

Phytophthora on durian

Phytophthora palmivora Root rot, stem rot, fruit rot



Phytophthora fruit rot of Durian (Nilanka Herath, Department of Agriculture, Sri Lanka)



Phytophthora fruit rot of Durian (Nilanka Herath, Department of Agriculture, Sri Lanka)



Phytophthora crown rot (H.J. Larsen, Bugwood.org)

Prevention	Monitoring	Direct Control
<ul style="list-style-type: none"> • <i>Phytophthora palmivora</i> is a pathogen which can be spread by soil, water and wind • Use large planting material (LPM) resistant clones • Use planting material from a certified source to ensure that it is disease-free • Establish good drainage since Phytothora prefers moist conditions: <ul style="list-style-type: none"> • Plant in raised beds on flat to semi-flat land • Construct drainage channels so that excess water can drain away • Space plants 8 x 8 m apart for medium-sized canopy varieties or 10 x 10 m apart for spreading canopy varieties so that the canopy does not overlap and create humid conditions • Prune the lowest branches to prevent the build up of humid conditions • Apply organic fertilizer such as organic waste (e.g. chicken dung) to improve tree health and resilience to disease • Apply lime to acidic soils to maintain a soil pH of 5.5-6.5. Apply lime within 30 cm of the soil surface radius of 1 m • Avoid mechanical damage to the stems as injury makes plants more susceptible to disease • Harvest manually or tie bags to branches to allow for natural fruit fall. Do not allow fruit to fall to the ground in order to avoid damage. • Pick diseased fruits and prune diseased branches, and collect diseased plant parts that have fallen to the floor so they are not sources of inoculum. Dispose of them by burning. 	<ul style="list-style-type: none"> • Symptoms: <ul style="list-style-type: none"> • Leaf blight: Brown, water-soaked spots appear on leaves, often on seedlings • Dieback of branches with leaves turning yellow • Patch/stem canker: a lesion on the bark and core of the trunk at the foot of the tree. When cut, a watery gum-like substance oozes from the lesion. The lesion may enlarge and surround the entire trunk • Stem rot: under very rainy and humid conditions, stem canker may also spread to large branches • Root rot: roots turn brown and soft • Immature/mature fruit rot: Watery patches appear on the fruit surface which then dry, enlarge and become dark brown/black. A white cottony substance may grow on the lesions. Fruits may drop prematurely 	<ul style="list-style-type: none"> • An integrated management approach is needed to effectively manage the disease: planting disease-tolerant material (if available), orchard management practices, biological control and use of appropriate chemicals. • <i>Trichoderma harzianum</i> can be applied to the soil surface as a general antagonist of soil pathogens

Note: Pesticides may be available to control this pest. Please check with the Ministry of Agriculture in your country to find out which pesticides are registered in your country and the local restrictions for their use.