

SOYA BEAN (GLYCIN MAX)

Origin

It was first domesticated in the north east of china around 11th

Century BC and from there it spreads to Korea between 30BC AND 70AD. It was mentioned in Japanese literature around 1712.

Origin cont'd

- Soya bean was introduced during the 19th century by Chinese trader to Africa.
- USES
- Oil from soya bean is used for food and other industrial purposes
- The crop is currently the world's most important source of vegetable oil.
- Soya bean lecithin are used as emulsifier in food industry.
- It is widely distributed to some parts of Nigeria as far as south latitude of 6⁰ north of latitude 11⁰.
- It grows well in Benue state of Nigeria.

Cultivars

- The following cultivars are grown in most of the producing areas in Nigeria.
- Bossier .
- Samsoy1
- Samsoy2
- M351 ,

Uses contd.

- Soya bean is the main commercial source of Tocopherol(vitamin E)
- The cake remaining after oil extraction is rich in protein and it is an important animal feed.
- The leafy stem remaining after pod removal can be used as fodder.
- In tropical Africa, soya bean is processed into soya milk.
- Soya bean is processed into different food items for human consumption.
- Source of food for man. It contains about 40% protein.

Propagation and planting

Soya bean is propagated by seed. The 1000 seed weight is 100-250g.

The seed can be sown when the soil is moist.

The seed rate is 40-120kg/ha.

The seed is sown at the dept of 2-4cm dept at spacing of 60by 30cm on seedbed or 15-30cm apart on ridges that are 1metre apart'

2-3 seed are introduced per hole

Weeding

- Soya bean is a poor competitor with weed particularly during the early growth stages.
- Hoe weeding is effective but in large farms, herbicides such as chloramben controls weeds effectively.
- Herbicides are normally applied as pre emergence while hand pulling or hoe weeding are utilized after weed emergence.

Fertilization

- Nitrogen fertilizer is not required for successful production of soya bean because it suppresses nodulation.
- A fertilizer rate of 300-450kg/ha of 0-20-20 compound fertilizer is recommended for a good crop yield.
- Calcium or Magnesium is also added in soil where such salts are deficient.
- Single super phosphate (SSP) is applied before planting(200kg/ha)

Maturity and harvest

- Maturity in soya bean is announced by the yellowing, drying, and dropping of leaves as well as drying of pods.
- To avoid shattering and loss of seeds in the field the crop is better harvested as soon as maturity signs becomes obvious.
- The entire plants are cut and heap into bundles on a platform for processing.
- Processing ; the harvested bundles are spread in the sun to dry properly before threshing and winnowing to remove chaffs'

Yield

- Average grain yield ranges from 0.5-2t./ha depending on the variety and crop husbandry.
- High yielding cultivars can be obtained from IITA Ibadan

Storage

- Seed meant for food are stored in sack after threshing and drying.
- Rapid loss of seed viability in storage under a warm and humid environment is a major problem In storing seeds for future use in Nigeria.

Pests

- The following pests are known to attack soya bean at their various stages of production:
- Stink bug, leaf hopper, caterpillar. Nematode and rodents also attack and reduce the quality and quantity of soya bean produced in the humid regions of the world.

Diseases

- Bacteria blight caused by *Pseudomonas tabaci*. It causes leaf defoliation. Resistant varieties are planted where the disease is endemic.
- Downy mildew is a fungus disease caused by *Peronospora oramanshurica*. The leaves and pods are the primary area of attack.
- Root diseases, namely; *Rhizoctonia* root rot caused by *R. Solani*, *Pythium* root rot caused by *P. Ultimum* are injurious to soya bean.

