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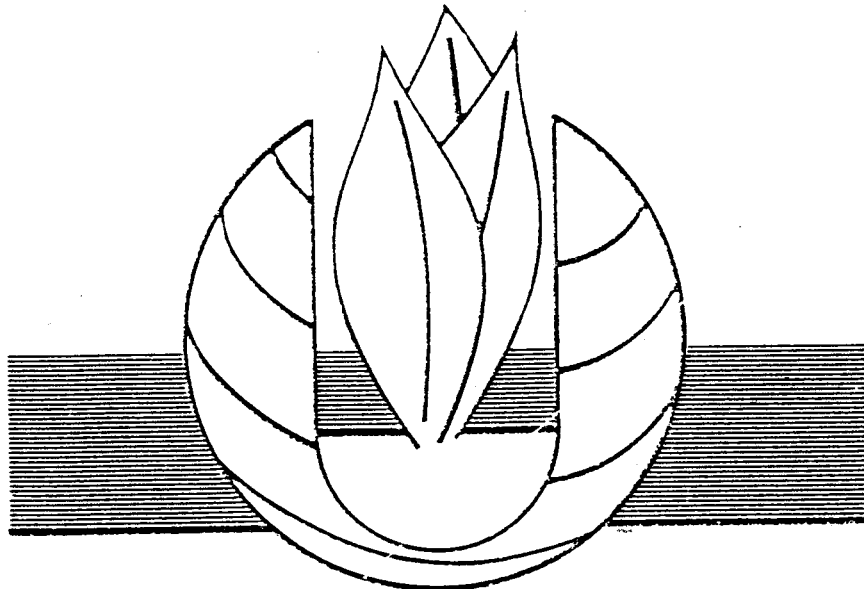


INTERNATIONAL BOARD FOR
PLANT GENETIC RESOURCES

FAO/IBPGR TECHNICAL GUIDELINES

FOR THE

SAFE MOVEMENT OF COCONUT GERmplasm



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3. Root wilt or Kerala wilt

Cause

A non-cultivable mollicute, formerly referred to as mycoplasma-like organism (MLO).

Symptoms

Symptoms are only obvious in palms that are more than 30 months old. The most consistent and diagnostic symptom is the characteristic bending of the leaflets called 'flaccidity'. In older palms, yellowing and marginal necrosis of the older leaves also develops. Roots of diseased palms show degenerated phloem, disorganized tracheal elements and tylosis in the metaxylem. They eventually rot. Inflorescence necrosis develops in some cases. The disease is not lethal, but significantly reduces production.

Natural host range

Only known from *Cocos nucifera* L.

Geographical distribution

India (parts of Kerala and Tamil Nadu States).

Transmission

The lace bug *Stephanitis typica* (Distant) is a vector (Mathen *et al.*, 1990). *Proutista moesta* (Westwood) is a putative vector (Rajan & Mathen 1985; Anonymous, 1989). There is no evidence of seed transmission. Symptoms develop 9 to 24 months after inoculation.

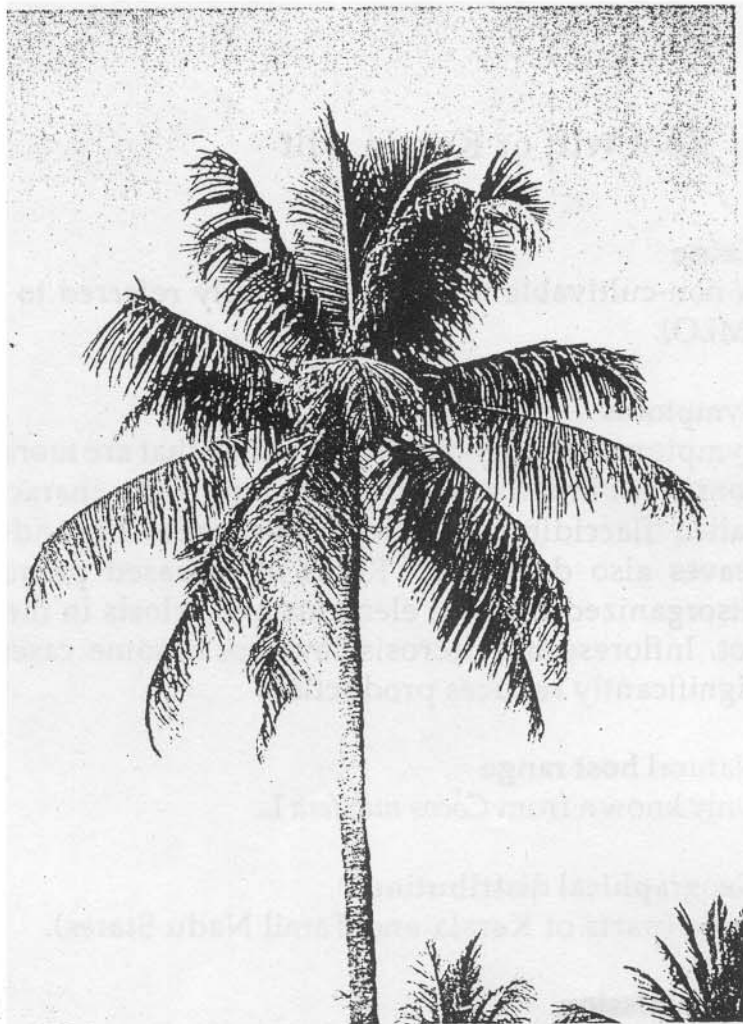


Fig. 12. Palm tree affected by root wilt. (Dr. J.J. Solomon, Central Plantation Crops Research Institute, Krishnapuram, Kerala)

Therapy

No efficient method is available. Tetracycline antibiotics give temporary remission of symptoms, but do not eliminate the non-cultivable mollicute from the plants.

Indexing

No reliable indexing method is available. It may be possible to detect non-cultivable mollicutes in suspect material by electron microscopy, fluorescence staining (DAPI), Dienes' staining or serological tests, but these techniques are not reliable enough for indexing.

Quarantine measures

As for lethal yellowing.

References

- Anonymous 1989. Annual Report for 1988. Central Plantation Crops Research Institute, Kasaragod.
- Mathen, K., Rajan, P., Radharkrishnan Nair, C.P., Sasikala, M., Gunasekharan, M., Govindankutty, M.P. & Solomon, J.J. 1990. Transmission of root (wilt) disease to coconut seedlings through *Stephanitis typica* (Distant) (Heteroptera: Tingidae). *Trop. Agric.* 67(1):69-73.
- Rajan, P. & Mathen, K. 1985. *Proutista moesta* (Westwood) and other additions to the insect fauna on coconut palm. *J. Plantation Crops* 13(2):135-136.