

## Introduction

Plantains are a major sub-group of the cultivated banana (*Musa sp.*). Plantains are sturdy plants grown on the Coastal Plains and in riverain areas. Plantains are important food crops in Guyana. Plantains have been identified for expansion under the Agricultural Diversification Project (ADP).

### Varieties

The main varieties of plantains cultivated in Guyana are 'Horse', 'Creole' and 'Horn'. Farmers can choose from these three varieties depending on the market (both local and export) requirements.

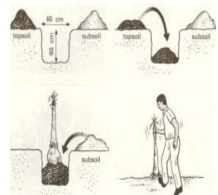
### Land Preparation

If new lands are to be used, all vegetation must be removed. A systemic herbicide could be used to get rid of all growth. For both new lands and previously cropped lands, plough with light machinery to a depth of 15-20cm (6-8").

Planting holes should be marked out using the following spacing:

(a) 2.4m x 2.4m (8' x 8') if plantain is the only crop to be planted (680 plants/acre).

(b) 3.6m x 3.6m (12' x 12') for intercropping (302 plants/acre). The



The planting holes should be dug 60x60x60 cm (2' x 2' x 2'). In preparing the planting holes, separate the top soil from the subsoil. The top soil is then placed at the bottom of the hole and the subsoil above to form a mound.

### Selection of Planting Materials

Three types of suckers (**Sword, Maiden and Bullhead**) are available. It is advisable to use the Sword sucker with the full corm at the base. Plants from the Sword sucker develop into stronger plants.



For rainy season planting, you may plant a sucker 60-90 cm (2-3') long. For the dry season, it may be 30-45cm (1-1 1/2') in length. Make a



slanted cut on the upper part. Place longer sucker in the hole and fill back with soil or place the short sucker into the hole and cover over to just cover the cut surface of the sucker.

### Pre-planting Preparation of the Suckers

Nematode and borer damage of plants are the main reason why they topple over. Proper treatment of the planting material will avoid this.

Trim away all brown areas from the base of the sucker to be planted. Trim all away until only white flesh is visible. Remove all dry and drying leaves at the same time. Place in a mixture of 10mls of Vydate L to 1 gal of water.

Leave for 2-3 minutes completely immersed. Plant as soon as possible after. Sucker to be carried elsewhere for planting should be cleaned and treated in the field where they were taken. Dispose of all trimmed material by burning or burying immediately.

### Pseudostem Borer

Slimy colourless secretions on the pseudostem indicate the presence of borers. These can be controlled with Triazophos. Make 2-3 holes 9cm (3") about 60cm (2') from the ground. These holes should 45° angle and sideways into the trunk. With the use of a dispensary bottle, Triazophos is pored into the holes. **DO NOT APPLY THIS TREATMENT TO PLANTS WHICH HAVE IMMATURE OR MATURE FRUITS.**

### Fruit Scarring Beetle

This beetle feeds on the young fruit causing wounds on the surfaces. The wounds are only superficial and do not extend to the edible portion of the fruit. The beetle can be controlled by spraying bunches with 0.1% concentration of Sevin 85%, W.P. (Carbaryl) solution or any contact insecticide with limited residual power. The use of bunch covers is the recommended method for controlling this beetle.

### Nematode

Nematodes cause damage to the roots, resulting in the reduced uptake of water and



nutrients. The affected plants are prone to topping under bunch weight or to being blown over by not so strong winds. Nematodes can be controlled by spraying the soil with Vydate L.

### Fertilizing

In the absence of a soil test, the following are the recommended rates of fertilizers to be applied to each plant.

Urea: 450g (1lb)

TSP: 225g (1/2 lb)

MOP: 225g (1/2 lb)

All of the Triple Super Phosphate (TSP) and one half of the Urea and Muriate of Potash (MOP) should be applied in the hole at planting. At flowering, apply the remainder of the Urea and MOP.

### GENERAL MAINTENANCE

#### Good Field Sanitation

Keep fields as clean as possible using manual or chemical methods. Especially important to keep the areas immediately around the plants clean as weeds encourage pests and diseases and rob the plants of (nutrients).

Trim and destroy all dead and dying leaves. Maintain a spray programme as recommended by the Ministry of Agriculture.



## DISEASE MANAGEMENT

The major disease of plantains in Guyana are Moko and Sigatoka Diseases.

### Moko Disease

Moko is a bacterial disease which results in the yellowing and dropping of leaves which results in the eventual death of the plants. Areas which have been affected by this disease should be rotated with other crops such as yams, sweet potatoes and eddoes. There are no known controls for Moko disease.

### Sigatoka Diseases

Black Sigatoka or "Dry Leaf Disease" caused by a fungus has been a recently identified in Guyana. Look for any unusual drying of the leaves especially on Plantains. The lower, older leaves are first affected and the disease moves to the upper leaves. Eventually the affected leaves becomes brown and possibly black and completely dries up. Fruits are spotted and bunches may be smaller in size.



## Managing Sigatoka Diseases



- Cut affected leaves and dispose of properly by burning or burying.
- Do not carry suckers out of your field under any circumstances.
- Maintain clean fields to avoid spreading the disease. Follow good agricultural practices on your farm.
- Call the Ministry of Agriculture for advice on what chemicals (pesticides) to spray.

## PEST MANAGEMENT

### Plantain/Banana Weevil

Weevils cause tunnels to develop in the corm. Red marks may also appear on the pseudostem surface near the corm. Weevils can be controlled by de-suckering and cleaning mats regularly and removing all dead and decaying matter. Infested plants can be treated with Triazophos, Basudin or Vydate L at a rate of 15ml to 4500ml (1/2 fl. oz to 1 gal) water and applied thoroughly on the plant.



## Harvesting and Storage

Plantains require about three months from the beginning of flowering until harvest. Plantains should be harvested when the skin is green in colour. After harvest, the bunches should not be piled up on one another. The fruit should not be exposed to sun, rain or wind. The optimal storage and transportation temperature for maximizing plantain storage life is between 12°C and 14°C. (allows for storage between 4 to 5 weeks). The shelf life of green mature plantain can be extended at ambient temperature by storing the fruit in polyethylene bags with an ethylene absorbent (potassium permanganate) wrapped in porous paper.



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Ministry of  
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## Growing Plantains in Guyana



Rural Enterprise and  
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Project