

DISEASES OF CASHEW AND THEIR CONTROL MEASURES

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One of the limiting factors of production in cashew nut is the ravages caused by the attack of pests and diseases. Compared to the number of pests attacking cashew and the damage caused by them, the magnitude of the disease problem is not that much serious. The important diseases of cashew and their control measures are briefly given here. Since inflorescence blight will be dealt elsewhere while discussing pests of cashew, the same has not been mentioned in this paper.

Die back or pink disease (*Corticium salmonicolor*—*Pellicularia Salmonicolor*)

The disease appears during the south west monsoon period. The affected shoots or branches start drying up from tip downwards and hence the name *die back*. The fungus appears as white or pinkish growth on the bark and in course of time penetrates into the deeper tissues causing death of the shoot. In advanced stages, splitting and peeling off of the bark occur. In a tree one branch or many branches will be affected. The leaves of the affected branch turn yellow and fall off giving a barren appearance to a portion of the tree. As a measure of control, the affected branches are to be pruned well below the site of infection and destroyed. The cut surface is to be protected by application of Bordeaux paste. Prophylactic sprays with Bordeaux mixture 1% twice, one in May-June before the onset of south west monsoon and the second in October will be beneficial in reducing disease incidence. It is better to adopt phytosanitary measures lest the affected branches serve as a source inoculum for further spread of the disease. If the affected branches are left unpruned, they will also be the sites of infestation and multiplication of bark beetles etc.

Damping off of seedlings

In nurseries where ill drainage conditions are prevalent, the disease makes its appearance. The seedlings show loss of turgidity followed by withering symptoms. The collar region reveals water soaked girdles around the stem. In some cases the roots decay completely and the plants topple over. The disease has been reported from all cashew growing areas. The fungi reported as causative agents include *Fusarium* sp., *Pythium* sp., *Phytophthora palmivora*, *Cylindrocladium scoparium*, *Sclerotium rolfsii* etc. Providing adequate drainage conditions in the nursery is of

prime importance in the prevention of the disease. Drenching the nursery beds/bags with Bordeaux mixture 1% will reduce the disease incidence.

Gummosis

In certain gardens, the trees are affected by gummosis which is characterised by exudation of a brown liquid from the longitudinal cracks on the stem. Fungi like *Fellicularia salmomicolor*, *Caratocystis* sp. have been isolated from affected tissues. Chopping of the affected tissues and applying Vitavax 0.1% on the affected portion was found to be beneficial in further spread of the disease.

Shoot rot and leaf fall

The disease occurs during the monsoon season. Black linear lesions develop on the stem and gum exudes out from the lesions. The lesions become large in due course of time and the shoots and tender leaves shrivel and rot, followed by defoliation. The fungus causing the disease is *Phytophthora nicotianae* var. *nicotianae*. The disease can be controlled by Bordeaux mixture 1% spray.

Leaf rot

During the monsoon, in certain years, rotting of leaves was found to occur in certain plantations. The affected leaves show black lesions on the lamina and several lesions coalesce to involve the entire leaf area resulting in rotting of leaves. The affected leaves fall off. The causative fungus was found to be *Cylindrocadium quinqueptatum*. Spraying Bordeaux mixture 1% was found to control the disease.

There are many other diseases of minor importance:

Anthraxnose disease.—The disease is caused by a fungus *Collectotrichum gloeosporioides*. The disease is not serious in India. But in Brazil, anthracnose disease is known to cause severe crop loss. The disease affects tender leaves, twigs, inflorescences, nuts and apples. It starts as the reddish brown, shiny lesions followed by resin exudation from the affected tissues. As a result of attack the inflorescence turns black. The disease is severe when rainfall coincides with the flowering season. Phytosanitary measures and spraying with Bordeaux mixture or Dithane M-45 have been recommended to control the disease by different workers.

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Yellow leaf spots.—In many of the plantations in marginal or submarginal lands, this disease is noticed. Leaves with severe blotching are found to fall off prematurely. Research work done at Central Plantation Crops Research Institute (Regional Station) Vittal has shown that spraying with 0.03% ammonium molybdate and liming the trees twice in May-June and October alleviates the symptoms.

Little leaf.—The disease is characterised by smalling of leaves, short internodes giving a rosette appearance, and die-back of shoots. At Vittal foliar appli-

cation of zinc sulfate 0.1% with half the amount of lime was found to correct the disorder.

Leaf spots.—Many types of leaf spot diseases have been noticed. Gray blight (*Pestalotia diechacta*), red leaf spot (*Phyllosticta* sp.), brown leaf spot (*Colletotrichum gloeosporioides*), leaf spots caused by *Phomopsis anacardii* are some of them. Sooty mould caused by *capnodium* sp., powdery mildew caused by *Oidium* sp. are other diseases reported from certain cashew growing tracts. But these are not serious.



GROW MORE !

CASHEW MORE !

CASH MORE !

CASHEW grows well in the red sandy loam soil and sandy soil of coastal areas in India in the States of Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Orissa, West Bengal, and Goa. June-July is the time for planting cashew. Seedlings of 6—8 weeks or air layers of high yielding varieties may be planted in the pits of 50×50×50 cms. deep and 7.5×7.5 mtrs. apart to raise plantations in a scientific way for better returns. BLA 139—1, 273—1, NDR 2—1, K 19—1, 22—1, VL 37—3 and M 26—1 are some of the known varieties recommended for planting. The seeds and technical advice can be had from the Cashew Research Stations at Anakkayam in Kerala, Vridhachalam in Tamil Nadu, Bapatla in Andhra Pradesh, Vittal in Karnataka, Vengurla in Maharashtra and Bhubaneswar in Orissa and also by addressing the Project Co-ordinator (Cashew), Central Plantation Crops Research Institute, Kasaragod, Kerala.