






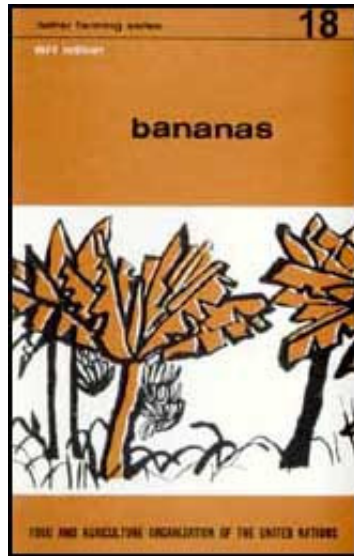

















[Home](#)-immediately access 800+ free online publications.
[Download](#) CD3WD (680 Megabytes) and distribute it to the 3rd World. CD3WD is a 3rd World Development private-sector initiative, mastered by Software Developer [Alex Weir](#) and hosted by [GNUveau Networks](#) (From globally distributed organizations, to supercomputers, to a small home server, if it's Linux, we know it.)[ar](#).[cn](#).[de](#).[en](#).[es](#).[fr](#).[id](#).[it](#).[ph](#).[po](#).[ru](#).[sw](#)

- ➔  Better Farming Series 18 - Bananas (FAO - INADES, 1977, 27 p.)
 -  *(introduction...)*
 -  Preface
 -  Why bananas are grown
 -  Where bananas are grown
 -  Description of the banana plant
 -  *(introduction...)*

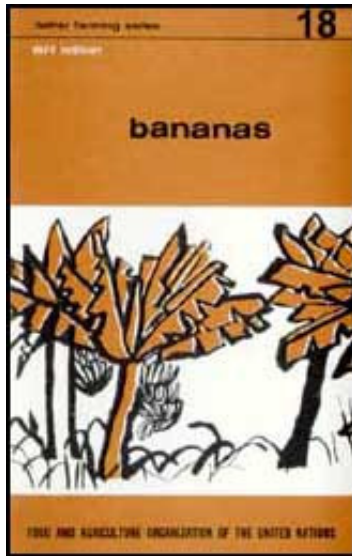



-  **Apparent trunk**
-  **Underground stem and roots**
-  **Leaves**
-  **Flowers**
-  **Fruit**
-  **Digging the planting holes**
-  **Planting the suckers**
-  **Looking after the plantation**
 -  *(introduction...)*
 -  **Keeping the soil clean**
 -  **Applying fertilizers**
 -  **Pruning**
 -  **Supporting the plant**
 -  **Looking after the fruit**
 -  **Protection against insects and**









- **diseases** Harvesting and use of bananas
 - 📄 Harvesting
 - 📄 Output of a plantation
 - 📄 Use of bananas
 - 📄 Running a commercial banana plantation
- 📄 Suggested question paper



[Home](#)-immediately access 800+ free online publications.
[Download](#) CD3WD (680 Megabytes) and distribute it to the 3rd World. CD3WD is a 3rd World Development private-sector initiative, mastered by Software Developer [Alex Weir](#) and hosted by [GNUveau Networks](#) (From globally distributed organizations, to supercomputers, to a small home server, if it's Linux, we know it.)[ar.cn.de.en.es.fr.id.it.ph.po.ru.sw](#)



 Better Farming Series 18 - Bananas
(FAO - INADES, 1977, 27 p.)

- ➔  *(introduction...)*
-  Preface
-  Why bananas are grown
-  Where bananas are grown
-  Description of the banana plant
-  Looking after the plantation
-  Harvesting and use of bananas
-  Suggested question paper

Published by arrangement with the
Institut africain pour la dveloppement conomique et social
B.P. 8008, Abidjan, Cte d'Ivoire

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED
NATIONS

Rome 1977

FAO Economic and Social Development Series No. 3/18

Reprinted 1984, 1992

P-69

ISBN 92-5-100149-9

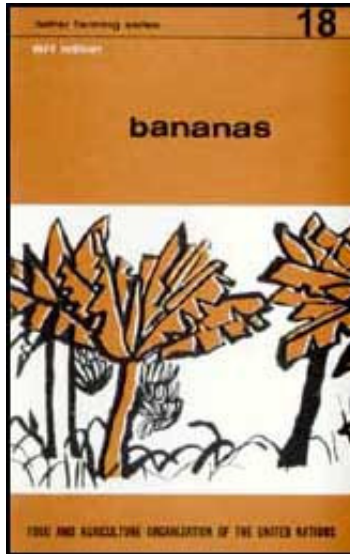
© French edition, Institut africain pour le dveloppement
conomique et social (INADES) 1971

© English edition, FAO 1977



[Home](#)-immediately access 800+ free online publications.
[Download](#) CD3WD (680 Megabytes) and distribute it to the 3rd
World. CD3WD is a 3rd World Development private-sector
initiative, mastered by Software Developer [Alex Weir](#) and

hosted by [GNUveau Networks](#) (From globally distributed organizations, to supercomputers, to a small home server, if it's Linux, we know it.)[ar.cn.de.en.es.fr.id.it.ph.po.ru.sw](#)



- 📖 Better Farming Series 18 - Bananas (FAO - INADES, 1977, 27 p.)
 - 📄 *(introduction...)*
 - ➔ 📄 Preface
 - 📄 Why bananas are grown
 - 📄 Where bananas are grown
 - 📄 Description of the banana plant
 - 📄 Looking after the plantation
 - 📄 Harvesting and use of bananas
 - 📄 Suggested question paper

Preface

The first twenty-six volumes in FAO's Better Farming Series were based on the Cours d'apprentissage agricole prepared in the Ivory Coast by the Institut africain de dveloppement conomique et social for use by extension workers. Later volumes, beginning with No. 27, have been prepared by FAO for use in agricultural development at the farm and family level. The approach has deliberately been a general one, the intention being to constitute basic prototype outlines to be modified or expanded in each area according to local conditions of agriculture.

Many of the booklets deal with specific crops and techniques, while others are intended to give the farmer more general information which can help him to understand why he does what he does, so that he will be able to do it better.

Adaptations of the series, or of individual volumes in it, have been published in Amharic, Arabic, Bengali, Creole, Hindi,

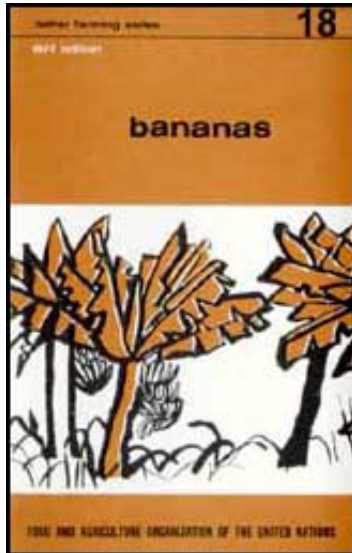
Igala, Indonesian, Kiswahili, Malagasy, SiSwati and Turkish, an indication of the success and usefulness of this series.

Requests for permission to issue this manual in other languages and to adapt it according to local climatic and ecological conditions are welcomed. They should be addressed to the Director, Publications Division, Food and Agriculture Organization of the United Nations, Via delle Terme di Caracalla, 00100 Rome, Italy.



[Home](#)-immediately access 800+ free online publications. [Download](#) CD3WD (680 Megabytes) and distribute it to the 3rd World. CD3WD is a 3rd World Development private-sector initiative, mastered by Software Developer [Alex Weir](#) and hosted by [GNUveau Networks](#) (From globally distributed organizations, to supercomputers, to a small home server, if

it's Linux, we know it.)[ar](#).[cn](#).[de](#).[en](#).[es](#).[fr](#).[id](#).[it](#).[ph](#).[po](#).[ru](#).[sw](#)




Better Farming Series 18 - Bananas (FAO - INADES, 1977, 27 p.)

 *(introduction...)*

 Preface


  Why bananas are grown

 Where bananas are grown

 Description of the banana plant

 Looking after the plantation

 Harvesting and use of bananas

 Suggested question paper

Why bananas are grown

The banana plant is grown for its fruit.

Bananas to be eaten raw are grown in commercial plantations, chiefly for export.

These bananas are soft, sweet, and not very mealy. Two main kinds are planted:

- Varieties of the so-called Chinese banana, or Canary banana, such as Lacatan (chiefly in Jamaica), Poyo, Big Dwarf, Little Dwarf.
- Varieties of the fig banana, such as Gros Michel.

Around houses you often see another variety which produces very small bananas called "sweet figs."

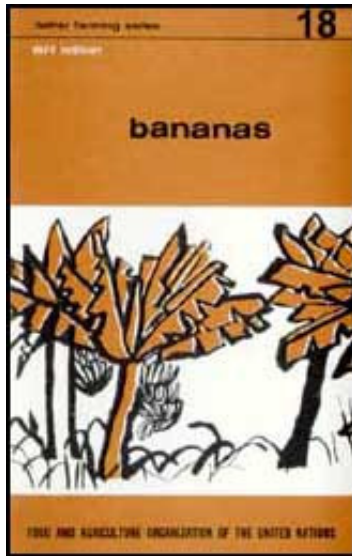
The kind of banana called plantain is grown as a food crop in forest regions. Its fruits are very large, not sweet and very mealy. They are cooked for eating.

There are two main types of plantains:

- French plantains, with heavy bunches containing many fruits;
- horn plantains, with very big fruits, few in number, shaped like a horn.



[Home](#)-immediately access 800+ free online publications.
[Download](#) CD3WD (680 Megabytes) and distribute it to the 3rd World. CD3WD is a 3rd World Development private-sector initiative, mastered by Software Developer [Alex Weir](#) and hosted by [GNUveau Networks](#) (From globally distributed organizations, to supercomputers, to a small home server, if it's Linux, we know it.)[ar](#).[cn](#).[de](#).[en](#).[es](#).[fr](#).[id](#).[it](#).[ph](#).[po](#).[ru](#).[sw](#)



Better Farming Series 18 - Bananas (FAO - INADES, 1977, 27 p.)



(introduction...)



Preface



Why bananas are grown



Where bananas are grown



Description of the banana plant



Looking after the plantation



Harvesting and use of bananas



Suggested question paper

Where bananas are grown

The banana needs heat, humid air, plenty of water, light.

It dislikes wind.

It likes soils rich in organic matter.

It likes soils that drain quickly.

Once picked, bananas should not be left long in the plantation.

Banana plants are planted along roads, tracks, railway lines or lagoons so that the fruits can be quickly moved away.

In the world as a whole, Central and South America produce most bananas nearly 20 million tons a year. Asia produces 10.2 million tons and Africa 4.2 million tons.

In Africa, the chief producers of bananas are:

Angola	320 000 tons
Madagascar	280 000 tons
Ivory Coast	230 000 tons
Central African Empire	170 000 tons

Somalia	140 000 tons
Cameroon	90 000 tons
Guinea	90 000 tons

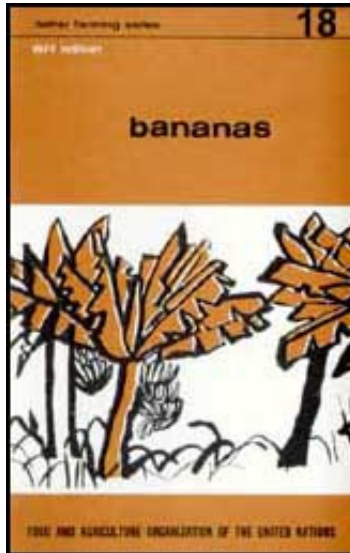
The above Figures (for 1974) are from the FAO Production yearbook 1974.

The production of plantains is often not counted.











[Home](#)-immediately access 800+ free online publications.
[Download](#) CD3WD (680 Megabytes) and distribute it to the 3rd World. CD3WD is a 3rd World Development private-sector initiative, mastered by Software Developer [Alex Weir](#) and hosted by [GNUveau Networks](#) (From globally distributed organizations, to supercomputers, to a small home server, if

it's Linux, we know it.)[ar.cn.de.en.es.fr.id.it.ph.po.ru.sw](#)



Better Farming Series 18 - Bananas (FAO - INADES, 1977, 27 p.)

- ➔ Description of the banana plant
 -  *(introduction...)*
 -  Apparent trunk
 -  Underground stem and roots
 -  Leaves
 -  Flowers
 -  Fruit
 -  Digging the planting holes
 -  Planting the suckers

Better Farming Series 18 - Bananas (FAO - INADES,

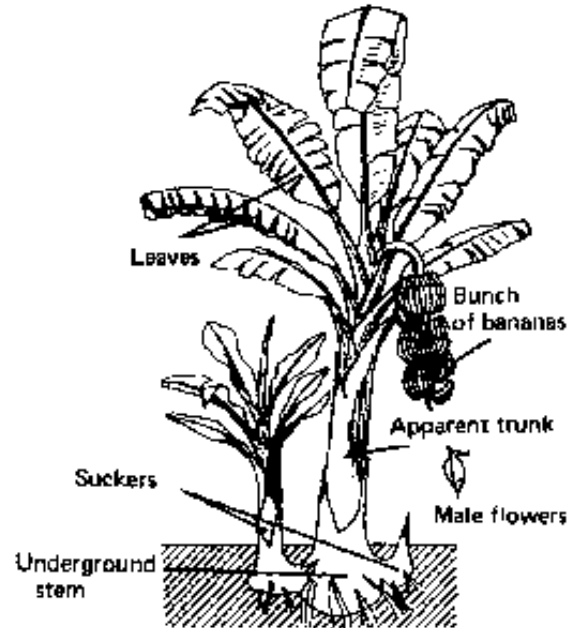
1977, 27 p.)

Description of the banana plant

The banana plant is not a tree.

Apparent trunk

It is a giant herbaceous plant with an apparent trunk that bends without breaking (see Booklet No. 2, page 10).



A banana plant

Underground stem and roots

The banana has an underground stem with adventitious roots (see Booklet No. 1, page 25). It is full of food for the plant.

Alongside the main stem, it has other stems called suckers. These stems grow into banana plants.

The banana plant produces its fruit and dies.

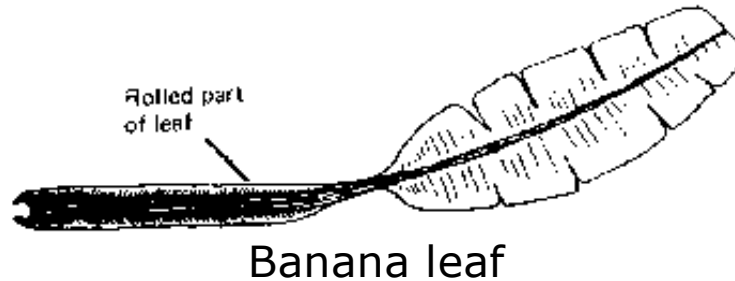
Another sucker replaces it.



An underground stem with suckers

Leaves

The banana plant has large leaves closely rolled up one over the other. Together they look like a trunk, but they form only an apparent trunk.



Inside it there is a bud which produces leaves.

After 7 or 8 months, when some 30 leaves have grown, the bud produces flowers.

Flowers

The flowers of the banana plant form a large spike (see Booklet No. 3, page 6).

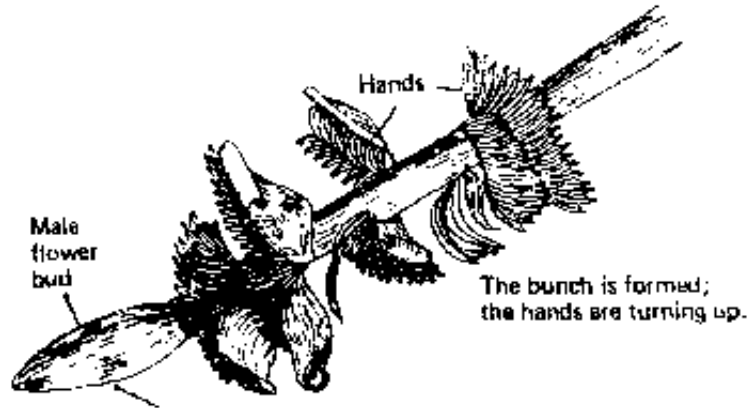
It turns downward to the soil and opens. It bears male and female flowers.



The spike comes out of the apparent trunk and turns to the ground

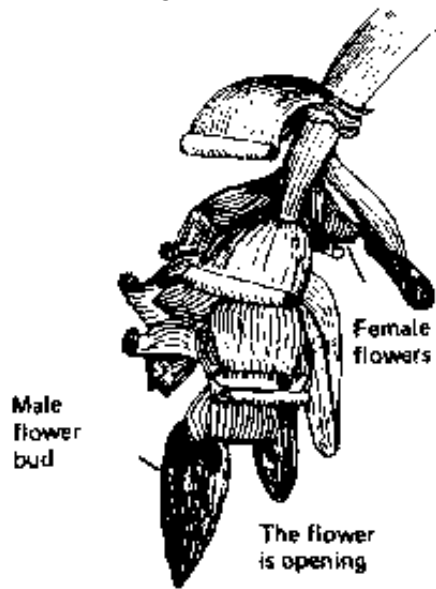
You can see:

- the female flowers pressed closely together in the shape of hands.



The bunch is formed; the hands are turning up.

- a red bud at the end of the spike containing the male flowers; the male flowers die quickly and the bud slowly becomes smaller.



The flowers is opening

Fruit

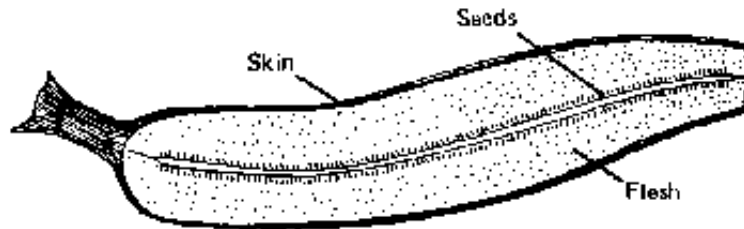
The banana plant yields fruits. These fruits are long in shape, with yellow or green skin.

The spike produces many bananas. The bananas on one spike are called a bunch.

On this bunch, the bananas are clustered in several hands.

The flesh of a banana is light in color, sweet and soft.

In the middle of the fruit you can see little black specks; these are the seeds, but they will not germinate (see Booklet No. 1, page 8).



Section of a banana

For example:

In southern Ivory Coast, Poyo bananas are planted 2 metres apart in rows that are 2 metres apart. This gives about 2 500 banana plants to the hectare.

In Cameroon Gros Michel bananas are planted 2.85 metres apart in rows 2.85 metres apart.

In plantations where bananas are grown with other crops, bananas may be planted 5 metres apart in rows 5 metres apart.

Digging the planting holes

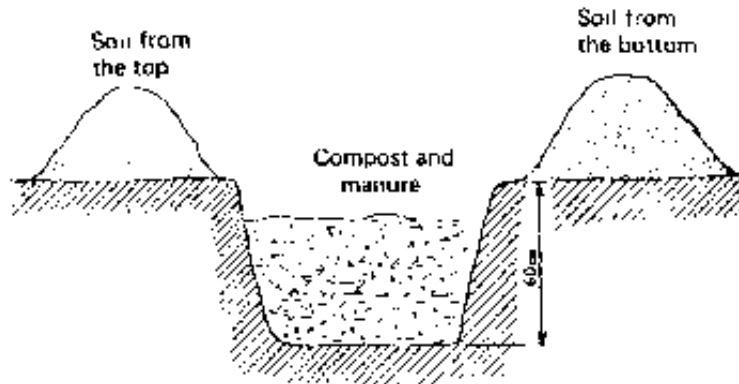
One or two months before planting, make a hole at the places where the pieces of wood were stuck in the ground.

Make the holes 60 centimetres deep, 60 centimetres wide and

60 centimetres long.

Put the soil from the top on one side and the soil from the bottom on the other side.

Fill the holes with compost and manure (see Booklet No. 6. pages 5 - 7).



Put the soil from the top on one side and the soil from the bottom on the other side.

Bananas dislike wind. To shelter them, plant bamboos on the edges of the plantation.

These bamboos will also provide stakes for the bananas (see page 15).

Planting the suckers

For planting, use suckers (see page 4). Take them from banana plants that are between 3 and 6 years old. These suckers should be between 50 centimetres and 1 metre high and broad at the base. Let them dry in the shade for 3 or 4 days before planting them.

Just before planting them, trim them at a point 50 centimetres from the base of the plant and dip them in water in which potassium permanganate is mixed.

Plant at the end of the dry season, so that roots grow before the rainy season begins, and the suckers do not rot.

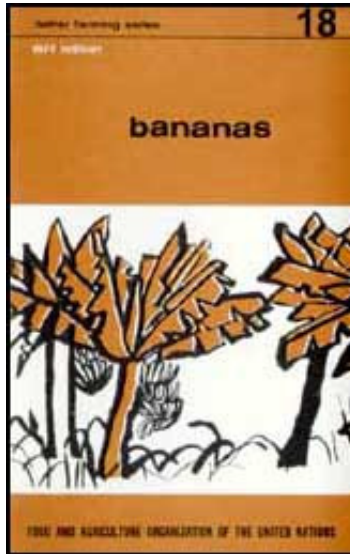
Two months earlier, you made the planting holes. You separated the soil at the bottom from the soil at the top. You put compost in the holes.


At planting time, take the compost out of the holes. Put the soil from the top into the bottom of the hole, place the sucker in the earth. The base of the sucker is now 10 centimetres from the surface of the ground. Put compost round the young plant. Put the bottom soil on the ground surface.



[Home](#)-immediately access 800+ free online publications.
[Download](#) CD3WD (680 Megabytes) and distribute it to the 3rd World. CD3WD is a 3rd World Development private-sector initiative, mastered by Software Developer [Alex Weir](#) and


hosted by [GNUveau Networks](#) (From globally distributed organizations, to supercomputers, to a small home server, if it's Linux, we know it.)[ar.cn.de.en.es.fr.id.it.ph.po.ru.sw](#)



 Better Farming Series 18 - Bananas
(FAO - INADES, 1977, 27 p.)

➔  Looking after the plantation

 (*introduction...*)


 Keeping the soil clean

 Applying fertilizers

 Pruning

 Supporting the plant

 Looking after the fruit

 Protection against insects and diseases

Better Farming Series 18 - Bananas (FAO - INADES, 1977, 27 p.)

Looking after the plantation

For a fine plantation, you must:

- keep the soil clean;
- apply fertilizers;
- prune the plants;
- prevent the plants from falling;
- look after the fruit;
- protect the plants from diseases and insects.

Keeping the soil clean

The grass grows a lot when the banana plant is small.

When the banana has grown up, the grass dies, because it has no light.

There is no need to sow a cover plant.

If the grass does not die, apply Gramoxone. Mix 0.4 litres of the product with 400 litres of water to treat one hectare. Add a spreader to the mixture to make it stick to the grass better.

You can put down a mulch (see Booklet No. 5, page 18) of dry grass and leaves at the end of the rainy season.

This vegetation will rot, and make humus; it will help to keep the soil moist during the dry season.

In low-lying ground there is too much water. It must be drained (see page 9).

In other places, the bananas do not get enough water. So you must give the bananas water by irrigating them (see Booklet No. 6, pages 18- 19).

Look for a stream where there is water all the year. Dig ditches between the rows of bananas.

Lead the water from the stream with dams and ditches, so that the soil of the plantation is always moist.

Applying fertilizers

You added organic matter in the form of the compost that you put into the planting holes.

The leaves and stalks cut from banana plants rot on the soil and add more organic matter.

But the plantation still needs mineral salts (see Booklet No. 1, page 19).

Bananas like potassium (see Booklet No. 6, page 11).

You can give a banana plant each year the following:

- Nitrogen (see Booklet No. 6, page 10) 750 grammes of ammonium sulphate or 300 grammes of urea.
- Phosphorus (see Booklet No. 6, page 10) 300 grammes of dicalcium phosphate or 500 grammes of Thomas slag (Bessemer basic slag).
- Potassium (see Booklet No. 6, page 11) 600 grammes of potassium chloride.

Give also 500 grammes of dolomitic limestone per plant once a Year' in one application.

The nitrogen and the potassium are given in several applications (four or five times).

The phosphorus and the lime are applied at the end of the dry season or at the end of the rainy season. The fertilizer will not be washed away by the rain.

If the banana plants are irrigated, fertilizer may be given during the dry season.

Instead of applying several different fertilizers, you can use one compound fertilizer (see Booklet No. 6, page 11).

For young plants you can give 1.5 kilogrammes of 10- 10- 20 fertilizer per plant per year, in several applications.

For bananas in production, you can give 1.5 kilogrammes of 5- 12- 24 fertilizer per plant per year, in several applications.

In addition, give 500 grammes of dolomitic limestone in one application per plant per year.

Pruning

Pruning banana plants is called suckering.

There are several ways of doing this.

We shall deal with only one way.

The offshoot that you planted is called the parent plant.

Four months after planting, cut away all the suckers that have sprouted except one.

Cut the suckers off at ground level or below the surface of the ground.

Keep the best sucker, the one that is best placed.

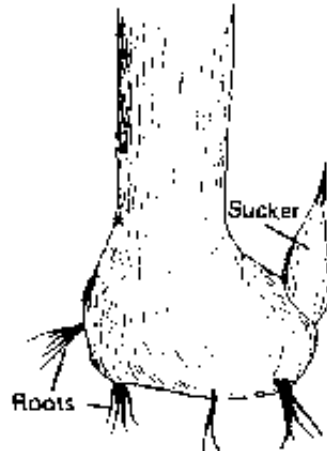
The plantation is laid out in rows, so that if the suckers are in the same line, the plantation rows are unchanged.

Four months after this first suckering, the parent plant is 8 months old and the one remaining sucker is 4 months old. Once again, cut off all the other suckers except one.

About 10 months after planting (taking Poyo bananas as an example), the parent plant produces fruits.

Harvest these fruits, and cut down the parent plant. The first generation sucker is now 6 months old and the second generation is 2 months old.

You can use a machete or axe to cut out the suckers you do not want to keep.



Underground stem of banana

Supporting the plant

The fruit of banana plants is very heavy. The plant bends under the weight, and the wind may blow it down. You must prevent it from falling.

To do this, cut thick bamboos about 3 metres long.

Tie two bamboos together with a piece of wire 40 centimetres long.

Put the bamboos in place, as shown in the drawing, when the flowers have appeared and turned down to the earth.

The bamboos hold up the banana plant.

It rests on the wire between the two bamboos.



It rests on the wire between the two bamboos

Looking after the fruit

When the plant has flowered, the male flower bud is a long way from the lowest hand of female flowers.

Twist the bud to break it off, and cut off the lowest hand of the bunch.

Cover the whole bunch with plastic when the hands turn upward.

See that there are holes in the plastic so that the bunch can breathe.

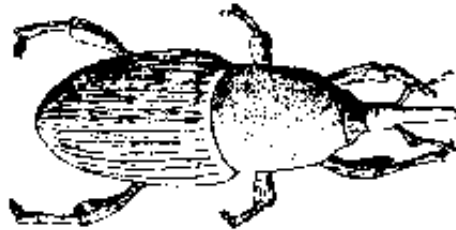
The plastic protects the bunch from sun and rain and from sprays for leaf spot disease (see page 17).

If you do not cover the bunch with plastic, the bananas will get black patches and will not be fit to sell.

Protection against insects and diseases

The banana is attacked by many insects and diseases.

- Banana weevil



Weevil

This insect makes holes in the base of the banana plant and lays its eggs in these holes.

The eggs turn into little weevils.

They eat out the heart of the banana plant.

You do not see the weevils, but if the fruit bunch does not develop, or if the bunch is small and badly shaped, there may be weevils.

To find out if there are weevils in the plantation, cut pieces of the plant's apparent trunk lengthwise. Put two pieces on the ground near each plant. Look every day at these pieces. If there are weevils in the plantation, they will hide under the pieces of "trunk."

To control the weevils, use BHC. Put 25 to 30 grammes of BHC round each plant.

- Banana eelworm or nematode

These are tiny worms that are found in the soil.

They eat the roots, and once the banana has no roots, it cannot feed, and may be blown over by the wind.

Make sure the bananas have no eelworms when they are planted.

Before planting, dip the suckers in lukewarm water, or in water mixed with Nmagon.

If there are eelworms in the plantation, put Nmagon in the soil.

- Other pests

There are other pests that attack bananas such as thrips, aphids, scale insects, etc. They are controlled with BHC, Aldrin or Dieldrin.

- Panama disease

This disease is caused by a tiny fungus in the soil.

It makes the leaves break.

If you cut the banana plant, the apparent trunk is colored brownish red.

To control the disease, plant resistant dwarf varieties such as Poyo or Lacatan. These bananas are very resistant to Panama disease. The Gros Michel variety is not resistant.

- Leaf spot disease (see page 15)

This disease is caused by a fungus.

The leaves show grey spots ringed with dark yellow.

The banana plant cannot breathe and the yield falls greatly.

The disease appears when the temperature is high and the air is very humid.

It is treated by spraying with mineral oil, using 12 to 20 litres per hectare.

- Bunchy top

This disease is carried by an aphid.

Dark green streaks appear on the leaves.

The leaves do not grow long and are wavy at the edges.

Dig up the diseased banana plants.

The aphid can be controlled with Malathion or Dieldrin.

- "Cigar- end" rot

The fruits go rotten. The disease begins at the tips of the bananas.

To control this disease, cut off the last hand that does not grow and break off the male flower bud (see page 15).

- Mosaic disease

Small yellow patches appear on the leaves toward the midrib (see Booklet No. 2, page 14).

You can see them easily by holding the leaf up to the sun.

You can also see little holes in the leaf- stalk.

To control the disease, dig up the plants and wait a long time before planting again in the same place.

- false mosaic disease

Light spots of varying color can be seen on the leaves.

This is not a serious disease.

It may be caused by lack of copper in the soil.

- Lack of zinc

The plant's leaves do not grow very long, and are pale, narrow and pointed.

The disease is cured by sprinkling on the ground 50 grammes of zinc sulphate per plant.

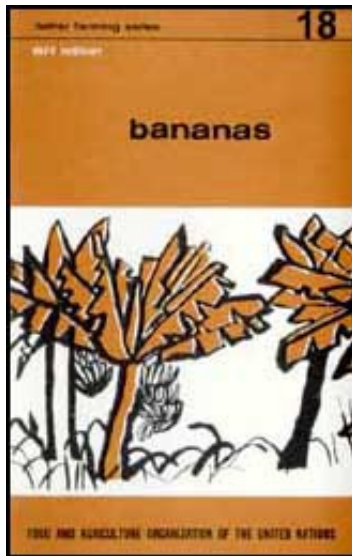
- Lack of magnesium


The disease is cured by applying dolomitic limestone.








[Home](#)-immediately access 800+ free online publications.

[Download](#) CD3WD (680 Megabytes) and distribute it to the 3rd World. CD3WD is a 3rd World Development private-sector initiative, mastered by Software Developer [Alex Weir](#) and hosted by [GNUveau Networks](#) (From globally distributed organizations, to supercomputers, to a small home server, if it's Linux, we know it.)[ar.cn.de.en.es.fr.id.it.ph.po.ru.sw](#)



 Better Farming Series 18 - Bananas (FAO - INADES, 1977, 27 p.)

- ➔  Harvesting and use of bananas
 -  Harvesting
 -  Output of a plantation
 -  Use of bananas
 -  Running a commercial banana plantation

Better Farming Series 18 - Bananas (FAO - INADES, 1977, 27 p.)

Harvesting and use of bananas

Harvesting

Bananas must not ripen on the plant.

The bunch of fruits finishes ripening tied to a rope, in the shade.

If the bunch ripens on the plant, the bananas split and become mealy.

Bunches can be kept longer if they are harvested unripe.

Output of a plantation

A well- cared- for plantation has a big output.

The third harvest on any one plantation is the biggest, of all.

From the fourth harvest, the output begins to go down.

The yield of a plantation may vary between 30 and 50 tons per hectare.

Use of bananas

Bananas are a strength- giving food.

The sweet banana, eaten raw when it is ripe, is as rich as other raw fruits.

It contains a lot of vitamins.
It should be eaten very ripe.

Plantains, when prepared, give more energy than prepared cassava.

They contain more protein (see Booklet No. 8, page 14) than cassava, but less mineral salts (see Booklet No. 1, page 19).

It is better to eat plantains than cassava.

Food crop bananas such as plantains and certain fig bananas are eaten cooked. The greener they are when harvested, the less sweet they are.

Large quantities of plantains are eaten in all the forest regions of west Africa. Ivory Coast produces about 1 100 000 tons of plantains, Cameroon about 850 000 tons, and Gabon about 80 000 tons.

- Cooked bananas

To make foutou, peel plantains, cook them in water, then mash them and roll them into balls.

Plantains are also eaten grilled over the fire, or fried in oil.

- Dried bananas

- Bananas can be dried, if you cannot sell them all. Peel them, then slice them into rounds and dry them in the sun. When they are dry they can be made into powder or flour.

- Banana flour is made with plantains or with green fig bananas. It is eaten in forest regions.

- Banana powder is sweet. It is made from ripe bananas. Mash the bananas and dry the paste in the oven. Banana powder should be stored in metal boxes and kept in a dry place.

- Making banana beer

The bananas must be very ripe.

In the rainy season let them finish ripening laid on a hurdle over the fire where the cooking is done.

During the dry season make a pit in the ground. On one side of it, dig a little ditch. Cover all the sides of the pit with green banana leaves. Pack the bunches of bananas in the pit. Cover them with banana leaves and earth. Light a fire in the ditch and let the warmth and smoke into the pit.

Keep the fire going every day until the bananas are quite ripe. This takes about six days.

Then take away the leaves and earth. Peel the bananas. Half-fill a hollowed- out tree trunk with banana pulp. Cover with fine grass. Knead the pulp with a little water. Press it and let the juice run out.

Then put the juice in a vat or earthenware jar with germinated millet and a little beer.

Cover the vat or the jar with grass to act as a filter.

The beer can be drunk the next day through a straw or wooden tube.

This beer will not keep for very long.

Banana beer is made chiefly in Rwanda and Burundi with special varieties of bananas.

- Other uses of the banana plant

Bananas can be given to animals to eat especially to pigs. The skins and the male flower buds can also be used as fodder.

Oxen like the chopped- up apparent trunk and leaves mixed

with oil cake.

If you leave the remains of the plants (such as apparent trunk, leaves, flower buds) on the ground of the plantation, they will become organic matter in the soil.

If you take these remains away from the plantation to give to animals, you will not add organic matter to the soil. But a banana plantation needs plenty of organic matter. So if you remove the banana plant remains, you must give the plantation dried herbage, manure or compost.

Banana leaves contain fibre. Sacks and ropes are made with this fibre.

It is obtained chiefly from a variety of banana called abaca.

The fibres of abaca leaves are called "Manila hemp."

Running a commercial banana plantation

This example of a commercial banana plantation comes from near Akoup in southern Ivory Coast:

Every day, new flowers appear on the plants.

On the 5th and 20th of each month, the new flowers are counted. They are marked with a little button tied on with wire.

Buttons of a different color are used each time the flowers are counted.

In this way, the number of new flowers is known. In about 3 months these new flowers will yield a bunch of bananas for harvesting.

The planter knows the number of bunches that will ripen and

can arrange for transport by banana boat.

A banana boat comes about twice a week. Each time a little of the harvest is sent

It works like this: Suppose the planter has ordered transport for 40 tons of fruit during the month.

Then he sees that the fruit will ripen before the 15th of the month. He asks for transport for 25 tons during the first 2 weeks of the month, leaving 15 tons for the rest of the month.

All the plantation owners belong to a cooperative, COFRUCI (Compagnie fruitire de Cte d'Ivoire). It organizes transport in banana boats.

Bananas must be graded by size. In the plantation they use an instrument called a gauge to measure the thickness of bananas.



A gauge

Bananas are graded from 40 to 45 millimetres thickness There are two grading systems, one with the odd numbers (41, 43 or 45 millimetres) and the other with the even numbers (40, 42 or 44 millimetres)

When the planter gives his orders for the shipment he can state which system he wants

For grading, three bananas in one hand are chosen and each is measured.

The thickness of the bananas on a bunch is related to the number of hands on the bunch.

If the bunch has 5 to 7 hands, the size of the three bananas measured should be 40 or 41 millimetres, depending on the chosen grading system. If the bunch has 7 to 10 hands, the size of each of the three bananas measured should be 42 or 43 millimetres. If a bunch has more than 10 hands, the size of each of the three bananas should be 44 or 45 millimetres.

The bunches ready for harvesting are known by the color of the buttons with which the bunches were marked 3 months earlier.

The planter says what size fruit he wants picked.

A worker goes through the plantation and counts the number of hands on each bunch with a button of the right color,

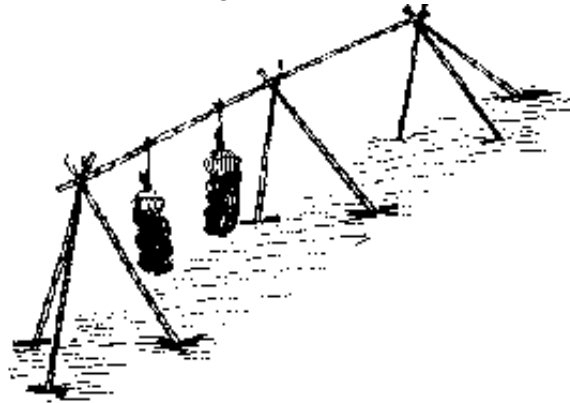
measures three bananas on each of the bunches, makes sure that the bunch is ready for harvesting, and marks the bunch for cutting.

The bunches are cut early in the morning.

This is done one day, at most, before the boat leaves.

Men carry the bunches out of the plantation on a pad on their backs.

The bunches are tied to long poles supported by trestles. The string used for tying is soaked in copper sulphate.



Support for bunches

The bunches are weighed.

The colored buttons are taken off the bunches.

The buttons of one color, let us say green, are then counted.

Three months earlier, 1 600 green buttons were fixed to the plants in the plantation.

Now, for example, 360 green buttons are counted.

So the planter knows that he still has 1240 bunches marked green (1600 less 360).

These bunches marked with the green buttons will ripen in the course of the month.

Transporting and packing bananas

The goods lorry arrives.

Inside, it has pads along the sides to protect the bunches.

On the floor of the lorry there is a thick layer of dry leaves.

Each bunch is wrapped and a cover is put over each row of bunches.

The lorry drives to the packing station.

There, the size of the bananas is measured again.

All the bunches which do not measure up to the required size are thrown out

Stained or rotten bunches are also rejected.

The bunches are cut into hands of bananas and these hands are cleaned and washed.


The hands of bananas are packed in cartons.

Some countries still send out complete bunches, but this wastes a lot of space and weight.

The cartons are then taken to the banana boat.



Home-immediately access 800+ free online publications.
Download CD3WD (680 Megabytes) and distribute it to the 3rd World. CD3WD is a 3rd World Development private-sector initiative, mastered by Software Developer Alex Weir and hosted by GNUveau Networks (From globally distributed organizations, to supercomputers, to a small home server, if it's Linux, we know it.)[ar](#).[cn](#).[de](#).[en](#).[es](#).[fr](#).[id](#).[it](#).[ph](#).[po](#).[ru](#).[sw](#)

 Better Farming Series 18 - Bananas
(FAO - INADES, 1977, 27 p.)

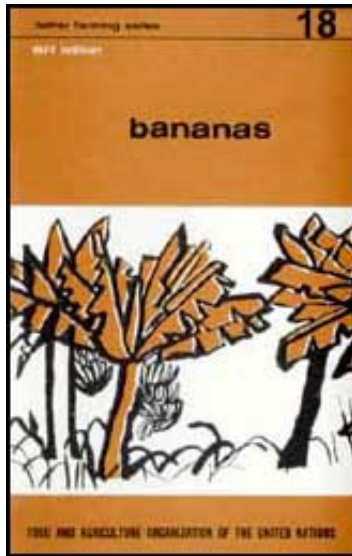
 (*introduction...*)

 Preface

 Why bananas are grown

 Where bananas are grown





- Description of the banana plant
- Looking after the plantation
- Harvesting and use of bananas
- ➔ Suggested question paper

Suggested question paper

ANSWER THE FOLLOWING QUESTIONS

Why are bananas grown?

The banana is not a tree, what is it?

How are the female flowers arranged?

What is the name for the fruit produced by one spike of flowers?

What is suckering?

Why do you put bamboos up against the banana plants?

Why do you wrap the bunch of bananas in plastic?

What does the banana weevil do to the banana plant?

What are the different parts of a banana plant?

How can you tell when a banana plant has mosaic disease?

When do you apply fertilizers to a banana plantation?

Read carefully what follows and reply in the words you use when speaking to a friend.

One of your friends has a banana plantation. He does not take much trouble over it. He always says that bananas look after themselves. He has heard that you have studied a course on how to grow bananas, and he comes to ask your advice, because his plantation does not produce much. What do you tell him? What do you advise him to do?

