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# PRACTICAL GUIDE

**NON-WOOD FOREST PRODUCTS**  
(*PNL*)

**GARCINIA KOLA**  
Sterculiaceae

**Sterculiaceae**

**Bitter cola**

**Bassa:** Nyè

**Bulu :**Onié

**Ewondo :** Onié

**Douala :** Ebongagnagne

**Pidgin :** Bitter cola

**Supervision :**

**Text :**

**Translation :** Sofia Jilil

**Illustrations :**

**Layout and design :**

Commonly called *Bitter cola*, *Garcinia cola* is a *Sterculiaceae* whose seeds are the subject of an intense trade in the entire forest area. Bitter cola would be used as stimulant and aphrodisiac and would also help to facilitate digestion. Moreover, the barks of the Bitter cola are used in certain localities for the fermentation of the wine palm and the traditional pharmacopeia.

## **Plant the bitter cola**

The Bitter cola is reproduced by seeds or cuttings. But its cultivation is done more easily by using the cuttings.

### **To plant starting from seeds**

The cultivation of Bitter cola which is made from seeds includes several steps:

#### **Step 1**

#### **Collect and safeguarding of seeds**

The seedbed is made of the following elements:

- A shadehouse to protect the little plants from the direct radiation of the sun as well as strong rains. It is desirable that the shadehouse is inclined in order to facilitate the flow of rain. It will be built from local material like bamboo, stakes cut in forest or palm tree branches.
- A compost, source of black and fertile soil.
- An area where to set out the pots. It is the location where the pots are filled with soil. Substrate of the pots will be made up in proportion of 2 soil shares, and of 1 sand share (coarse grain).
- An area for exposure where the seedlings in the pots are stored.
- The seedbed must be built on a ground as flat as possible. One suitable seedbed could fit in 3 X 4 m<sup>2</sup>(12 m<sup>2</sup>).

#### **Step 2**

#### **Collect and safeguarding of seeds**

- The best fruits to plant must be ripe and have fallen to ground. Seeds are then mature and germinate easily.
- Leave the pulp and the skin to decompose.
- Then remove the seeds.

#### **Step 3**

#### **Germination of seeds**

- Cut two or three banana tree-plantain.
- Then make a large hole on the level of its base. That will allow it to destroy the central bud (meristem) of the cut plant.
- Insert seeds in the trunks of banana tree.
- Attach firmly the two ends of each trunk.

- Put trunks hermetically closed under the hangar.
- After 3 months, detach the wires to recover the seeds which will have already germinated.

**CAUTION:** The germinal capacity of seeds of Bitter cola is very weak. It ranges between 20 to 30%.

#### **Step 4**

### **Sowing of germinated seeds in the polyethylene bags**

It is necessary to be careful not to damage the roots of the seedlings which are very fragile.

- Beforehand, the polyethylene bags are filled to the 2/3 of the mixture of black soil and sand.
- Carefully insert the germinated seeds. At last, add soil in the bag until filling it, supporting slightly to harden the plant in pot and slightly water.

In the seedbed, the pots of young seedlings will be laid out in blocks with passages between the blocks. The width of each block will be of four pots. This allows it to easily reach each seedling during the weeding and watering.

#### **Step 5**

### **Maintenance of the pots**

The maintenance of the seedlings consists of:

- Watering abundantly every two days, but without excess, so that the soil of the bags remains always wet.
- Weeding slightly
- Fighting against fungicides and insects by pulverizing the seedlings every two weeks with 50 ml of Cyperdim and 50 G of Ridomil diluted in 16 liters of water.
- By fertilizing each pot of 3g with 20.10.10 every 3 months.
- After 12 months, the seedlings can be planted in fields.

#### **Step 6**

### **Planting**

The ground setting will be made at the beginning of the rain season. This gives the plants enough time to settle in before the dry season.

- Wedge the sites of the holes for planting by respecting the spacing of 10 X10.
- The holes of road repair will have a diameter of 20 cm and a 30 cm depth.
- Remove the bag and gently set the plant surrounded of its mound in the hole and fill it with soil.
- Then, fill to the 1/3 with fertile black soil or compost.

The maintenance of the seedlings in field will consist of weeding all around the seedlings. It is also necessary to fertilize with 20.10.10 every 3 month and fight against insects and fungicides by pulverizing Cyperdim and Ridomil every month. The production of the fruits will approximately intervene after 7 years.

### **To plant by the cuttings**

The cultivation by cutting is more specified because it can grow more easily and can obtain fruits with better characteristics. This culture is done according to the following stages:

### **Step 1**

#### **Implementation of the wood park**

The wood park consists of:

- Young selected trees, that are planted (1m X 0,5 m) beside the seedbed and maintained to produce of plant material.
- Trees larger selected, than are cut down and pruned to produce the young regrowths.

### **Step 2**

#### **Cuttings**

##### **Where to cut the branches?**

It is necessary to cut the cuttings on:

- Very tender branches.
- Stem with young healthy leaves.
- Vertical branches that are looking upwards.

##### **How to cut the branches?**

- It is necessary to cut very early in the morning, and preferably just after a rain to avoid drying.
- Take a plastic bag and wet it inside.
- Cut cuttings with sharp shears and put them in the plastic bag prepared beforehand.
- Keep the bag thereby closed in the shade.
- Put the collected cuttings directly in the propagator.

##### **How to prepare the branches?**

Before installing the cuttings to propagate, it is necessary:

- To divide cuttings in pieces from 2,5 to 12 cm.
- To recut the base with a sharp knife to remove the damaged parts.
- To remove any undesirable material like large white leaves, etc.
- To decrease the surface of the leaves to minimize perspiration.

##### **How to set up the cuttings?**

- Control the substrate of rooting in the propagator. It must be wet, but not congested with water.
- Perforate the substrate with a small stick (do not insert and use the same diameter as the cutting).
- Put the cuttings in the holes and tighten at the base to better secure the cutting. The cuttings should not touch each other, but avoid empty spaces.

### **Step 3**

#### **Sowing of the young growths in the polyethylene bags**

This procedure is very delicate because we must not damage the seedlings that are still very fragile.

- Beforehand, the polyethylene bags are filled to the 2/3 with the mixture of black soil and sand.
- Carefully insert the young seedlings.
- At last, add soil in the bag until filling it. Press lightly to harden the plant in the pot and to sprinkle lightly.
- Transfer the pots to the seedbed.

The following procedures are similar to those of the cultivation by seeds.

## **Obtain seeds of bitter cola**

*Garcinia Cola* produces fruits between June and November. The fruits must be treated according to the following steps:

### **Step 1**

#### **Drying of seeds**

The pulp is removed from the fruits. Then, the seeds obtained are dried in the sun for one week and ready to be consumed.

The seeds are preserved on trays with great ventilation. From time to time, it is necessary to expose them in the sun to prevent them from rotting. They can be preserved for a period exceeding one year if they are tightly closed in dry containers.

## **Market the bitter cola**

- *Garcinia cola* seeds are sold without preliminary transformation in urban markets, production markets, roads and by street vendors.
- *Garcinia Cola* is in all the markets of the country. It is also present in the external market (Gabon, France, Belgium, Great Britain, the United States...).

## **SOURCE:**

With this practical guide, EWB values the work of Capacity Building Programme (cbp)