

## MANAGEMENT OF GANODERMA DISEASE IN OIL PALM FARMS

### 8. Ganoderma infection management methods for infected trees

#### a) 'Mounding' or pile the surrounding of the stem with soil

i. Cover the stem with soil to encourage the growth of the root.

ii. Strengthen the base of the tree so it does not collapse during strong wind.

iii. Only use for Basal Stem Rot (BSR) infected palms with an infection section located 1 meter or less from the ground level.

#### iii. Mounding Steps:

- Get rid of the infected stem tissue, if the infection part is shallow.
- Pile and cover soil to a height of 1 meter from the ground around the stem of the infected tree.



Diagram 11. Mounding for infected tree that is still productive

#### b) Collect and destroy the *Ganoderma* fungus brackets

i. Reduce the spread of spore sources into other areas.

ii. Destroy the fungus brackets by soaking them under water.

iii. Label (use red paint) so that *Ganoderma* infected trees can be identified.

- Mark ( G ) to indicate the tree that has been infected by Basal Stem Rot (BSR).
- Mark (  $\hat{G}$  ) to indicate the tree that has been infected by Upper Stem Rot (USR).
- Mark (  $\hat{\hat{G}}$  ) to indicate the tree that has been infected by both BSR and USR.



Diagram 12. Base Stem Rot (BSR)



Diagram 13. Upper Stem Rot

## 9. Management methods for dead *Ganoderma* infected trees

### a) Excavate and remove/expose

- i) Remove the residual diseased tissues from embedded in the soil.
- ii) Expose diseased tissues to the sun so that they dry easily. Fungi will dried and die when exposed to dry air and sunlight.
- iii) Methods:
  - Dig the diseased trunk base and shredded the trunk base and trunk.
  - Spread the shredded parts on the ground but away from the planting points.
  - Excavate a 2 meters x 2 meters x 1.5 meters deep hole at the dug site of the infected stem base.
  - Spread the excavated soil so that it is exposed to the sun and DO NOT bury the diseased tissues.

### b) Plant away from infected trees

- i) Made ensure that the new tree is planted away from the previous site of the infected tree.
- ii) It is to avoid roots of the newly planted tree from infection.

### c) Dig Isolate Trench (Peat only)

- i) Isolation tenches is dug to segregate the infected trees from other healthy trees.
- ii) Dig a trench with measures 4 meters x 4 meters around an infected palm tree. The trench should be 1 meter wide and 30cm deep.
- iii) Frequent maintenance of the trench is required.