



Coconut Research Institute of Sri Lanka



Advisory Circular No B 10

STEM BLEEDING DISEASE AND ITS CONTROL

Stem bleeding is a common disease in every coconut growing area. It can occur due to several causes, but if it is due to the fungus *Ceratocystis paradoxa*, prompt action has to be taken to treat these palms.

Symptoms of the disease

Main symptoms of this disease is oozing out of reddish brown rust coloured liquid from the longitudinal cracks on the bark. Bleeding points turn brown and finally to black colour. The tissues beneath the bleeding point turn yellow and decay to a brown fibrous mass. Adjacent bleeding points coalesce beneath the bark and form large decayed areas. With the time, bleeding cease and the liquid dry on the bark as black patches.

Young palms with rapidly expanding trunk bases are more prone to stem bleeding disease due to cracking of the bark

Other causes for stem bleeding

Infection of coconut palms by the fungus *Ganoderma* often show basal stem bleeding. It is rear in Sri Lanka and production of bracket shape fruiting bodies of the fungus at the bases of the palm is a characteristic sign of this disease.

Bleeding can occur as a result of lightening damage, fire damage, use of high dose of fertilizer, flooding, frequently fluctuating water table and red weevil attack.

Fire damage and lightening can be easily identified in the presence of ash and a cluster of palms with broken fronds respectively.

Red weevil infested palms can be identified as the presence of empty red weevil cocoons and circular holes on the trunk, leaf petioles.



Picture 1:A palm affected by stem bleeding

Control measures

Early identification makes the management easy. Affected tissues should be removed with little healthy tissues and the wound should be treated with Bordeaux paste or Bordeaux mixture or 1% copper fungicide solution. After few weeks of application when there is no more bleeding the wound could be dressed with coal tar application to prevent termite damage.

In the case of lightening damage an oblique hole should be cut into the trunk to facilitate draining out of fluid collected. Later these holes should be closed with cement sand mixture.

Monocrotophos insecticide should be injected into the trunk of red weevil infested palms to kill the larvae feeding the soft tissues inside the trunk.

Bordeaux paste is prepared dissolving 450g Copper Sulphate in 2.25 l of water mixing with a suspension of 450g of quick lime in 2.25 l of water.

Bordeaux Mixture is prepared as follows.

Copper Sulphate	200 g
Quick Lime	200 g
Water	25 l

Dissolve Copper Sulphate overnight in 5 l of water (suspend in a bag to facilitate dissolving). Suspend lime separately in 20 l of water and strain through a fine cloth. Add the Copper Sulphate to the lime stirring vigorously. Use immediately after preparation.

Many Copper fungicide brands are available in the market. Prepare 1% solution according to the instructions given by the manufactures.

Note: Bordeaux mixture, paste and fungicides are toxic. Handle with care.