Cassava Production Guide

1. Importance of cassava

Cassava is very important staple food crop for many people in Uganda especially for West Nile, Northern and Eastern Uganda. It is also widely grown in other parts of the country as a famine reserve crop. It has high yielding capability, easy to grow and performs well even in marginal areas. Cassava provides a good source of alcohol and industrial starch.

(Fig.1: Underground structure of cassava plant)

2. Ecological requirements

i) Soil

Cassava can be grown on a wide range of soil but best on deep, free draining soils with reasonable fertility levels. Shallow soils which may restrict tuber expansion should be avoided.

ii) Rainfall

Cassava is highly drought resistant and grown in many parts where rainfall is low and unreliable.
iii) Altitude

Cassava grows at all altitudes but best on low to medium altitudes. It is low yielding at altitudes above 1500m a.s.l.

3. Recommended varieties

Many popular varieties have been wiped out by the Cassava Mosaic Disease (CMD) and other recent ones have also become vulnerable to the cassava brown streak disease (CBSD). New varieties with resistance/tolerance to CMD and CBSD have been released and others are still being developed. The new varieties are NASE 1, NASE 2 and Migyera. More are on field testing.

4. Propagation

Cassava is propagated vegetatively using stem cuttings.

5. Agronomic practices

a) Land preparation

The cassava seedbed requires deep cultivation to a depth of 25 cm. A rough seedbed is preferred. Ridges or mounds are used in other areas and it encourages tuber development.

b) Planting materials

Planting is done by use of cuttings. These are parts of the stem which should be from a mature plant, especially the middle part. They should be 30 – 45 cm long and 2½ – 4 mm thick with buds above the leaf scar.
c) Planting method and spacing

Cuttings may be buried in a horizontal position $7\frac{1}{2} - 10$ cm deep or buried half way into the soil. In pure stands (without intercropping), a spacing of 1.5 m x 0.9 m is recommended.

When intercropped, interplant with a cover crop of beans or groundnuts at a spacing of 50cm x 20cm. This combination gives maximum yields of both cassava and bean or groundnuts.

d) Weeding

Keep the crop weeded in the early first 3 months. Intercropping also helps to suppress weeds.

e) Pests and diseases and their management

i. Pests
Most times insect pests are not a threat to cassava production but still need attention. The most notable ones include;

- Cassava mealy bug
Attacks mainly the growing points of the plant causing stunting, leaf and shoot deformation. Severe damage leads to tuber quality deterioration.

**Control:** Use clean and resistant varieties like Nase 1. Biological control is also being tried in some districts.

- **Cassava green mite**

  It is a sucking pest which leads to reduces growth, scorching of leaves, tiny leaf production, leaf fall and eventually a plant without leaves. This causes great yield reduction or loss.

  **Control may be through:**

  - Use of resistant varieties
  - Biological control using predator mites
  - Crop rotation
  - Planting early at the onset of rains

- **Other pests include wild pigs and termites.**

  ii. **Diseases**

  - The cassava Mosaic Disease (CMD) is the most feared virus disease at the moment. It causes reduced leaf size, malformed and twisted leaves with yellow areas separated by areas of normal green color. Severely affected plants are stunted
Yield loss due to CMD depends on the stage at which the plant is infected and severity of symptoms. The disease is transmitted by the white fly.

Control:
- Roughing infected plants
- Use of resistant varieties
- Use of clean planting materials

- Cassava Brown Streak

This is another virus disease but is less damaging than mosaic causing brown streaks on green stems. The marks remain and appear as sunken areas on mature stems. The disease is controlled in the same way as CMD.
f) **Harvesting, yields and post harvest handling.**

i. Cassava takes 8 – 36 months to mature depending on the variety.

ii. Yields also vary depending on variety and soil type. Average yields are 10 – 30 tons/ha.

iii. Cassava harvesting may be done piecemeal (one by one) or by uprooting whole plants. A stick or hoe may be used to remove the tubers.

iv. Cassava cannot be stored fresh for a long time. It is therefore sliced and dried in the sun (See Fig. 4). In this dry form, it can be kept for long periods of time in a dry bag in a place such as granary or other food stores. The dry cassava may also be pounded into flour which can be stored for a long period of time in a dry place.