

RP-57

ON THE OCCURRENCE OF TYLOSES IN THE
YELLOW LEAF DISEASE AFFECTED ARECA PALMS

R. B. NAIR and M. ARAVINDAKSHAN

Reprinted from the *Agricultural Research Journal of Kerala*, Vol. 8, No. 1

March 1970

Page 58

ON THE OCCURRENCE OF TYLOSES IN THE YELLOW LEAF DISEASE AFFECTED ARECA PALMS

Tyloses were noted within the xylem vessels of the midribs of the leaflets of areca palms affected by the yellow leaf disease (Plate 1). They were concentrated more at the region about 10 cm below the tip of the leaflets. They could not be located within the leaves of healthy plants (Plate 1, Fig. 1).

Tyloses are known to exist in various types of plants and they are balloon-like enlargements of parts of cell walls projecting into adjacent cell lumina through pit cavities (Eames and Mac Daniels 1947). In the present case the tyloses appeared as spherical or sub-spherical outgrowths of varying sizes (3μ to 64μ in diameter) projecting into the lumen of the xylem vessels. Upto 9 such outgrowths could be seen in cross sections. Complete blocking of the vessel resulted in some cases due to the close packing of the tyloses. Upto 35 per cent of the vessels were found to be thus blocked. The tyloses appeared to be filled up with a liquid substance.

Only the old leaves of the disease infected palms showed the presence of the tyloses and it appeared that their presence was correlated with the incidence of the disease.

Reference

- Eames, A. J. and L. H. Mac Daniels. 1947. *An Introduction to Plant Anatomy*. Sec. Ed. Mc. Graw Hill Publication.

Agricultural College and Research
Institute, Vellayani, Kerala State,

R. B. NAIR
M. ARAVINDAKSHAN

(Accepted : 11-11-1970)

TYLOSES IN ARECA PALMS

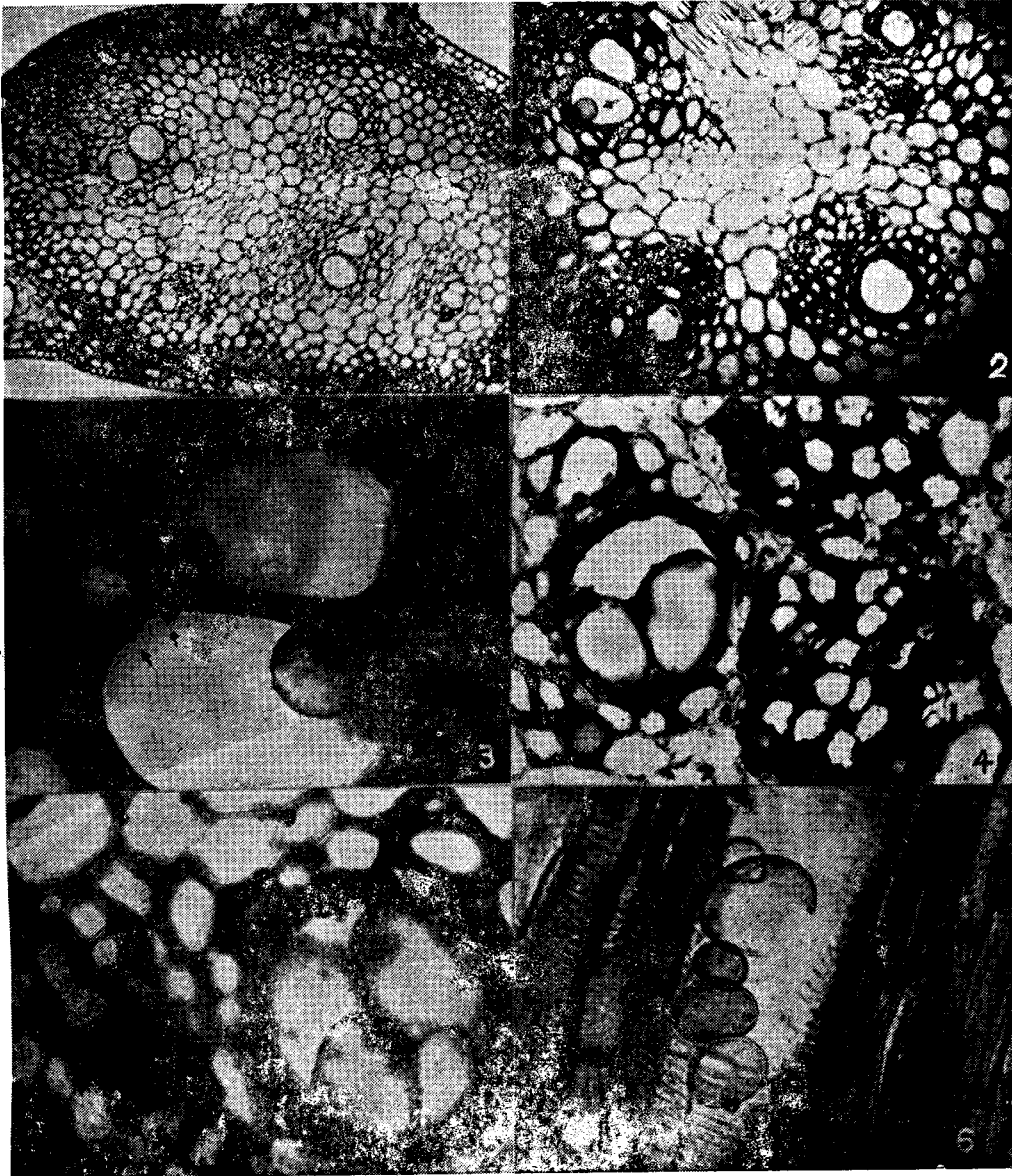


Fig. 1—6. Sections of midribs of areca palm leaflets. 1. Cross section in healthy leaf. 2-5 Cross section in diseased leaflets showing tyloses in different stages of development. 6. Longitudinal section in diseased leaflets.