

**EFFECT OF THE YELLOW LEAF DISEASE ON THE PLANT  
CHARACTERS OF ARECA CATECHU L.**

The yellow leaf disease has come to stay as the major factor limiting the production of arecanut in Kerala. The disease is prevalent throughout the State and is fast spreading too. The symptoms of the disease include yellowing of the leaves, stunted growth, reduction in yield, nut fall and darkening of nut (kernel) and root decay. The plants may ultimately die due to the disease (Plate 1, Figs. 1—6)

**Table I**

Plant characters (mean values) of healthy and yellow leaf  
disease affected areca palms

Plant characters	Healthy	Diseased
Height (m)	11	8.95
Girth at a height of 75 cm (cm)	48	42
Girth at the last exposed node (cm)	42	29
Number of nodes	63	48
Internodal length at a height of 75 cm (cm)	15	12
Internodal length of the last exposed node (cm)	9	6
Number of leaves per palm	10	9
Number of diseased leaves per palm	Nil	6
Length of leaf including leaf-sheath (m)	3-12	2.90
Length of leaf sheath (m)	1	0.90
Breadth of leaf sheath (cm)	58	44
Number of leaflets per leaf	104	78
Length of leaflets (cm)	92	80
Breadth of leaflets (cm)	4	5
Length of spathe (cm)	70	50
Breadth of spathe, maximum (cm)	17	20
Number of bunches per palm	6	3
Number of nuts per palm per year (mature nuts)	415	140
Length of a mature nut (cm)	7.00	5.00
Width of a mature nut (cm)	3.10	2.90
Weight of a mature nut (g)	34.50	22.10

With a view to assess the effect of the disease on the various morphological features of the plant a comparison of these of healthy and diseased palms was made in 50 plants each, 15 years old, growing around the Regional Arecanut Research Station, Palode, Kerala. These plants belonged to the same variety (Palode cultivar) and were grown under identical cultural conditions.

The results of these assessments are given in Table 1.

It will be observed that the disease suppresses the growth and productive capacity of the plants considerably.

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EFFECT OF YELLOW LEAF DISEASE ON ARECA PALM

Plate I

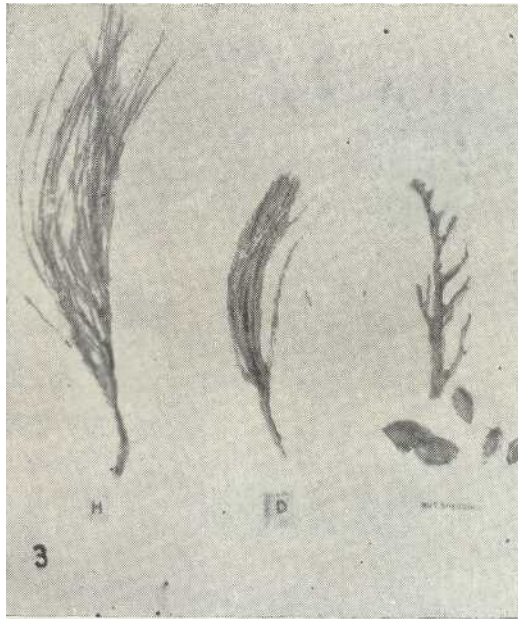
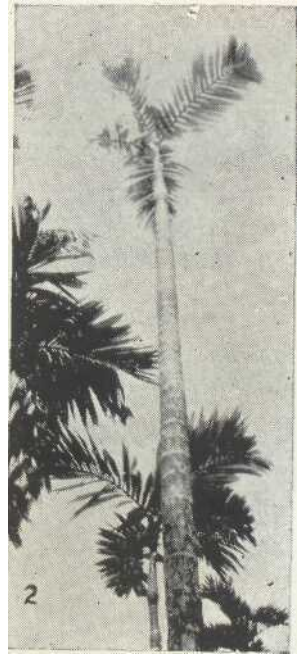
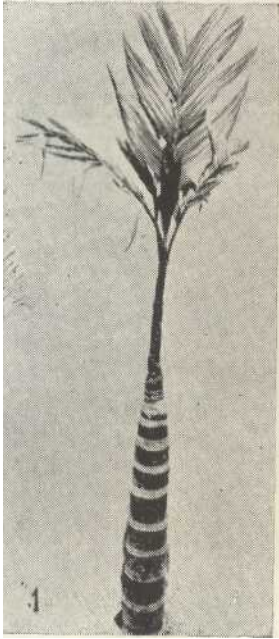


Fig. 1. Young diseased tree.

Fig. 2. Adult diseased tree.

Fig. 3. Healthy (left) and diseased (middle) inflorescence and bunch with fallen nuts (right).

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Plate I (Contd.)

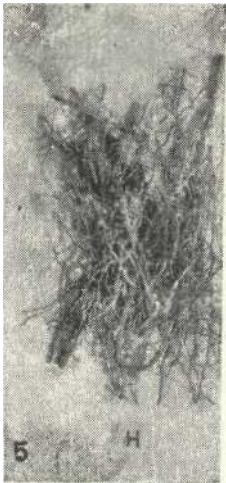
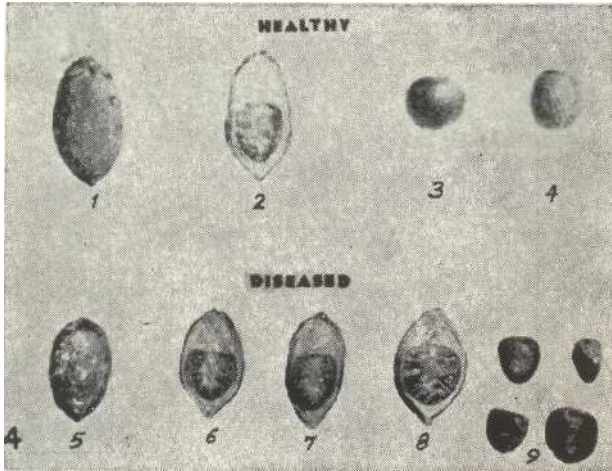


fig. 4. Nuts of healthy (upper row) and diseased (lower row) palms.  
Fig. 5. Roots of healthy palm — Note the numerous side roots.  
Fig. 6. Roots of diseased palm — Note the absence of side roots.