

Cowpea

Family :Leguminoseae

Botanical name:Vigna unguiculata

# Origin

- The genus *vigna* has about 170 species with the target number endemic in Africa, several in India, Australia and the new world
- There are evidences that cowpea originates from west Africa probably Nigeria

# Climatic and soil requirements

- Cowpea is a tropical crop. It requires high temperature, intensive sunshine with evenly distributed rainfall between 750mm and 1500mm during the growing phase
- Cowpea is adapted to a wide range of soil.
- It grows almost equally on sandy as well as clay soils and can stand poor soil condition better than most crop

# Cultural practices

- Land Preparations
- The soil must be ploughed and harrow to provide a suitable medium for seed growth and establishment
- Seed beds are also made depending on the cropping system
- Seeds should be planted as soon as beds are prepared.

# Planting materials

- Cowpea is propagated by seeds.
- Seeds are sown as from July to August in Nigeria
- Most of the local varieties are short day plants
- This periods ensures that the growth phase coincides with adequate soil moisture and maturation occurs as soon as the weather becomes drier.

# Planting contd

- The spacing varied with growth habit. Erect bush type may be spaced 30by30cm while the trailing type may be spaced 30cm within rows and 90cm between the rows

The sowing dept is from 3-5cm

The seed rate varies from 34-56kg\ha for sole cropping and lesser rate for mixed cropping

# Weeding

- There is usually about one weeding with the trailing type.
- If a clean seed bed is prepared at the time of sowing the weeding will suffice to keep the land sufficiently weed free until the plant covers up.

# Fertilization

- Cowpea does not respond to fertilizer where the soil fertility is high.
- If adequate fertilizer has been applied to previous crop, there will be no need to apply fertilizer to cowpea.
- Where soil fertility is low, farm yard manure, single superphosphate or potash will give increased yield.



# Fertilization contd

- Generally, nitrogenous fertilizers are not necessary as they tend to inhibit nodulation.
- If soil is deficient of nitrogen, a small dose of nitrogen very early in the growth stage of the cowpea may be applied.

# Maturity and harvest.

- Flowering does not occur at the same time in cowpea depending on the variety and time of planting.
- Flowers begin to open as from 40-70days after planting.
- Two to three weeks later, the first set of pods begin to mature.
- Since flowers don't emerge at the same time, pod development spread over a period and consequently, harvesting will also spread over a range of time. Only dry pods are picked at every harvest.
- The vegetable cowpea is harvested green for consumption.

# Yield

Grain yield ranges from 200-1000kg/ha under peasantry production.

Yield up to 2000kg/ha is possible under sound management.

## Utilization

It is an important source of plant protein for both man and his livestock in tropical west Africa

# STORAGE

- Cowpea is stored in sack, earthen pots tins with screw cap, cribs etc
- PESTS
- Bugs The common bugs are *Acanthomia horida*, *Nezera viridula*, *Clavigrella scutillaris*
- Thrips The thrips that attack cowpea in Africa are *Megalurothrips sjostedi*, *Sericothrips occipitalis*.

# Pest contd

- The bean weevil (*Callosobruchus maculatus*) is a serious storage pest of cowpea.
- Infestation start from the field and build up over time in the storage structure.
- It causes serious losses if protective measures are neglected.

# Diseases

- Fusarium wilt caused by *Fusarium oxysporium*. This disease caused the plant to wilt even under high moisture level.
- Powdery mildew caused by *Erysiphe polygoni*.
- Application of benomyl solution as soil drench around the plant will provide a good check to spread of the disease.
- *Cecospora* leaf spot caused by *cecospora canescence* is one of the most important cowpea disease in Nigeria. Severe attack leads to total yellowing of leaves which eventually fall off.
- Bacteria blight caused by *xanthomonas vignicola*.

# Diseases contd

- Cowpea mosaic is caused by virus