The Disease

- Bud and nut rots of coconut are caused by a fungus, *Phytopthora palmivora* Butler
- The fungus produces three types of spores: sporangia that can be moved by wind or water, zoospores that are motile in water, and chlamydospore that are very long lived in the soil
- It can cause fruit and root rots, stem canker, leaf and seedling blights in over a thousand plant species



 The pathogen is disseminated by wind, rain splashes, insects and human activities

- Disease spread is favoured by high relative humidity of 94-100% and temperature of 24°C and below
- It infects palms of all ages but young palms (less 20 yr old) are more susceptible
- During high disease pressure, green coconut varieties can be infected as well
- The most visible sign of infection is the wilting of the spear leaf, which is already in the advance stage of infection
- A characteristic foul smell is emitted by the rotting bud
- One or two surrounding leaves (near spear leaf) turned yellow and wither

Nature of Damage

- Early diagnosis is frequently not possible thus infected palms often die
- Infection of nuts results to premature nutfall and 100% yield loss
- If the plantation has humid and cool conditions, all palms can be infected and die from the disease
- The presence of alternate hosts amplifies the survival capability of the pathogen, ensuring constant presence of inoculum
- Once infected, very low chance of recovery



Management Strategies

Cultural

Farm Sanitation

- Cut close to the ground and burn the infected palms as soon as the disease is diagnosed, or spray with contact fungicide
- Place the crown and cut leaves over the file of dried leaves and burn. Burn also the portion of the trunk where the crown was removed to minimize sources of infection.
- Utilize remaining logs as lumber
- Pass over a flame the instrument used for cutting, to kill the organism.
- Disinfect harvesting tools with 10% chlorine or household bleach

Good Agricultural Practices

- Clear out unnecessary vegetation to enable good circulation of air within the farm
- Harvest nuts regularly and do not leave these on the ground for a long time
- Observe proper planting distance
- If possible, clean the crown before the rainy season
- Regular application of organic matter to encourage establishment of biological control agents
- Remove possible sources of inoculum from alternate hosts such as affected plant parts of cacao, durian, and papaya planted within the area and in the nearby farms

Chemical Control

- As a preventive measure and to cut the disease cycle, treat palms within the 20m radius of the infected palms (annually):
 - Use phosphonates for trunk injection, soil drench or foliar spray Metalaxyl or copper hydroxide to paint cankers
- Prophylactic measures must be implemented every two months for farms where there is frequent disease occurrence
- Topical spraying of fungicide directed to the leaf axils

For more information, write or call:

Integrated Crop Protection Division

Davao Research Center

Philippine Coconut Authority

Department of Agriculture

Bago Oshiro, Tugbok District, Davao City

Telephone no. (082) 293-0113, 0115

Fax No. (082) 293-0571

E-mail Address: pca.drc2015@gmail.com

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