Ministry of Food Production
Extension Training and Information Services Division

FACT SHEET

Coc/TT: Ag Ext : 13 :05

BLACK POD DISEASE OF COCOA

WHAT IS BLACK POD DISEASE?

Black Pod disease is caused by a fungus, *Phytophthora palmivora.* It infects pods, flower cushions, young vegetative shoots, stems and roots of cocoa trees. Black pod disease occurs mainly during the rainy season and is spread mainly by rain splash. When it is dry, such as in the dry season, the fungus is unable to grow, reproduce or infect cocoa.

WHAT ARE THE SYMPTOMS OF BLACK POD DISEASE?

Symptoms on pods:-

Infection of the pod can occur at any age and on any part of the pod surface. Externally, it begins as a circular brown spot which grows rapidly to cover the entire pod (*figures 1 and 2*). Under wet conditions, the fungus grows and reproduces, giving the spots a dingy white appearance. The infected pods darken to a blackish colour which eventually dries and becomes mummified. The brown spot has a characteristic fishy odour .

Figure 1: Infected Mature Pod

Figure 2: Infected Immature Pods

Internally, the disease causes the cocoa beans to rot (*figure 3*).

Figure 3: Rotted Beans Inside Pod

Diseased pods on trees and on the ground encourage the spread of the fungus.

Symptoms on flower cushions:-
Infection of the flower cushion is most likely to occur if an infected pod remains attached to the cushion (*figure 4*). Such a cushion may bear infected pods. Infected cushions encourage spread of the fungus.

Figure 4: Infected Pod and Flower Cushion

Symptoms on vegetative shoots:-
The fungus causes a rapid browning of young tissue. This results in death of entire shoots.

Symptoms on stems:-
Infection through wounds in the bark of the trunk leads to cankers on the stem. When the bark in this area is removed, a bright pink to wine coloured area can be seen.

HOW CAN BLACK POD DISEASE BE CONTROLLED?

The most effective means of controlling this disease involves a combination of practices:

1. Use recommended spacing.
2. Use recommended Trinidad Selected Hybrids (TSH) with high yielding characteristics and known tolerance to the disease.
3. Remove and destroy (burn) all infected pods since these encourage spread of the fungus.
4. Control weeds and manage shade so as to improve air flow and reduce humidity.
5. Construct and maintain drains to remove excess water.
7. Apply fungicides as recommended. The application of fungicides should be timed to coincide with the start of the disease in the field.

Cocoa trees flower and produce pods during the rainy season; a time which also provides the ideal weather conditions for spread of the disease. It is therefore advisable to apply the fungicides at the most critical times between flowering and pod maturity:

- at flowering - (July/Aug)
- at young pod set - (Sept)
- When the pods are mature - (Nov/Dec)

or as necessary depending on how heavy rain falls.

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