmission of the disease.

Disease management

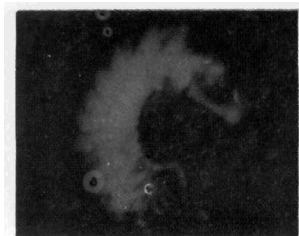
Effective control measures are yet to be evolved against this disease. However through proper management, the yield level of affected gardens can be sustained for a period of five to six years for which the following practices are recommended:

- ❑ Regular and balanced fertilizer application: apply 200g of urea, 200g Mussorie phos and 230 g muriate of potash per palm per year in two splits.
- ❑ In addition to the above, apply 800g of Mussorie phos in the affected garden.
- ❑ Apply organic manures @ 12kg each of compost and green leaves per palm per year.
- ❑ Provide irrigation during summer months.
- ❑ Avoid water stagnation in the garden by providing drainage facilities.
- ❑ Grow cover crops in the garden.
- ❑ When only a few palms are affected in a garden, remove them to prevent further spread of the disease.
- ❑ Adopt need based plant protection measures against other pests and diseases.

Yellowing of areca leaves

Yellowing of areca leaves may occur due to reasons other than YLD which can be ameliorated with appropriate management measures as indicated below:

1. Deficiency of nutrients such as nitrogen and magnesium causes yellowing of leaves. During heavy rains, nitrogen and magnesium are lost through leaching from the soil. Application of 200 g urea and 200 g magnesium sulphate can correct the deficiency of nitrogen and magnesium.
2. In peak summer, due to excess radiation, areca leaves may exhibit yellowing symptoms. Shade regulation in the areca garden can prevent such problems in younger palms.
3. Root grub infestation also results in yellowing of areca leaves. Root grubs are usually seen attacking areca palms grown in sandy soils and also in areas prone to water-logging. Arecanut leaves



Root grub



Yellowing symptom due to root grub infestation

become pale and yellow and droop down. **Tender leaves lose their colour first.** Application of Phorate 10G @ 15 g per palm is recommended against root grubs. Insecticide application should be done at the beginning of the rainy season as well as at the end of rainy days. Collection and destruction of the adult beetles as they emerge from the basins of the palms during May-June at dusk (6.30 pm to 7.30 pm) will also reduce the pest population build up.

4. Waterlogging: Yellowing of areca leaves is severe when there is waterlogging. This can be improved by drainage.
5. Mite infestation: During summer, some species of mites suck sap from the lower surface of areca leaves. This results in the yellowing of leaves. Spraying of Dicofol (Kelthane) @ 2 ml per litre of water can control these mites.
6. Sometimes, small streaks are observed on arecanut roots which indicate the attack of nematodes. These nematodes, living inside the roots, draw nutrients, which result in yellowing of leaves. Application of Phorate 10G @ 15 g per palm can control nematodes.



Areca roots showing symptoms of nematode infestation

Yellowing of arecanut leaves caused by reasons other than phytoplasma can be controlled by proper remedial measures. Hence it is important that the exact reason for yellowing is identified promptly so that appropriate corrective measures could be taken up.

For further details, please contact The Head,
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