



## Occurrence of leaf blight – a new concern to coconut plantations in Andhra Pradesh

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Coconut (*Cocos nucifera* Linn.) is an important plantation crop in India. It is cultivated for oil and raw materials used in the coir industry. Coconut farming and allied activities provide livelihood security to millions of people in India. The every part of a coconut tree has its own use or applications. It is generally called “Tree of Heaven”, “Tree of Abundance”, “Tree of Life” and “kalpavriksha”. Andhra Pradesh is one of the most important coconut growing states in India.

In the present scenario of climatic change this valuable palm is devastated by several fungal, bacterial, viral, viroid and phytoplasmal diseases that not only deteriorate the quality of nuts but also reduced the vigour and yield of palms. A wide range of fungi attack different parts of coconut namely, crown, stem and root. Among the 173 fungal species reported on coconut, only a few cause serious disease problems and provide challenges for management and are difficult to control effectively and the major devastating diseases

prevalent on coconut in Andhra Pradesh are Basal stem end rot caused by *Ganoderma lucidum*, Stem bleeding disease caused by *Thievolepsis paradoxa*, bud rot caused by *Phytophthora palmivora*, Grey Leaf Spot caused by *Pestalotiopsis palmarum* and lately Leaf blight caused by *Lasiodiplodia theobromae*.

Among the various fungal diseases affecting coconut palm, *L. theobromae* (Botryosphaeriaceae: Botryosphaeriales: Dothideomycetes: Ascomycota) is cosmopolitan in distribution; however, this species is more commonly found in tropical and subtropical regions. This fungus is unique and destructive to crops because it can live endophytically in asymptomatic plant material and avoid detection by quarantine. Moreover, *Lasiodiplodia* species can ramify profusely when the host is under stress, causing significant yield losses. The probable mode of entry of this disease into Andhra Pradesh might be due to transport of nursery seedlings already infected with leaf blight from other parts of the country.

S. No.	Name of the Village	Mandal/District	GPS coordinates	Percent disease incidence (PDI)
1	Jangareddy gudem	Jangareddygudem/West Godavari	Latitude 17.12, Longitude 81.29	25.8
2	Adurru	Mamidikuduru/East Godavari	Latitude 17.15, Longitude 81.74	25.5
3	Chakalirevupalem	Ravutalapadu/East Godavari	Latitude 17.00, Longitude 82.26	15.6
4	Antervedipalem	Sakhenetipalli mandal/East Godavari	Latitude 16.40, Longitude 81.77	10.2
5	Kothalanka	Mummidivaram/ East Godavari	Latitude 16.63, Longitude 82.13	4.2
6	HRS, Ambajipeta farm	Ambajipeta/East Godavari	Latitude 16.60, Longitude 81.95	0.5
7	Dwarapudi	Mandapeta/East Godavari	Latitude 16.95 Longitude 81.93	1.0
8	Mukkamala	Ambajipeta / East Godavari	Latitude 16.64 Longitude 81.96	3.0
9	Pulletikurru	Ambajipeta / East Godavari	Latitude 16.63 Longitude 81.94	2.5
10	Rajupalem	Mammadivaram/East Godavari	Latitude 16.66 Longitude 82.10	1.5

## Symptoms of leaf blight

- The pathogen causing severe damage in adult palms (above 30 years old) and mild damage in young palms.

- Heavily infected coconut palms exhibited delayed flowering when compared to healthy palms and the incidence is severe in older/matured fronds and the younger fronds were mostly free from the disease.

- The affected leaflets showed minute yellow dots initially and start drying from the tip towards middle rachis. Drying spread to entire leaf let and shows a charred or burnt appearance from distance.

- In the fronds, irregular necrotic spots with dark brown margins appeared on leaf lets of older fronds and turn dark brown in colour on maturation with black powdery mass.

- Under severe conditions, symptoms of dark grey to brown lesions with wavy or undulated margins appear on nuts from the apex.

- The affected nut will be desiccated, shrunken, deformed and drops prematurely. The pathogen penetrates into the kernel through mesocarp, resulted in decaying of endosperm

## Preliminary Roving survey taken up at different villages of Andhra Pradesh

The disease incidence was first observed in Jangareddygudem village of West Godavari district during September 2018. And intensive roving survey revealed the disease prevalence in the following places.

The variety grown is East Coast Tall and soils in the surveyed gardens majority were black soils. The trees are aged between 5 to 40 years in the infected gardens and symptoms were mostly in initial stages thereby providing scope for management.

## Management measures for leaf blight

- Remove and destroy old infected leaves having the inoculum from the healthy coconut palms, which acts as primary source of inoculum to further spread of the disease

- Spraying of Hexaconazole 2 ml per litre of water on infected palms

- Basal application of Pseudomonas fluorescence @ 200 g along with 50 kg FYM per year.

Creating awareness to the farmers of coconut in coordination with Department of Horticulture, Farmer Produce Organizations and Coconut Development Board is essential to control the spread of the disease. ■