

**CHAPTER 2**

**FUNGI ASSOCIATED WITH THE COCONUT PALM  
(*COCOS NUCIFERA* L.)**

**By**

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## CONTENTS

<b>Introduction</b>	..	53
<b>Distribution of fungus-associated diseases of coconut</b>	..	54-56
<b>Distribution of fungi reported on coconut</b>	..	57-64
<b>Country-wise distribution of fungi, associated diseases and name of reporters</b>	..	65-86
<b>Bibliography</b>	..	87-91

## INTRODUCTION

The coconut palm harbours many fungi on its various organs. One hundred and seventy three species of fungi have been so far observed on the live palm, shed and dead tissues and its produces. These fungi live either in association with known diseases or as sheer space occupiers. The number of fungi as well as diseases caused by them keep on increasing. This makes it imperative to periodically up-date their list to satisfy the current needs. An attempt is made here to list the fungus species and fungus diseases hitherto recorded on coconut. Earlier compilations are by Johnston (1965) and Joseph and Radha (1979).

The present compilation lists 54 diseases having fungus-association (Table 1). List of 173 species of fungi along with the country of their occurrence, is presented in Table II. A country wise record of the fungi, the

diseases with which they are associated and the name of author(s) who reported or compiled the information are given in Table III. The nature of association of the fungi in some instances has been indicated as "unspecified" where it was not available in the original.

No fungus recorded on the coconut, however innocuous it might appear, was left out because it might prove hazardous to the crop under optimal environment. For example, weak pathogens like *Gliocladium roseum* and *Gloeosporium* sp. caused leaf rot of coconut (Menon and Pandalai, 1960). Therefore, the fungi or the diseases have hardly been grouped here into major or minor. This compilation may serve as useful reference list on the distribution and association of fungus species in the context of mycological investigations on coconut.

**Table I DISTRIBUTION OF FUNGUS-ASSOCIATED DISEASES OF COCONUT**

<i>Name of disease</i> (1)	<i>Country of occurrence</i> (2)
<i>Anabe roga</i>	India
Basal stem rot	Sri Lanka
Bitten leaf	Jamaica, Mauritius, South Africa, Trinidad and Tobago
Black leaf mould	Malaysia, New Hebrides, Papua New Guinea
Black mould on nut	New Caledonia, Papua New Guinea
Black spot of petiole and leaves	* Malaysia
Blue stain of trunk	Colombia
Brown root rot	Malaysia, Sri Lanka
Bud rot	Cayman Is., Cook Is., Costa Rica, Cuba, Diego Garcia, Dominican Rep., Fiji, India, Indonesia, Jamaica, Malaysia, New Hebrides, Papua New Guinea, Philippines, Puerto Rico, South Africa, Sri Lanka, Tonga, Trinidad and Tobago, UK, USA
Coconut "Knife cut"	Mauritius
Die back	Jamaica
False bud rot	India
Fetid heart rot	Cameroun
Fruit rot	Colombia, India, Malaysia
Ganoderma wilt	Bangladesh, Indonesia, New Hebrides
Grey blight/Grey leaf blight/ Leaf blight/Leaf mildew	Bangladesh, Brazil, Brunei, Burma, Colombia, Guyana, Indonesia, Kampuchea, New Caledonia, New Hebrides, Papua New Guinea, Samoa, Solomon Is., Sri Lanka, Thailand, US Trust Terr., Wallis
Gummosis	Colombia
Heart rot	Cuba, Fiji
Kribi disease	Cameroun

(1)	(2)	(1)
Leaf and stem disease	Indonesia, Papua New Guinea	
Leaf break	Colombia, Fiji, India, Malaysia, Papua New Guinea, Sri Lanka	
Leaf dieback	Malaysia, Sri Lanka	
Leaf disease	Malaysia, Sri Lanka	
Leaf rot	Brunei, Fiji, India, Indonesia, Malaysia, Vietnam	
Leaf smut/smut	Fiji, Fr. Polynesia, New Caledonia, New Hebrides, Tahiti, Wallis	
Leaf spot	Fiji, Fr. Polynesia, India, Indonesia, Malaysia, New Caledonia, New Hebrides, Papua New Guinea, Philippines, Samoa, Sri Lanka, Thailand, Tonga, Virgin Is.	
Lesion on nut	Samoa	
Lethal bole rot	Kenya, Tanzania	
Nut discolouration	Philippines	
Nut fall	India, Sri Lanka	
Nut rot	Brunei, Indonesia, Vietnam	
Nut spot	India	
Oval leaf spot	Indonesia, Malaysia, New Caledonia, New Hebrides, Samoa, Solomon Is., US Trust Terr.	
Peduncle rot	Brazil	
Petiole disease	Malaysia, New Caledonia, Papua New Guinea	
Premature death	Jamaica	
Premature fall of nuts and leaves	Puerto Rico	
Red ring disease	Colombia, Honduras, Panama, Venezuela	
Ring disease of nuts	Fiji, Papua New Guinea	
Root disease	India, Papua New Guinea, Sri Lanka	
Root rot	India, Malaysia, New Hebrides, Sri Lanka, USA	
Root (wilt) disease	India	

(1)	(2)
Rotting of seedlings	Indonesia
Seedling damage	Ivory Coast
Shoot desiccation	Colombia
Shoot rot	India
Sooty mould	Malaysia, Philippines, Solomon Is.
Stem bleeding/Stem rot	Diego Garcia, Dominican Rep., Fiji, India, Indonesia, Malaysia, New Caledonia, New Hebrides, Papua New Guinea, Philippines, Sri Lanka, Thailand, Trinidad and Tobago
Stem disease	Bangladesh, India, Malaysia, New Hebrides, Sri Lanka
Tapering stem	Papua New Guinea
Thread blight/White thread blight	Fiji, New Hebrides, Papua New Guinea, Sri Lanka
Tip break	Papua New Guinea
Top rot	Brazil, Burma
Wilting of leaves	USA

**Table II DISTRIBUTION OF FUNGI REPORTED ON COCONUT**

<i>Name of fungus</i> (1)	<i>Name of country</i> (2)
<i>Actiniceps cocos</i>	India
<i>Aithaloderma setosum</i>	Malaysia, Solomon Is.
<i>Alternaria alternata</i>	India
<i>Alternaria</i> sp	Cuba
<i>Annellophora phoenicis</i>	Indonesia, Malaysia
<i>Anthostomella cocoina</i>	New Caledonia, Philippines
<i>A. cyclindrospora</i>	New Caledonia, Papua New Guinea
<i>A. fusicapilla</i>	Malaysia
<i>Ascochyta cocoina</i>	India
<i>Ascochyta</i> sp	Cuba
<i>Aspergillus chevalieri</i>	UK
<i>A. cinnamomensis</i>	Malaysia
<i>A. flavus-oryzae</i>	Malaysia
<i>A. fumigatus</i>	Malaysia
<i>A. glaucus</i>	Malaysia
<i>A. niger</i>	Malaysia, UK
<i>A. ochraceus</i>	Malaysia
<i>A. tamaritii</i>	Malaysia, UK
<i>A. wentii</i>	Malaysia
<i>Aspergillus</i> sp	Colombia, Ghana, India
<i>Bahusandhika indica</i>	India
<i>Botryodiplodia cococarpa</i>	Indonesia
<i>B. palmarum</i>	India, Samoa

(1)	(2)
<i>B. theobromae</i>	Brazil, Brunei, Fiji, India, Indonesia, Malaysia, Panama, Papua New Guinea, Vietnam
<i>Botryodiplodia</i> sp	Colombia, Honduras, India, Malaysia, Papua New Guinea, Sri Lanka, Venezuela
<i>Botrytis (Beauveria) bassiana</i>	Ghana
<i>Capnodium footi</i>	Philippines
<i>Capnodium</i> sp	Colombia
<i>Catacauma torendiella</i>	Brazil
<i>Catantops humilis</i>	Malaysia
<i>Cephalosporium</i> sp	Malaysia
<i>Ceratostomella adiposum</i>	Malaysia
<i>C. paradoxa</i>	Colombia, Diego Garcia, Dominican Rep., Fiji, India, Indonesia, Mauritius, New Caledonia, New Hebrides, Papua New Guinea, Philippines, Sri Lanka, Thailand, Trinidad and Tobago
<i>C. fimbriata</i>	Seychelles
<i>Cercospora</i> sp	Fiji
<i>Chaetomium</i> sp	India
<i>Cladosporium</i> sp	Cuba
<i>Clasterosporium cocoicola</i>	New Hebrides, Paupua New Guinea
<i>Clasterosporium</i> sp	Cuba
<i>Colletotrichum (Glomerella) cingulata</i>	India
<i>C. paucisetum</i>	India
<i>Colletotrichum</i> sp	Malaysia
<i>Coniothyrium fukelii</i>	Malaysia
<i>C. olivaceum</i>	Malaysia
<i>Corticium penicillatum</i>	Fiji, New Hebrides, Papua, New Guinea, Sri Lanka

(1)	(2)
<i>Curvularia inequalis</i>	India
<i>C. maculans</i>	Malaysia
<i>C. palmarum</i>	India
<i>Curvularia</i> sp	Cuba, India
<i>Cylindrocarpon effusum</i>	India
<i>C. gracile</i>	New Caledonia
<i>C. lucidum</i>	India
<i>Cylindrocladium scoparium</i>	Malaysia
<i>Cylindrocladium</i> sp	Brazil
<i>Cytospora palmicola</i>	Sri Lanka
<i>Dactylaria</i> sp	Cuba
<i>Desmotascus cocos</i>	Sri Lanka
<i>Diplodia epicocos</i>	Seychelles, Tanzania
<i>Diplodia</i> sp	Cuba, Indonesia, Jamaica, Malaysia, Sri Lanka
<i>Drechslera incurvatum</i>	Papua New Guinea
<i>Epicoccum cocos</i>	Indonesia, Malaysia, New Caledonia, New Hebrides, Papua New Guinea, Philippines, Samoa, Solomon Is., Tonga, US Trust Terri.
<i>Eurotium herbariorum</i>	Seychelles
<i>Exosporium durum</i>	Philippines
<i>E. palmarum</i>	India
<i>Fomes applanatus</i>	Papua New Guinea, Sri Lanka
<i>F. lamaoensis</i>	Brazil, Malaysia, Papua New Guinea, Sri Lanka
<i>F. lignosus</i>	Malaysia, Papua New Guinea, Sri Lanka
<i>F. lucidus</i>	Papua New Guinea, Sri Lanka
<i>F. multiplicatus</i>	Papua New Guinea

(1)	(2)
<i>F. noxius</i>	Papua New Guinea
<i>F. ovalaccatus</i>	Papua New Guinea
<i>Fomes</i> sp	Fiji, India
<i>Fusarium conglutinans</i>	Cameroun
<i>F. dimerum</i>	Cameroun
<i>F. equiseti</i>	India
<i>F. oxysporum</i>	Togo
<i>F. semitectum</i>	Cameroun
<i>Fusarium</i> sp	Brazil, Burma, Cuba, India, Papua New Guinea, Tanzania
<i>Ganoderma boninense</i>	Sri Lanka
<i>G. lucidum</i>	Bangladesh, India, Indonesia, Malaysia, New Hebrides, Papua New Guinea, Sri Lanka
<i>Gliocladium roseum</i>	India
<i>Gliocladium</i> sp	India
<i>Gloeosporium cocophilum</i>	Fr. Polynesia, Sri Lanka, Thailand
<i>Gloeosporium</i> sp	Cuba, India, Tanzania
<i>Glomerella cingulata</i>	Papua New Guinea
<i>Gongronella butleri</i>	India
<i>Grallomyces portoricensis</i>	New Hebrides
<i>Graphiola cocoina</i>	Fiji, Fr. Polynesia, New Caledonia, New Hebrides, Tahiti, Wallis
<i>Graphium</i> sp	India
<i>Helminthosporium halodes</i>	India, Ivory Coast
<i>H. incurvatum</i>	Fr. Polynesia, Indonesia, Malaysia, New Caledonia, New Hebrides, Papua New Guinea, Philippines, Sri Lanka, Thailand, Virgin Is.
<i>Helminthosporium</i> sp	Fiji

(1)	(2)
<i>Hendersonia palmigena</i>	India
<i>Isaria palmae</i>	India
<i>Leiosphaerella longispora</i>	Papua New Guinea
<i>Lomachashaka kera</i>	India
<i>Macrophomina phaseoli</i>	Brazil, India, Papua New Guinea
<i>Marasmiellus cocophilus</i>	Kenya, Tanzania
<i>Marasmius palmivorus</i>	Brazil, India, Indonesia, Malaysia, Papua New Guinea, Seychelles
<i>Marasmius</i> sp	Seychelles
<i>Melanconium palmarum</i>	Malaysia, Papua New Guinea, Sri Lanka
<i>Monochaetia monochaeta</i>	New Hebrides
<i>Mucor racemosus</i>	UK
<i>Mucor</i> sp	India, Malaysia
<i>Mycomicoethelia palmivorum</i>	India
<i>Mycosphaerella gastonis</i>	India, Indonesia, Malaysia, Samoa, Sri Lanka
<i>M. palmicola</i>	India
<i>Mycosphaerella</i> sp	Fiji, India
<i>Myelosperma tumidum</i>	Sri Lanka
<i>Nectria bolbophylli</i>	India
<i>Neocosmospora vasinfecta</i>	India
<i>Oidium cococarpum</i>	India
<i>Oxydothis maculosa</i>	Indonesia
<i>Penicillium candido-fulvum</i>	UK
<i>P. glaucum</i>	Malaysia
<i>P. javanicum</i>	India
<i>P. speculisporum</i>	India

(1)	(2)
<i>Penicillium</i> sp	Colombia, Ghana, India
<i>Periconia saraswathipurensis</i>	India
<i>P. torulosa</i>	India
<i>Pestalotia japonica</i>	Papua New Guinea
<i>P. palmarum</i>	Bangladesh, Brazil, Brueni, Burma, Colombia, Diego Garcia, Fiji, Guyana, India, Indonesia, Kampuchea, Malaysia, Mozambique, New Caledonia, New Hebrides, Papua New Guinea, Philippines, Samoa, Seychelles, Solomon Is., Sri Lanka, Tanzania, Thailand, US Trust Terr., Wallis
<i>P. papposa</i>	Malaysia
<i>P. stictica</i>	Malaysia
<i>P. theae</i>	Malaysia, Papua New Guinea
<i>P. versicolor</i>	Malaysia
<i>Pestalotia</i> sp	Cuba, India, Malaysia, Papua New Guinea, Sri Lanka
<i>Phaeosphaeria palmivorum</i>	India
<i>Phoma cocoicola</i>	Sri Lanka
<i>Phoma</i> sp	Colombia, Cuba, India, Malaysia
<i>Phomopsis cocos</i>	India
<i>Phyllachora</i> sp	Brazil
<i>Phyllosticta cocos</i>	India
<i>P. cocophila</i>	Indonesia
<i>P. palmicola</i>	Brazil
<i>Phyllosticta</i> sp	Philippines
<i>Phyllostictina cocoicola</i>	Brazil
<i>Physalospora transversalis</i>	Burma, India
<i>Phytophthora palmivora</i>	Brazil, Cayman Is., Colombia, Cook Is., Costa Rica, Cuba, Dominican Rep., Fiji, India, Indonesia, Jamaica,

(1)	(2)
	Malaysia, New Hebrides, Papua New Guinea, Philippines, Puerto Rico, Seychelles, South Africa, Sri Lanka, Tonga, Trinidad and Tobago
<i>Phytophthora</i> sp	Brazil, Fiji, Philippines, Sri Lanka, USA
<i>Pleospora batanensis</i>	India
<i>Podoconis theae</i>	Indonesia
<i>Polyporus ostreiformis</i>	Bangladesh, India, Malaysia
<i>P. rugulosus</i>	South Africa
<i>Polyporus</i> sp	India
<i>Polystictus occidentalis</i>	Papua New Guinea
<i>P. sanguineas</i>	Papua New Guinea
<i>Poria ravenalae</i>	Malaysia
<i>Poria</i> sp	Sri Lanka
<i>Pseudocampoum fasciculatum</i>	India
<i>Pseudodiplodia epicocos</i>	India
<i>Pseudomicrocera kenningsii</i>	Seychelles
<i>Pythium</i> sp	Cuba, Jamaica, Nigeria
<i>Ramularia eriodendri</i>	Indonesia
<i>Rhizoctonia bataticola</i>	Brazil, India, Sri Lanka
<i>Rhizoctonia (Corticium) solani</i>	India
<i>Rhizoctonia</i> sp	Colombia, Jamaica, Nigeria
<i>Rhizopus nigricans</i>	Malaysia, UK
<i>Schizophyllum commune</i>	Seychelles
<i>Scoptria chlorina</i>	New Caledonia, Papua New Guinea
<i>Scopulariopsis</i> sp	UK
<i>Septoria cocoes</i>	Sri Lanka

(1)	(2)
<i>Sphaeroneaema</i> sp	Sri Lanka, Tanzania
<i>Sphaeropsis palmarum</i>	India
<i>Sphaerostilbe coccidophthora</i>	Seychelles
<i>Spongospora</i> sp	Malaysia
<i>Sporidesmium macrurum</i>	Malaysia, Papua New Guinea
<i>Stemphylium</i> sp	Cuba
<i>Syncephalastrum (?) cinereum</i>	UK
<i>Thielaviopsis (Ceratostomella) paradoxa (ethaceticus)</i>	Brazil, Fiji, India, Jamaica, Malaysia, Mauritius, Papua New Guinea, Philippines, Puerto Rico, South Africa, Sri Lanka, Togo, Trinidad and Tabago, USA
<i>Thielaviopsis</i> sp	India, Jamaica, Malaysia
<i>Torula herbarum</i>	India
<i>Trametes ohinensis</i>	Papua New Guinea
<i>Trichoderma</i> sp	Cuba, India
<i>Trichothecium roseum</i>	Malaysia
<i>Valsa batangae (Cytospora batangae)</i>	Cameroun
<i>Verticillium</i> sp	Malaysia
<i>Ustilina zonata</i>	Malaysia

**Table III COUNTRY-WISE DISTRIBUTION OF FUNGI, ASSOCIATED DISEASES AND NAME OF REPORTER(S)**

Country (1)	Name of fungus (2)	Disease/part with which associated (3)	Reported/compiled* by (4)
Bangladesh	<i>Ganoderma lucidum</i>	Ganoderma wilt	Johnston (1965*)
	<i>Pestalotia palmarum</i>	Leaf blight	"
	<i>Polyporus ostreiformis</i>	Stem disease	"
Brazil	<i>Botryodiplodia theobromae</i>	Leaf blight	Radha (1978*)
	<i>Catacauma torendiella</i>	Unspecified	Batista (1946)
	<i>Cylindrocladium</i> sp	Peduncle rot	"
	<i>Fomes lamaoensis</i>	Unspecified	Bondar (1940)
	<i>Fusarium</i> sp	Top rot	Batista and Coelho (1947)
	<i>Marasmius palmivorus</i>	Unspecified	Bondar (1940)
	<i>Pestalotia palmarum</i>	Leaf blight	Radha (1978*)
	<i>Phyllachora</i> sp	"	Johnston (1965*)
	<i>Phyllosticta palmicola</i>	Unspecified	Batista and Vital (1952)
	<i>Phyllostictina cocoicola</i>	"	Batista (1952)
<i>Phytophthora palmivora</i>	"	Bondar (1940)	
<i>Phytophthora</i> sp	Leaf blight	Radha (1978*)	
<i>Rhizoctonia bataticola</i> ( <i>Macrophomina phaseoli</i> )	Unspecified	Bondar (1940)	
<i>Thielaviopsis (Ceratosomella) paradoxa</i>	"	"	

(1)

(2)

(3)

(4)

Brunei	<i>Botryodiplodia theobromae</i>	Leaf rot	Johnston (1965*)
"	"	Nut rot	"
Burma	<i>Pestalotia palmarum</i>	Leaf blight	"
	<i>Fusarium</i> sp	Top rot	Anonymous (1943)
	<i>Pestalotia palmarum</i>	Leaf blight	Johnston (1965*)
	<i>Physalospora transversalis</i>	Unspecified	"
Cameroun	<i>Fusarium congruvinans</i>	Fetid heart rot	Heim and Chevaugnon (1948)
	<i>F. dimerum</i>	"	"
	<i>F. semitectum</i>	"	"
	<i>Valsa batangae</i> ( <i>Cytospora batangae</i> )	Kribi disease	Grimaldi (1966)
Cayman Is.	<i>Phytophthora palmivora</i>	Bud rot	Edwards (1938)
Colombia	<i>Aspergillus</i> sp	Blue stain of trunk	Sanchez Potes (1966)
	<i>Botryodiploida</i> sp	Red ring disease	Menon and Pandalai (1960*)
	<i>Ceratostomella paradoxa</i>	Gummosis	Sanchez Potes (1966)
	<i>Capnodium</i> sp	On withered leaf	Toro (1930)
	<i>Penicillium</i> sp	Blue stain of trunk	Sanchez Potes (1966)
	<i>Pestalotia palmarum</i>	Leaf mildew	"
	<i>Phoma</i> sp	Leaf break	"

<i>Phytophthora palmivora</i>	Fruit rot	Sanchez Potes (1966)
"	Shoot desiccation	"
"	On withered leaf	Toro (1930)
<i>Rhizoctonia</i> sp	On roots	"
<i>Phytophthora palmivora</i>	Bud rot	Johnston (1965*)
<i>Phytophthora palmivora</i>	Bud rot	Stahel (1924)
<i>Alternaria</i> sp	Heart rot	Todorova Mijailova (1967)
<i>Ascochyta</i> sp	"	"
<i>Cladosporium</i> sp	"	"
<i>Clasterosporium</i> sp	"	"
<i>Curvularia</i> sp	"	"
<i>Dactylaria</i> sp	"	"
<i>Diplodia</i> sp	"	"
<i>Fusarium</i> sp	"	"
<i>Gloeosporium</i> sp	"	"
<i>Pestalotia</i> sp	"	"
<i>Phoma</i> sp	"	"
<i>Phytophthora palmivora</i>	Bud rot	Burner (1922)

(1)	(2)	(3)	(4)
	<i>Pythium</i> sp	Heart rot	Todorova Mijailova (1967)
	<i>Stemphylium</i> sp	"	"
	<i>Trichoderma</i> sp	"	"
	<i>Verticillium</i> sp	"	"
Diego Garcia	<i>Ceratostomella paradoxa</i>	Stem rot/Stem bleeding	Orian (1959)
	<i>Pestalotia palmarum</i>	On leaf put nursery blight of seedlings	"
	<i>Phytophthora palmivora</i>	Bud rot	"
Dominican Rep.	<i>Ceratostomella paradoxa</i>	Stem bleeding	Schieber (1970)
	<i>Phytophthora palmivora</i>	Bud rot	"
Fiji	<i>Botryodiplodia theobromae</i>	Leaf break	Mc Paul (1962)
	"	Ring disease of nuts	Simmonds (1924)
	"	Leaf rot	Johnston (1965*)
	<i>Ceratostomella paradoxa</i>	Stem bleeding	Mc Paul (1962)
	<i>Cercospora</i> sp	Leaf spot	"
	<i>Corticium penicillatum</i>	Thread blight	"
	<i>Fomes</i> sp	Heart rot	"
	<i>Graphiola cocoina</i>	Leaf smut	Campbell (1925)
	"	Leaf spot	Mc Paul (1962)

	<i>Helminthosporium</i> sp	Leaf rot	Mc Paul (1962)
	<i>Mycosphaerella</i> sp	"	"
	<i>Pestalotia palmarum</i>	"	Campbell (1925)
	<i>Phytophthora palmivora</i>	Bud rot	Simmonds (1925)
	<i>Phytophthora</i> sp	Leaf rot	Mc Paul (1962)
	<i>Thielaviopsis paradoxa</i>	Stem bleeding	Campbell (1925)
	<i>Gloeosporium cocophilum</i>	On nut	Johnston (1965*)
	<i>Graphiola cocoina</i>	Leaf smut	"
	<i>Helminthosporium incurvatum</i>	Leaf spot	"
	<i>Aspergillus</i> sp	On copra	Fishlock (1930)
	<i>Botrytis (Beauveria) bassiana</i>	On scale infested leaf	Cottebell (1923)
	<i>Penicillium</i> sp	On copra	Fishlock (1930)
	<i>Pestalotia palmarum</i>	Leaf blight	Copeland (1921)
	<i>Botryodiplodia</i> sp	Red ring disease	Menon and Pandalai (1960*)
	<i>Actiniceps cocos</i>	On dead wood	Subramanian (1954)
	<i>Alternaria alternata</i>	On leaf	Rao and Subramanyam (1956)
	<i>Ascochyta cocoina</i>	"	Ponnappa (1969)
	<i>Aspergillus</i> sp	Root (wilt) disease	Radha and Menon (1954)
	<i>Bahusandhika indica</i>	On dead spathe	Subramanian (1954a)
	<i>Botryodiplodia palmarum</i>	Leaf rot	Johnston (1965*)
French Polynesia			
Ghana			
Guyana			
Honduras			
India			

(1)	(2)	(3)	(4)
	<i>B. theobromae</i>	On root	Misra <i>et al.</i> (1929)
	"	Fruit rot	Menon and Nair (1952)
	"	Leaf rot	"
	<i>Botryodiplodia</i> sp	Root disease	Mitra (1929)
	<i>Ceratostomella paradoxa</i>	Stem bleeding	"
	<i>Chaetomium</i> sp	Root (wilt) disease	Radha and Menon (1954)
	"	Leaf rot	Johnston (1965*)
	<i>Colletotrichum (Glomerella) cingulata</i>	Leaf spot	Mitra (1929)
	<i>C. paucisetum</i>	Leaf spot	Johnson (1965*)
	<i>Curvularia inequalis</i>	On dead leaves	Subramanian (1953)
	<i>C. palmarum</i>	"	"
	<i>Curvularia</i> sp	Root (wilt) disease	Radha and Menon (1954)
	<i>Cylindrocarpon effusum</i>	"	Thomas Joseph (1978)
	<i>C. lucidum</i>	"	Sosamma and Koshy (1978)
	<i>Exosporium palmivorum</i>	Leaf spot	Mitra (1929)
	<i>Fomes</i> sp	False bud rot	Menon and Pandalai (1960*)
	<i>Fusarium equiseti</i>	Root (wilt) disease	Thomas Joseph (1978)
	<i>Fusarium</i> sp	"	Radha and Menon (1954)

<i>Fusarium</i> sp	Shoot rot	Sundaraman (1929)
<i>Ganoderma lucidum</i>	<i>Anabe roga</i>	Venkataraman (1929)
<i>Gliocladium roseum</i>	Leaf rot	Menon and Nair (1952)
<i>Gliocladium</i> sp	Root (wilt) disease	Radha and Menon (1954)
<i>Gloeosporium</i> sp	Leaf rot	Menon and Nair (1952)
"	Root (wilt) disease	Radha and Menon (1954)
"	Shoot rot	Mc Rae (1929)
<i>Gongronella butleri</i>	On root	Lily (1975)
<i>Graphium</i> sp	Root (wilt) disease	Thomas Joseph (1978)
<i>Helminthosporium halodes</i>	Leaf rot	Menon and Nair (1952)
<i>Hendersonia palmigena</i>	On leaf	Poonappa (1959)
<i>Isaria palmae</i>	On dry inflorescence	Chona <i>et al.</i> (1957)
<i>Lomachashaka kera</i>	On dead leaf	Subramanian (1956)
<i>Macrophomina phaseoli</i> ( <i>Rhizoctonia bataticola</i> )	Root rot	Menon and Nair (1952)
<i>Marasmius palmivorus</i>	False bud rot	Menon and Pandalai (1960*)
<i>Mycoscothelia palmivorum</i>	On leaf	Chaudury and Rao (1964)
<i>Mycosphaerella gastonis</i>	Leaf spot	Johnston (1965*)
<i>M. palmicola</i>	On leaf	Chaudury and Rao (1964)
<i>Mycosphaerella</i> sp	Leaf spot	Mitra (1929)
<i>Mucor</i> sp	Root (wilt) disease	Radha and Menon (1954)

(1)	(2)	(3)	(4)
	<i>Nectria bolbophylli</i>	On trunk	Sydow and Butler (1911)
	<i>Neocosmospora vasinfecta</i>	Root (wilt) disease	Radha and Menon (1954)
	<i>Oidium cococarpum</i>	On seed coconut	Stevens and Perice (1933)
	<i>Penicillium javanicum</i>	Root (wilt) disease	Thomas Joseph (1978)
	<i>P. spiculisorum</i>	"	"
	<i>Penicillium</i> sp	"	Radha and Menon (1954)
	<i>Periconia saraswathipurensis</i>	Leaf spot	Gupta and Asha Ram (1971)
	<i>P. torulosa</i>	On dead leaf	Raghuvver Rao and Dev Rao (1964)
	<i>Pestalotia palmarum</i>	Leaf spot	Sundaraman (1925)
	<i>Pestalotia</i> sp	Root (wilt) disease	Radha and Menon (1954)
	<i>Phaeosphaeria palmivorum</i>	On leaf	Chaudury and Rao (1964)
	<i>Phoma</i> sp	On leaf	Ponnappa (1969)
	<i>Phomopsis cocoes</i>	"	"
	<i>Phyllosticta cocos</i>	"	Johnston (1965*)
	<i>Phytophthora palmivora</i>	Bud rot	Mc Rae (1923)
	"	Nut fall	"
	"	Leaf base	Menon and Pandalai (1960*)
	<i>Physalospora transversalis</i>	Unspecified	Johnston (1965*)

<i>Pleospora batanensis</i>	On leaf	Chaudury and Rao (1964)
<i>Polyporus ostreiformis</i>	Stem bleeding	Johnston (1965*)
<i>Polyporus</i> sp	False bud rot	Menon and Pandalai (1960*)
<i>Pseudocampytom fasciculatum</i>	On dead peduncles	Subramanian (1956a)
<i>Pseudodiplodia epicocos</i>	Nut spot	Johnston (1965*)
<i>Rhizoctonia bataticola</i>	Root rot	Menon and Nair (1952)
<i>R. (Corticium) solani</i>	"	"
<i>Sphaeropsis palmarum</i>	On leaf	Johnston (1965*)
<i>Thielaviopsis paradoxa</i>	Stem bleeding	Sundaraman (1922)
<i>Thielaviopsis</i> sp	False bud rot	Menon and Pandalai (1960*)
<i>Torula herbarum</i>	On dead leaf sheath	Subramanian (1952)
<i>Trichoderma</i> sp	Root (wilt) disease	Radha and Menon (1954)
<i>Annellophora phoenicis</i>	Leaf spot	Johnston (1965*)
<i>Botryodiplodia cococarpa</i>	Nut rot	"
<i>B. theobromae</i>	"	"
"	Leaf rot	"
<i>Ceratostomella paradoxa</i>	Stem bleeding	"
<i>Diplodia</i> sp	Rotting of seedlings	Leeffmans (1934)
<i>Epicoccum cocos</i>	Oval leaf spot	Johnston (1965*)
<i>Ganoderma lucidum</i>	Ganoderma wilt	Van der Goot (1937)

Indonesia

(1)

(2)

(3)

(4)

	<i>Helminthosporium incurvatum</i>	Leaf spot	Johiistón (1965*)
	<i>Marasmius palmivorus</i>	Leaf and stem disease	Van der Goot (1937)
	<i>Mycosphaerella gastonis</i>	On coconut	Barros (1973)
	<i>Oxydothis maculosa</i>	Unspecified	Johnston (1965*)
	<i>Pestalotia palmarum</i>	Leaf blight	Hübert (1957)
	"	On palms killed by bud rot	Van Hall (1921)
	<i>Phyllosticta cocophila</i>	On leaf	Johnston (1965*)
	<i>Podoconis theae</i>	Unspecified	"
	<i>Ramularia eriodendri</i>	Unspecified	"
Ivory Coast	<i>Helminthosporium haldoes</i>	Seedling damage	Quillec and Renard (1975)
Jamaica	<i>Diplodia</i> sp	Premature death	Smith (1929)
	<i>Phytophthora palmivora</i>	"	"
	"	Bud rot	Ashby (1922)
	<i>Pythium</i> sp	Die back of roots	Ashby (1921)
	<i>Rhizoctonia</i> sp	"	"
	<i>Thielaviopsis (Ceratostomella) paradoxa</i>	Bud rot	Britton-Jones (1940)
	<i>Thielaviopsis</i> sp (? <i>C. paradoxa</i> )	Bitten leaf	Bain (1940)
Kampuchea	<i>Pestalotia palmarum</i>	Leaf blight	Johnston (1965*)

Country	Fungus	Host	Pathogen	Reference
Kenya	<i>Marasmiellus cocophilus</i>	Lethal bole rot		Book et al. (1970)
Malaysia	<i>Aithaloderma setosum</i>	Sooty mould		Johnston (1965*)
	<i>Annelophora phoenicis</i>	Leaf spot		"
	<i>Anthostomella fusisporrella</i>	Petiole disease		Booth and Shaw (1967)
	<i>Aspergillus cinnamomensis</i>	On copra		Cooke (1932)
	<i>A. flavus-oryzae</i>	"		"
	<i>A. fumigatus</i>	"		Eyre (1932)
	<i>A. glaucus</i>	"		Cooke (1932)
	<i>A. niger</i>	"		"
	<i>A. ochraceous</i>	On nut		Ward (1937)
	<i>A. tamaritii</i>	On copra		Cooke (1932)
	<i>A. wentii</i>	On nut		Ward (1937)
	<i>Botryodiplodia theobromae</i>	Leaf rot		"
	<i>Botryodiplodia</i> sp	Leaf break		"
	<i>Catanopsis humilis</i>	On leaf		"
	<i>Ceratostomella adiposum</i>	On copra		Thompson (1933)
	<i>Cephalosporium</i> sp	"		"
	<i>Colletotrichum</i> sp	"		"
	<i>Coniothyrium fukelii</i>	On leaf		Johnston (1965*)
<i>C. olivaceum</i>	On leaf		"	

(1)	(2)	(3)	(4)
<i>Curvularia maculans</i>	Leaf spot	Chan (1974)	
"	Leaf die back	Wiltshire (1956)	
<i>Cylindrocladium scoparium</i>	On root and bole	Coleman (1959)	
<i>Diplodia</i> sp	On copra	Thompson (1933)	
<i>Epicoccum cocos</i>	Oval leaf spot	Johnston (1965*)	
<i>Fomes lamaoensis (noxius)</i>	Brown root rot	"	
<i>F. lignosus</i>	Root rot	"	
<i>Ganoderma lucidum</i>	On trunk	Jamil (1968)	
<i>Helminthosporium incurvatum</i>	Leaf spot	Williams (1968)	
<i>Marasmius palmivorus</i>	Leaf disease	Thompson (1941)	
"	On leaf base	Sharples (1928)	
<i>Melanconium palmarum</i>	Leaf spot	Anonymous (1963)	
<i>Mucor</i> sp	Bud rot	Sharples and Lambourne (1922)	
<i>Mycosphaerella gastonis</i>	Leaf spot	Johnston (1965*)	
<i>Penicillium glaucum</i>	On nut	"	
<i>Pestalotia palmarum</i>	Leaf blight	Thompson (1924)	
<i>P. papposa</i>	Leaf spot	Johnston (1965*)	
<i>P. stictica</i>	"	"	

<i>P. theae</i>	"	"	"
<i>P. versicolor</i>	"	"	"
<i>Pestalotia</i> sp	"	"	"
<i>Phoma</i> sp	Diseased roots		Sharples (1928)
<i>Phytophthora palmivora</i>	Fruit rot		Turner* (1965)
<i>Polyporus ostreiformis</i>	"		Johnston (1965*)
<i>Poria ravenalae</i>	On nut		"
<i>Rhizopus nigricans</i>	"		"
<i>Spongospora</i> sp	Black spot of petiole and leaf stalks		Sharples (1923)
<i>Sporidesmium macrurum</i>	Black leaf mould		Johnston (1965*)
<i>Thielaviopsis ethacetica</i> ( <i>T. paradoxa</i> )	Stem bleeding		Sharples (1923)
<i>Thielaviopsis</i> sp	Bud rot		Sharples and Lambourne (1922)
<i>Trichothecium roseum</i>	On copra		Thompson (1933)
<i>Ustilina zonata</i>	Stem disease		Johnston (1965*)
<i>Ceratostomella paradoxa</i>	Bitten leaf		Shepherd (1930)
"	Coconut "knife-cut"		Wiehe (1940)
<i>Thielaviopsis paradoxa</i>	"		Shepherd (1930)
<i>Pestalotia palmarum</i>	On coconut		De Carvalho (1948)
<i>Anthostomella cocoina</i>	Unspecified		Johnston (1965*)

(1)	(2)	(3)	(4)
	<i>A. cylindrospora</i>	Petiole disease	Booth and Shaw (1967)
	<i>Ceratostomella paradoxa</i>	Stem bleeding/stem rot	Johnston (1965*)
	<i>Cylindrocarpon gracile</i>	Unspecified	"
	<i>Epicoccum cocos</i>	Oval leaf spot	"
	<i>Graphiola cocoina</i>	Leaf smut	"
	<i>Helminthosporium incurvatum</i>	Leaf spot	"
	<i>Pestalotia palmarum</i>	Leaf blight	"
	<i>Scoptria chlorina</i>	Black mould on nut	"
New Hebrides	<i>Ceratostomella paradoxa</i>	Stem bleeding	Dadant (1954)
	<i>Clasterosporium cocoicola</i>	Black leaf mould	Johnston (1965*)
	<i>Corticium penicillatum</i>	Thread blight	Dadant (1954a)
	<i>Epicoccum cocos</i>	Oval leaf spot	Johnston (1965*)
	<i>Ganoderma lucidum</i>	Ganoderma wilt	"
	"	Root rot	"
	"	Stem disease	"
	<i>Grallomyces portoricensis</i>	On leaf	"
	<i>Graphiola cocoina</i>	Leaf smut	"
	<i>Helminthosporium incurvatum</i>	Leaf spot	"

<i>Monochaetia monochaeta</i>	On nut	Johnson (1965*)
<i>Pestalotia palmarum</i>	Grey leaf spot	Dadant (1954)
<i>Phytophthora palmivora</i>	Bud rot	Johnston (1965*)
<i>Pythium</i> sp	On root	Rajagopalan and Aderung-boye (1970)
<i>Rhizoctonia</i> sp	"	"
<i>Botryodiplodia</i> sp	Red ring disease	Menon and Pandali (1960*)
<i>Anthostomella cylindrospora</i>	Petiole disease	Shaw and Booth (1967)
<i>Botryodiplodia theobromae</i>	Ring disease in immature nuts	Dwyer (1937a)
<i>Botryodiplodia</i> sp	Leaf break	"
"	Tip break	"
<i>Ceratostomella paradoxa</i>	Stem bleeding	"
<i>Clasterosporium cocoicola</i>	Black leaf mould	Johnston (1965*)
<i>Corticium penicillatum</i>	Thread blight	Bryce (1924a)
<i>Drechslera incurvata</i>	Leaf spot	Gallasch (1974)
<i>Epicoccum cocos</i>	Leaf spot	Shaw (1965)
<i>Fomes applanatus</i>	Unspecified	Countinho (1922)
<i>F. latmaoensis</i>	Root disease	Bryce (1924)
<i>F. lignosus</i>	"	"
<i>F. lucidus</i>	"	"

<i>F. multiplicatus</i>	Unspecified	Coutinho (1922)
<i>F. noxius</i>	Tapering stem	Dwyer (1937a)
<i>F. ovalaccatus</i>	Thread blight	Coutinho (1922)
<i>Fusarium</i> sp	Tip break	Dwyer (1937a)
<i>Ganoderma lucidum</i>	On roots	"
<i>Glomerella cingulata</i>	On leaf	Johnston (1965*)
<i>Helminthosporium incurvatum</i>	Leaf blight	Shaw (1965)
<i>Letosphaerella longispora</i>	On collapsed fronds	Sivanesan <i>et al.</i> (1976)
<i>Macrophomina phaseoli</i>	Unspecified	Johnston (1965*)
<i>Marasmius palmivorus</i>	Leaf and stem disease	Dwyer (1937)
<i>Melanconium palmivorum</i>	Leaf spot	Shaw (1965)
<i>Pestalotia japonica</i>	On leaf	Johnston (1965*)
<i>P. palmarum</i>	Grey blight	Dwyer (1937)
<i>P. theae</i>	Leaf spot	Shaw (1965)
<i>Pestalotia</i> spp	"	"
<i>Phytophthora palmivora</i>	Bud rot	Dwyer (1937)
<i>Polystictus occidentalis</i>	Unspecified	Coutinho (1922)
<i>P. sanguineas</i>	"	"

<i>Scopria chlorina</i>	Black mould on nut	Johnston (1965*)
<i>Sporidesmium macrum</i>	Black leaf mould	"
<i>Thielaviopsis paradoxa</i>	Unspecified	Dwyer (1937)
<i>Trametes ohinensis</i>	Unspecified	Coutinho (1922)
<i>Anthostomella cocoina</i>	On leaf	Johnston (1965*)
<i>Capnodium footi</i>	Sooty mould	Teodoro (1926)
<i>Ceratostamella (Thielaviopsis) paradoxa</i>	Leaf spot	Protacio (1965)
"	Stem bleeding/stem rot	Johnston (1965*)
<i>Epicoccum cocos</i>	On leaf	Stevens (1932)
<i>Exosporium durum</i>	Leaf spot	Johnston (1965*)
<i>Helminthosporium incurvatum</i>	Leaf spot	Era and Celino (1972)
<i>Pestalotia palmarum</i>	Leaf blight	Lee (1922)
<i>Phyllosticta</i> sp	On leaf	Anonymous (1926)
"	Nut discolouration	Teodoro (1926)
<i>Phytophthora palmivora</i>	Bud rot	Johnston (1965*)
<i>Phytophthora</i> sp	"	Reinking (1923)
<i>Thielaviopsis paradoxa</i>	Stem bleeding	Lee (1922)
<i>Phytophthora palmivora</i>	Bud rot	Tucker (1924)
<i>Thielaviopsis paradoxa</i>	Premature fall of nuts and leaves	Cook (1924)

Philippines

Puerto Rico

(1)	(2)	(3)	(4)
Samoa	<i>Botryodiplodia palmarum</i>	Lesion on nut	Johnston (1965*)
	<i>Epicoccum cocos</i>	Oval leaf spot	"
	<i>Mycosphaerella gastonis</i>	Leaf spot	"
	<i>Pestalotia palmarum</i>	Leaf blight	"
Seychelles	<i>Ceratostomella fimbriata</i>	On leaf	Dupont (1925)
	<i>Diplodia epicocos</i>	Unspecified	Dupont (1925)
	<i>Eurotium herbariorum</i>	Unspecified	"
	<i>Marasmius</i> sp	"	"
	(? <i>Marasmiellus palmivorus</i> )	On nut	Dupont (1931)
	<i>Pestalotia palmarum</i>	Unspecified	Dupont (1925)
	<i>Phytophthora palmivora</i>	Unspecified	"
	<i>Pseudomicrocera kenningsii</i>	On nuts	Dupont (1932)
	<i>Schizophyllum commune</i>	Unspecified	Dupont (1926)
	<i>Sphaerostilbe coccidiphthora</i>	On nuts	Dupont (1932)
Solomon Is.	<i>Aithaloderma setosum</i>	Sooty mould	Johnston (1965*)
	<i>Epicoccum cocos</i>	Oval leaf spot	"
	<i>Pestalotia palmarum</i>	Leaf blight	"
South Africa	<i>Phytophthora palmivora</i>	Bud rot	Walters (1929)

	On coconut matting	Anonymous (undated)
<i>Polyporus rugulosus</i>	Bitten leaf	Walters (1929)
<i>Thielaviopsis (Ceratostomella) paradoxa</i>	Leaf break	Ragunathan (1927)
<i>Botryodiplodia</i> sp	Stem bleeding	Johnston (1965*)
<i>Ceratostomella paradoxa</i>	Thread blight	Petch (1925)
<i>Corticium penicillatum</i>	On nut	Johnston (1965*)
<i>Cytospora palmicola</i>	On leaf	"
<i>Desmotascus cocos</i>	Root rot	Small (1927)
<i>Diplodia</i> sp	Root disease	"
<i>Fomes appianatus (Ganoderma appianatus)</i>	Brown root rot	Copeland (1921)
<i>F. lamaoensis</i>	Root disease	Small (1927)
<i>F. lignosus</i>	"	"
<i>F. lucidus (Ganoderma lucidum)</i>	Stem disease	Johnston (1965*)
"	Basal rot of stem	Peries (1974)
<i>Ganoderma boninense</i>	On nut	Johnston (1965*)
<i>Gloeosporium cocophilum</i>	Leaf blight	Anonymous (1960)
<i>Helminthosporium incurvatum</i>	Leaf spot	Johnston (1965*)
<i>Melanconium palmarum</i>	Leaf disease	Small (1927)
<i>Mycosphaerella gastonis</i>	On leaf	Johnston (1965*)
<i>Myelosperma tumidum</i>		

(1)	(2)	(3)	(4)
	<i>Pestalotia palmarum</i>	Grey leaf blight	Anonymous (1924)
	<i>Pestalotia</i> sp	Dead root	Bryce (1921)
	"	Leaf disease	Small (1927)
	<i>Phoma cocoicola</i>	On leaf	Johnston (1965*)
	<i>Phytophthora palmivora</i>	Bud rot	Anonymous (1960)
	<i>Phytophthora</i> sp	Nut fall	Bryce (1921)
	<i>Poria</i> sp	Root disease	Small (1927)
	<i>Rhizoctonia bataticola</i> ( <i>Macrophomina phaseoli</i> )	Root disease	Park (1927)
	<i>Septoria cocos</i>	On Leaf	Johnston (1965*)
	<i>Sphaeronema</i> sp	Dead roots	Bryce (1921)
	<i>Thielaviopsis ethacetica</i>	Stem bleeding	Anonymous (1921)
Tahiti	<i>Graphiola cocoina</i>	Smut	Simmonds (1925)
Tanzania	<i>Diplodia epicocos</i>	Unspecified	Welsford (1925)
	<i>Fusarium</i> sp	"	"
	<i>Gloeosporium</i> sp	"	"
	<i>Marasmiellus cocophitus</i>	"	Bock <i>et al.</i> (1970)
	"	Lethal bole rot	Johnston (1965*)
	<i>Pestalotia palmarum</i>	Unspecified	Welsford (1925)

	<i>Sphaeronema</i> sp	Unspecified	Welsford (1925)
Thailand	<i>Ceratostomella paradoxa</i>	Stem bleeding/Stem rot	Johnston (1965*)
	<i>Gloeosporium cocophilum</i>	On nut	"
	<i>Helminthosporium incurvatum</i>	Leaf spot	"
	"	On coconut	Johnston (1964)
	<i>Pestalotia palmarum</i>	Leaf blight	"
Togo	<i>Fusarium oxysporum</i>	Unknown disease	Meiffren (1951)
	<i>Thielaviopsis (Ceratostomella) paradoxa</i>	"	"
Tonga	<i>Epicoccum cocos</i>	Leaf spot	Johnston (1965*)
	<i>Phytophthora palmivora</i>	Bud rot	Simmonds (1925)
Trinidad and Tobago	<i>Ceratostomella paradoxa</i>	Stem bleeding	Goberdhan (1961)
	<i>Phytophthora palmivora</i>	Bitten leaf	Stell (1929)
	<i>Thielaviopsis (Ceratostomella) paradoxa</i>	"	Briton-Jones <sup>1940</sup> (1940)
	"	Stem bleeding	Anonymous (1924a)
United Kingdom	<i>Aspergillus chevalieri</i>	On copra	Passmore (1931)
	<i>A. niger</i>	"	"
	<i>A. tamaritii</i>	"	"
	<i>Mucor racemosus</i>	"	"

(1)	(2)	(3)	(4)
	<i>Penicillium candido-fulvum</i>	On copra	Passmore (1931)
	<i>Rhizopus nigricans</i>	"	"
	<i>Scopulariopsis</i> sp	"	"
	<i>Syncephalastrum (?) cinereum</i>	"	"
United States of America	<i>Phytophthora</i> sp	Bud rot	Burger (1925)
	<i>Pythium</i> sp	Wilting of leaves	Webber (1924)
	<i>Thielaviopsis paradoxa</i>	On stem	Fulton (1922)
	"	Root rot	Giddings and Wood (1924)
US Trust Territory	<i>Epicoccum cocos</i>	Oval leaf spot	Johnston (1965*)
	<i>Pestalotia palmarum</i>	Leaf blight	"
Venezuela	<i>Botryodiplodia</i> sp	Red ring disease	Menon and Pandalai (1960*)
Vietnam	<i>Botryodiplodia theobromae</i>	Leaf rot	Johnston (1965*)
	"	Nut rot	"
•Virgin Is.	<i>Helminthosporium incurvatum</i>	Leaf spot	Wiltshire (1956)
Wallis	<i>Graphiola cocoina</i>	Leaf smut	Johnston (1965*)
	<i>Pestalotia palmarum</i>	Leaf blight	"

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