BANANA

Designed by:

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Table of Contents

Varieties 1
Soil needs 1
Climatic conditions.....1
Land Preparation 1
Fertilization 2
Planting 2
Plantation Management 2
Disease management 4
Panama Wilt 4
Leaf spot or Leaf Steak, Sigotoka leaf spot.....5
Anthracnose.....6
Cigar End Tip Rot.....6
Bacterial Wilt or Moko Disease.....7
Bacterial Wilt or Moko Disease.....8
Harvesting 8

Varieties

We have three main groups of banana plants in East Africa:

The East African Highland Banana: these are the most dominant in the region especially in Uganda. They include the cooking type (Matooke) and the brewing type (Mbidde) and these two types are physically similar.

The plantains: (e.g. Gonja) these are mostly grown in the high lands of kasese in Uganda, the crop is not widely grown and is eaten roasted.

The cultivars of the East African coast: these include the edible Sukalindizi dessert banana eaten ripe, kisubi a brewing type, kayinja also a brewing type and kivuvu a cooking and brewing type.

Soil needs

Banana requires a deep, well drained loam soil with high humus content. Banana best grows in soil pH ranging from about 5.6-7.5. It doesn't tolerate acidic soil. The crop needs an adequate supply of potassium, nitrogen, magnesium, calcium and phosphorus.

Climatic conditions

Banana grows best at a temperature of about 27°C. The grow bananas and flowering are negatively affected at lower temperatures. Banana grows best when they receive 1500-2500mm rain per year which is well distributed over the year. The crop grows best where relative humidity is at least over 60%.

Land Preparation

Land should be slashed and prepared without burning to protect organic matter. About two ploughings are sufficient to provide a good seed bed for banana. The drainage channels or soil conservation bunds are established along the contours.

Fertilization

Bananas absorb a lot of nutrients from the soil. Therefore, there is need to for you to replenish the soil using external sources like the farm yard manure, crop residues, homestead and kitchen refuse. You should however avoid applying metals or polythene on your banana plants. You should never apply manure too close to the banana mat as this would encourage banana weevils to breed and will also result in the high mat condition.

Planting

The best time for planting your bananas will depend on your local climatic conditions.

In areas with pronounced dry season and yet irrigation is not possible, you will typically plant at the beginning of the rains.

You will plant your bananas in holes dug by hand. Your banana holes should be roughly (45x45x45) cm, with a recommended spacing of (3x3) cm.

Mix well rotten manure or compost (1-2) tins with top soil and return it to the hole.

Put the sucker in the middle of the hole and cover with the rest of the soil.

If you chose to use corm bits, be sure NOT to bury your corms deep; cover with just a 5cm layer of soil.

Plantation Management

Here are tips on how to manage your banana plantation including how to De-sucker, how to mulch, how to stake, how to Bag, how to deflower and how to apply fertilizers on your plantation.

De-suckering; this involves uprooting of excess suckers from a banana mat, you will this in order to suit the harvest frequency. Removing of the side shoot is done until the emergence of flowers 1-3 stems at most per mat (i.e. the bearing one, the follower and the sucker). Sucker management is important to avoid high

mats and to maintain proper spacing. High or many suckers per mat could easily fall.

Mulching; this is used to conserve moisture in the soils, and to reduce rainfall runoff to avoid erosion. Mulch also improves the soil as the mulch material rots. However, mulch is known to serve as breeding place for banana weevils and other pests. Additionally, if you placed your mulch too close to the mother plant it will affect the growth of the young suckers. The means you need to work out a balanced approach to mulching your banana plantation in Uganda.

Staking; Bananas are susceptible to winds and should be staked to provide extra support to the banana stems. Banana cultivars that bear very big bunches are most susceptible to heavy winds. You normally do your banana staking using a forked pole.

Bagging; this involves majorly covering the banana bunch with a treated polythene bag to minimize sooty mold (Furry growth of fungus), insect damage and abrasion injury to the fruits.

Deflowering; once all the fingers have developed the rest of the inflorescence including the male flower bud) should be removed to reduce incidences of fungus and insect attack.

Disease management

Panama Wilt

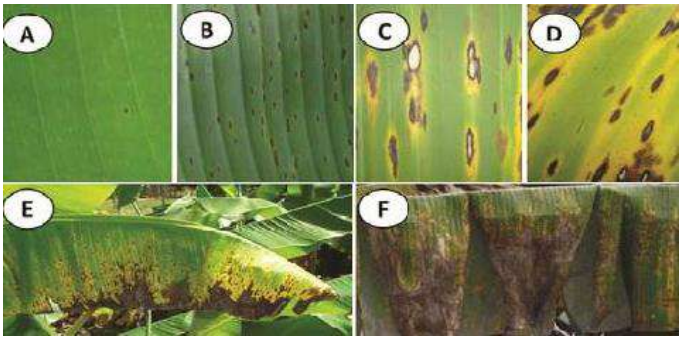
Symptoms

- Yellowing of lower leaves including petioles and leaf blades.
- Leaves hang around the pseudo stem and wither.
- Yellowish to reddish steaks are noted with color intensification.

Control

- Affected plants should be uprooted and burnt.
- Banana should not be planted in affected soil for a period of 3-4years.

Leaf spot or Leaf Steak, Sigotoka leaf spot



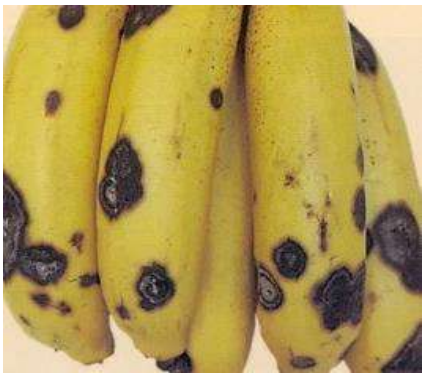
Symptoms

- Slight discoloration between the leaf's secondary veins.
- Over time, these points develop into pale yellow streaks, brown streaks and elliptic necrotic spots arranged parallel to the secondary veins.
- The depressed grey center is surrounded by a yellow halo. As the disease progresses, the lesions coalesce and cover a large area of the leaf.

Control

- Sigota leaf spot is best controlled using both cultural and chemical methods. Cultural approaches may involve improved drainage, control of weeds, removal of affected suckers and proper spacing.
- Chemical approaches may involve use of Dithane M-45 MP (in oil water emulsion) and Dithane 45 (in water only). Foliar spray of copper oxychloride (3g/litre of water) or Thiophanate Methyl (1g/litre of water) control the disease effectively.

Anthracnose



Symptoms

- Large brown patches covered with crimson growth of fungus.
- The diseased fruit turns black and the fruit is shriveled.

Control

Spray with Chrorothanlonil (0.2%) and Bavistin (1%) four times at 15 days intervals.

Cigar End Tip Rot

Symptoms

- The black dead tissue spread to the tip of the immature fingers.
- Rotten portion of the finger is dry and ash-like.

Control

Removal of pistil and parianth by hand 8-10 days after bunch formation and spraying the bunch with Dithane-45 (0.1%) or Topsin M (0.1%).

Bacterial Wilt or Moko Disease

Symptoms

- Affected plants show rapid wilting and collapse of the younger leaves later, these symptoms progress towards the older leaves.
- Leaves acquire a tingly whitish-yellow appearance, become dry, flaccid and readily drop around the pseudo-stem.
- If the diseased suckers are planted, terminal leaf becomes necrotic and the plant dies. Infected young sword suckers show wilting and blackening .
- Vascular discoloration ranging from pale yellow to dark brown or bluish black in the form of a ring is seen at the central part of the pseudostem, when it is cut transversely.
- Slimy drops of bacterial ooze which is grayish brown in color appears at the transverse cut end of the pseudostem.
- When fruit bunch is produced, the fingers appear distorted and turn yellow resulting in premature ripening of fruits.
- The pulp turns into a very characteristic dark brown color.

Bacterial Wilt or Moko Disease

Control

- Eradicate and destroy suckers. Subsequently, disinfect the area with 0.1% bleaching powder (1g/L) solution.
- Spread bleaching powder or 10 % fresh cow dung slurry (100g/L) in the plant basin.
- Drench soil with 1% Bordeaux mixture or 0.4% Copper oxychloride(4g/L).
- Use disease free planting material.
- Leave the soil fallow for 6 months, especially in summer.
- Adopt crop rotation with non-host crops for 12 months.
- Before planting treat suckers with 0.4% copper oxychloride (4g/L) for 30 minutes.
- Drench soil with antibiotics like Streptomycin / Streptocycline 500ppm (5 g/10 liters).

Harvesting

Your bananas should mature within 3-6 months.

Mature bananas are hard; the flower bract is dry and breaks off easily from the fruit tip.

Harvest your banana bunches with a curved knife, or a sharp panga, you will need to cut the bunch stem carefully.