

Cassava production

A guide to good agricultural practices



Working in partnership to create down-to-earth messages on integrated soil fertility management

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 CHRISTIAN RURAL AID NETWORK



AFRICA
soil health
consortium 

1. Land preparation



A good cassava site should:

- have deep loamy soils with medium to high fertility. Cassava does not grow well in clayey or stony soils or in soils less than 30 cm deep
- be well-drained and not prone to water-logging
- be flat or gently sloping

Prepare land to

- remove stumps and bushes
- control weeds
- get a good seedbed and improve soil contact with stem cuttings

Land can be prepared by

1. **ploughing** using a tractor, hand-held hoe or using an ox-drawn plough. If the soil is waterlogged, making mounds or ridges of 0.3 m high, spaced at 1m apart improves drainage.
2. **slashing down tall weeds.** Slashed weeds spread on the farm help to trap soil moisture, manage soil erosion and to help control weeds. So do not slash and burn. With time the weeds rot and add nutrients as green manure. This improves soil fertility. After slashing, plant cassava directly into the dead weeds without ploughing the land.
3. **spraying:** If weeds are short (less than knee-high), spray a pre-planting herbicide like *Glyphosate (Roundup)*/*Paraquat (Gramoxone)*. Using pre-planting herbicides saves on labour costs during weeding by reducing the number of time you weed from 5 to 2, before canopy closes.

2. Stem selection

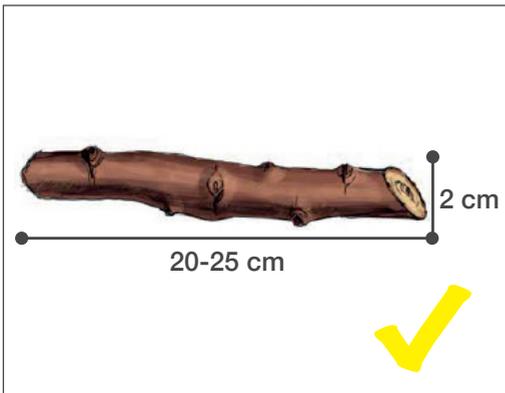


Plant improved certified cassava materials. These mature faster, give good yields and are more tolerant to major pests and diseases. The common varieties in the Volta region are *Afisiafi*, *Bankyehema*, *Agbelifia* and *Esambankye*.

Choose healthy stems from plants that have minimal stem and leaf damage and are free from signs of attack by diseases. Select the hardwood portion of stem cuttings - not from top green stems or the bottom portions of plants.

Cuttings should be

- at least 20-25 cm long and 2 cm thick
- clean-cut and not splintered

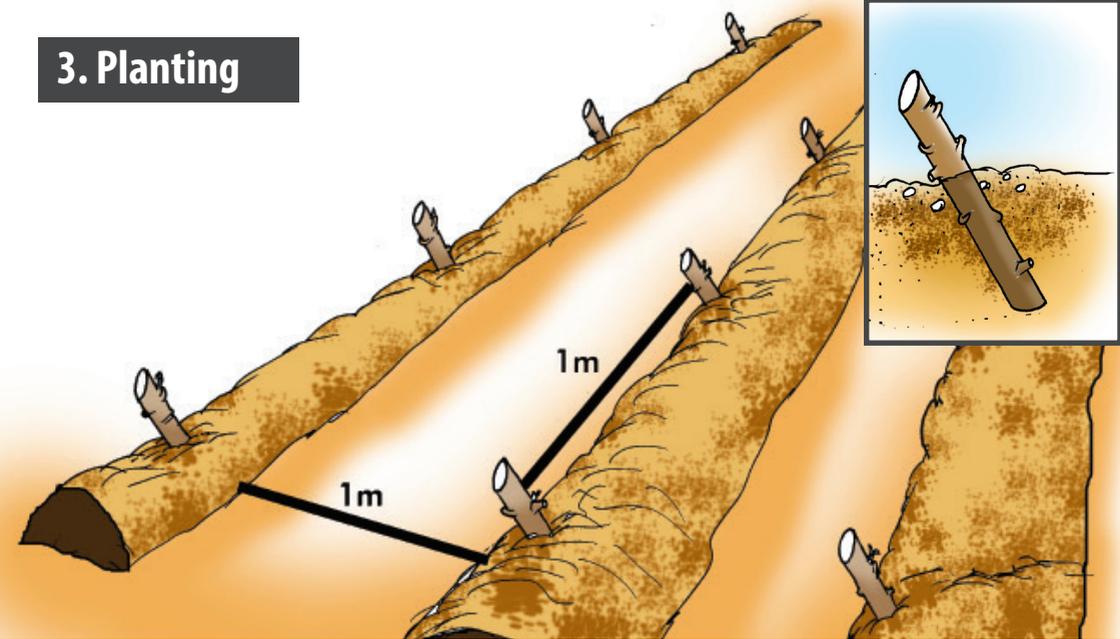


Properly cut stems



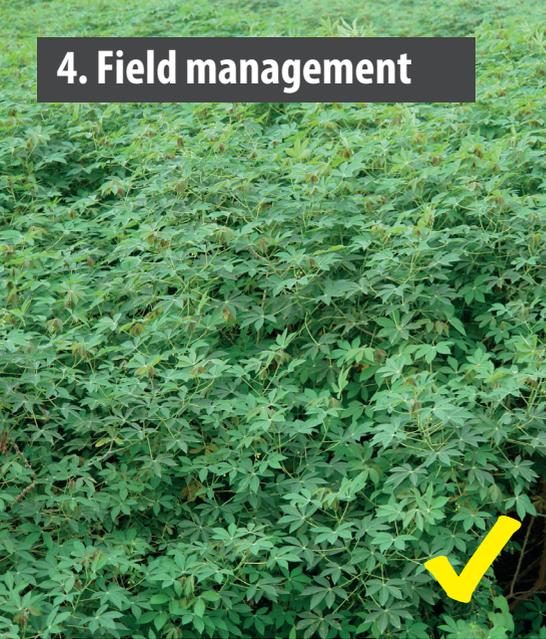
Poorly cut stems

3. Planting



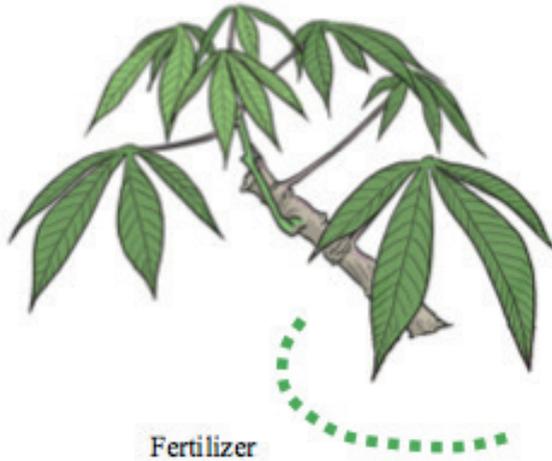
- Plant fresh cuttings at a spacing of 1 m between rows. Within rows, space the plants at 1 m apart. You need about 10,000 plants per hectare.
- Correct spacing is good for better crop growth, easier weeding and reduces the spread of pests and diseases. Spacing that is too far apart between the cassava plants leads to increased weed competition and poor yields.
- For more compactly arranged roots, plant cassava cuttings at an angle with 2/3 of the cutting below the soil surface, and about 1/3 above the ground.
- Following good agronomic practices when planting can ensure better quality and quantity cassava yields.

4. Field management



- Weeds compete with cassava for water, light, space and nutrients. This affects yields by reducing canopy development and root bulking.
- Cuttings that do not sprout within 3 to 4 weeks of planting should be removed and replaced immediately.
 - *New cuttings should be planted in new holes*
- The first weeding is done 3 to 4 weeks after planting. Second weeding can be done 8 to 12 weeks after planting; and the third weeding at 20 to 24 weeks after planting.
- Weeding can be by hand or by applying post-emergence herbicides like Glyphosate (Roundup) or Paraquat (Gramoxone) may be applied to kill weeds that emerge. Do not allow weeds to flower.
 - *Take precaution when spraying herbicides, especially to protect the crop during its early stages*
- To maximize yield and reduce weeds in your next crop, control weeds in cassava from planting to harvest.
- Correct crop management practices can ensure better quality and quantity of cassava yields.

Fertilizer application



- Apply 12 bags of 50 kg each of NPK (15-15-15) per hectare.
- Apply in 'half-moon' around the stem of the plant.
- Apply one third of the NPK fertilizer at 4 to 6 weeks after planting (This is the same as 1 heaped tablespoon or 20 grammes per plant). Apply the remaining NPK at 8 to 10 weeks after planting. (This is the same as 2-heaped tablespoons or 40 grammes per plant)
- Applying all fertilizer too early may lead to increased losses of fertilizer.

Common pests & diseases

- Take care of the crops by looking out for pests and diseases.
- Major diseases attacking cassava are African Cassava Mosaic Virus, Cassava Bacterial Blight, Cassava Anthracnose Disease and Root Rot. Mealybug, greenmite, termite and variegated grasshoppers are the major insect pests of cassava.
- Pests and diseases can be controlled by planting clean healthy stem cuttings. Removing and burning diseased plants also helps to reduce the spread of diseases. Pests reduce the growth and yield of cassava.
- Seek advice on pest control from extension staff.



Mealy bug



African Cassava Mosaic Virus



Variegated grasshopper



Cassava Bacterial Blight



Termite damage



Anthracnose disease

5. Harvesting & storage



Harvesting

- Harvest cassava as soon as the tubers are matured. Delayed harvesting may result in fibrous or rotten cassava roots.
- When to harvest is determined by the cassava variety, climate and soil factors. Harvest early maturing varieties between 9-12 months after planting; and late season varieties between 12-18 months after planting.
- Cut off the top part of the stem, remove the roots carefully from the soil by hand.

Storing cassava roots and stems

- Harvested cassava roots cannot be stored for long. They start to reduce in quality 2 to 3 days after harvest. Harvest only as need arises in order to reduce wastage.
- Store fresh roots in the ground or in moist sawdust. They can also be dipped in water, and then pack in polysack fitted into a wet cocoa sack and tie the bags tightly.
- Do not store bruised and unbruised roots together - separate them before storage.
- Store only mature healthy stems. Tie the stems into bundles and store upright under a tree; or store stems upright in pits under a tree and apply water whenever the soil becomes dry. You may cover the bundles with straw to reduce drying.