

Arecanut

Fruit Rot of Arecanut

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Symptoms

1. Water soaked lesions appear near the perianth.
2. Later these lesions spread over other parts giving the nut a dark green colour (Figure 1).
3. Infection causes nut shedding.

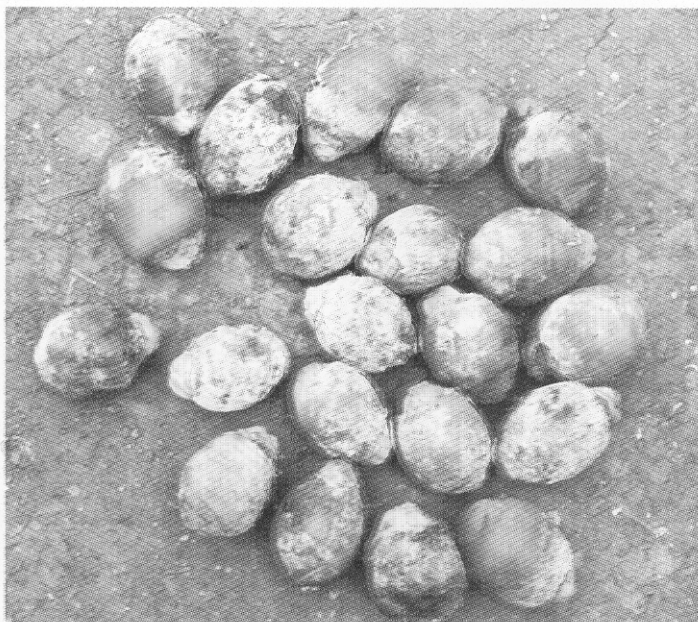


Figure 1

Pathogen

Phytophthora arecae/*P. meadii*.

Management

1. Spraying with 1 per cent Bordeaux mixture immediately after the first monsoon showers and the second round of spray after 40-45 days.
2. Spraying operations are to be undertaken on clear sunny days. Diseased nuts and bunches are to be destroyed to reduce the inoculum.
3. Polythene covering (125-200 gauge 24 x 30 inches) can as well substitute the traditional method of spraying Bordeaux mixture for effective management of kole roga in arecanut.

Bud Rot of Arecanut

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Symptoms

1. The disease was recorded in a severe form in the heavy rainfall tracts of Karnataka.
2. Though the disease generally occurs in monsoon season, the fresh infection during November onwards becomes severe during succeeding months.
3. The crops loss due to this disease is 1 per cent or more.
4. Tender leaf becomes yellow, which later changes to brown (Figure 1).
5. Spindle can be drawn out of the crown with a slight pull in advanced stages.
6. Infection spreads to outer whorl of leaves leading to their yellowing, drooping and shedding (Figure 2).
7. Diseased palm emits an odd smell.



Figure 1



Figure 2

Pathogen

Pytophthora arecae/P. meadii

Management

1. Cut and remove the rotten tissues and burn.
2. Apply Bordeaux paste (10 per cent) cover it with polythene sheet.
3. The disease can be prevented by prophylactic spray with Bordeaux mixture (1 per cent) during pre and post monsoon period.

Management

1. Diseased palms in the early stages may be root fed with 125 ml of 1.5 per cent Calixin at quarterly intervals.
2. The basin of the affected palms may be drenched with 1.5 per cent Calixin at quarterly intervals.
3. Affected palms may be given 2 kg of neem cake/palm.
4. The stem of all diseased palms should be removed along with roots and burnt.
5. Palms in the different stages of the disease should be isolated from healthy palms by digging trenches of 30 cm width and 60 cm depth.
6. The health of the palms may be improved by applying normal dose of NPK fertilizers.
7. Repeated ploughing, water stagnation and closer spacing may be avoided.

Yellow Leaf of Arecanut

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Symptoms

1. Characteristic yellowing of leaves starts from the tip and progress inwards (Figure 1). Vein banding is seen (Figure 2).
2. Yield of the palm decreases; kernel shows discoloration and turn blackish.
3. Root tips become dark and rot.
4. The crown size reduces.



Figure 1

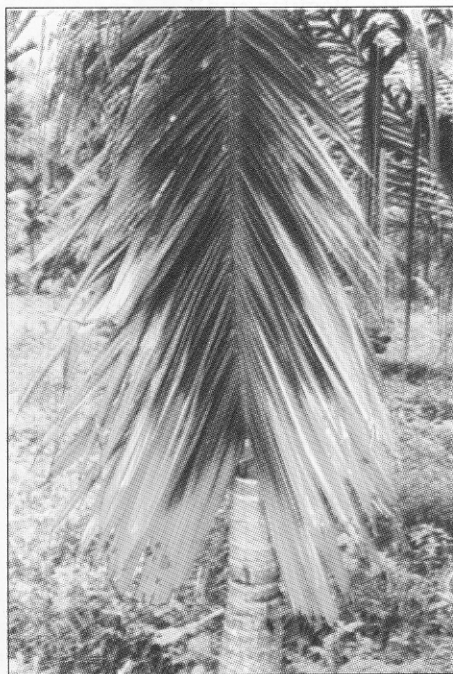


Figure 2

Pathogen

Phytoplasma (Figure 3). Electronmicrograph showing pleomorphic bodies of phytoplasma in the phloem cells.

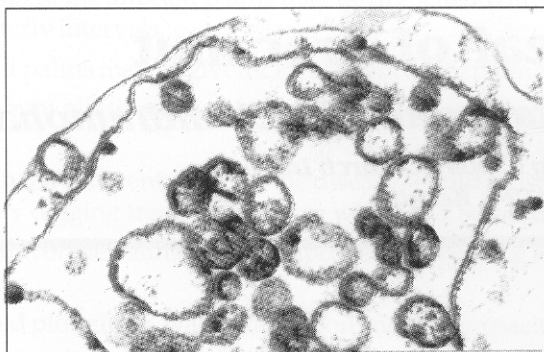


Figure 3

Management

In Heavily Affected Area

The following management practices have been recommended to improve the yield of YLD affected palms:

- 1.. Regular and balanced fertilizer application. Apply 200 g of urea, 200 g mussoorie phos and 200 g of muriate of potash per palm per year in two split doses.
- 2.. In addition to the above, apply 800 g of mussoorie phos per palm.
3. Apply organic manures @ 12 kg each of compost and green leaves per palm per year.
- 4.. Provide irrigation during summer months.
5. Avoid water stagnation by providing drainage facilities.
6. Grow cover crops in the garden.
7. Adopt need based plant protection measures against other pest and diseases.
8. Loss can be reduced to the minimum if the palms could be attended immediately on appearance of symptoms.

When only a few palms are affected in a garden, remove them to delay further spread of the disease within the garden.

In Mildly Affected Areas

The strategy for mildly affected areas is to contain the disease by removing all the diseased palms, continue monitoring the palms and remove as soon as symptoms appear.

Inflorescence Die-back and Button Shedding of Arecanut

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Symptoms

1. Yellowing and drying of the rachis from the tip downwards (Figure 1).
2. Shedding of the female flowers and buttons and complete drying of the inflorescence.



Figure 1

3. The disease affects the female flowers and developing buttons, leading to the reduction in the yield.
4. It is prevalent in the Kerala and Karnataka and is severe during summer months from February to May.

Pathogen

Colletotrichum gloeosporioides.

Management

1. Spraying with Dithane Z 78 @ 4g/litre of water or combination of copper sulphate and aureofungin sol both at 50 ppm. First spraying at the time of opening of female flowers and the second 20-25 days thereafter.
2. Remove and destroy all diseased dried bunches as a phytosanitary measure to reduce the inoculum.