

KOLA (*COLA SPECIES*)

- **Kola** (*Cola* **sp.**)
Cola nitida (Vent) Schott and Endl.
Cola acuminata (Beauv) Schott and Endl.

- ❖ Kola has a long history of cultivation and trade in West Africa, especially in Nigeria, Ivory Coast, Sierra Leone, Guinea, Liberia, Ghana, Togo, Cameroon and Republic of Benin.
- *Cola nitida*.
- *C. acuminata*.
- *C. verticillata*.
- *C. ballayi*.
- ❖ ***C. nitida*** and ***C. acuminata*** are the most important species economically and most widely cultivated.
- ❖ Cultivation and development of the 2 species became popular by the inception of CRIN.
- ❖ Today CRIN conducts research into the cultivation, development and end-uses of kola. This had boosted the global economy of the crop.
- ❖ The nuts from both species occur fresh in **red, pink and white** colours often in the same pod.
- ❖ Today, Nigeria produces over 88% of the world's crop and about 90% of this is consumed locally while the remaining 10% is exported.

Propagation of kola

- Traditionally, kola is propagated by nuts sown at stake between food crops or in traces of forest vegetation where it grows undisturbed.
- Better seedling development is achieved when kola nut is firstly germinated in a seed-box (**pre-germination** in the **pre-nursery stage**),

The Kola Nursery

- ❖ **Nursery site:**
 - Select a site near a stream / water tap.
- ❖ The following equipments are essential in kola nursery –
 - Germinating or seed boxes / Rooting propagators

- Seedling or polythene bag
- Protective wire netting
- ❖ **Cured kola nuts:**
- After curing, kola nuts are pre-germinated in a pre-germinator containing a growth medium of wet sawdust.

- ❖ **Freshly harvested / uncured kola nuts:**

- **Scarification / cotyledon wounding**

- **Vegetative Propagation**

- ❖ Conventionally feasible vegetative methods in kola consist of –

- Rooting of stem cuttings (tips of branches)
- Marcotting of stem
- Budding
- Grafting

- ❖ **Rooting of stem cuttings:**

- **Choice of cuttings**

- **Taking the cuttings**

- **Setting the cuttings**

- **Potting of rooted cuttings (ramets):**

- **Hardening the ramets:**

- **Transplanting of kola seedlings or ramets into the field.**

- **Selectively thinned forest:**

- **Regrown forest or open land:**

- **Botany of kola**

- ❖ The adult tree develops into a dome-shaped pattern of growth.

- ❖ In an unpruned kola tree, the foliage and fruits produced often reach the ground level, thus makes for easy harvest and insect and disease attacks.

- ❖ Closely spaced trees tend to etiolate and grow tall thus leading to loss of foliage and branches.

- ❖ Flowering:

❖ Both *C. nitida* and *C. acuminata* possess functional male and female flowers in the same inflorescence. Flowers of *C. acuminata* are smaller than those of *C. nitida*.

❖ In both species, the stamens of the same flowers are not functional, thus self-pollination does not occur within the flower – **self incompatibility**.

❖ **There are 2 factors determining the nut colour in kola:**

➤ The colour of the nut of the parent kola trees.

➤ The colour of the nuts from which the surrounding kola trees were raised.

❖ Harvesting in kola is carried out when the pods become inconspicuously brown.

• **Post-harvesting Handling**

➤ **Primary processing:**

➤ **Curing:**

❖ **Storage:**

➤ The cured nuts are wrapped in green but partially dried leaves and packed inside large baskets and kept in shaded / cool spot for marketing.

• **Insect Pests of Kola**

❖ **Field pest:**

➤ Stem borers (*Phosphorus virens*)

➤ The kola weevil (*Balannograstris colea*)

❖ **Nursery pest:**

➤ Caterpillar

➤ Mealy bug

➤ Red spider

Desirable kola nut quality

A good kola nut should:

➤ Be slimy

➤ Not be astringently bitter in taste

- **Economic Uses Of Kola Nut**

- ❖ For preparation of kola type beverages such as Coca cola.
 - ❖ A source of essential oils for flavourings in confectionary industries.
 - ❖ For the preparation of chococola – a type of chocolate containing cocoa and *Cola*.
- A source of alkaloids – caffeine and theobromine in pharmaceutical preparations.