

Root and corm rot of cocoyam

Pythium spp. e.g. *Pythium myriotylum*, *Pythium debaryanum* Root and corm rot of cocoyam



Wilted and chlorotic leaves caused by *Pythium* (photo by R. P. Pacumbaba)

Prevention

- Before planting cocoyam, grow a ground legume such as *Mucania* or *Pueraria*. The build up of organic matter in the soil may increase microbes which act against the pathogen
- Plant resistant varieties if available
- Use certified, healthy planting material
- Be careful not to move soil from an infested field to a new field since the pathogen lives in soil
- Do not plant crop where water is likely to remain for several days i.e. on land that is likely to flood. The pathogen thrives in wet environments
- Try to avoid planting in heavy clay soils that hold water. If this can't be avoided then make drains around the plots or plant the cocoyam on raised beds or mounds so water can drain away
- Avoid overhead irrigation and watering the crop at night when it's cooler in order to minimise leaf wetness for long periods
- Apply organic fertilizer such as cow manure as required to maintain soil nutrient levels. This will make plants strong and less susceptible to infection
- If soil is low in calcium, add lime at the rate of 20 g per m²
- Solarize the soil to reduce *Pythium* levels by mulching the soil and covering with transparent polyethylene for a few weeks during the hot season

Monitoring

- *Pythium* is a soil borne pathogen that attacks the roots and underground parts of a plant
- Symptoms include:
 - Stunted plant and shortened leaf stalks. Leaf blades become curled or crinkled, yellowish and spotted
 - Infected corm varies in colour: whitish yellow, grey/blue, dark purple. Rot starts at the bottom and progresses upwards, and has a foul odour. Sometimes the disease starts at the side of the corm, 5-7 cm above the base. Skin softens, interior of corm disintegrates and finally corm skin disintegrates.
- If you see lesions on the surface of the corm or roots are decayed, then cut open corm. See if there is rotting. There will be a sharp line between healthy and diseased tissue.
- Consider taking action as soon as symptoms are seen

Direct Control

- Remove diseased plant material from the field at harvest and burn (if allowed in your area) to reduce inoculum levels

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.