HORTICULTURE NOTE: NO. 8

CASSAVA

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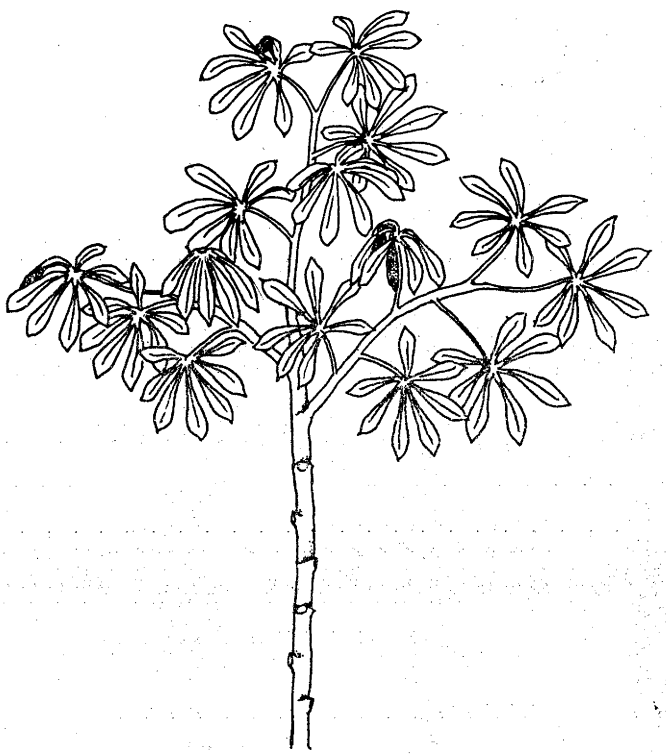
Common name: Cassava, Manoic, Tapioca

Botanical name: *Manihot esculenta*

WHAT THE PLANT LOOKS LIKE

Cassava is a shrubby plant with upright stems up to 3 m high. The stems are sometimes branched and vary in colour from silvery-grey to reddish-brown to dark brown. The leaves have 3-7 lobes (fingers), and vary in shape, colour and size. Cassava is grown for its tubers, and occasionally for its fresh leaves.



Leaves and stem of a mature cassava plant - about one tenth natural size

WHERE IT GROWS

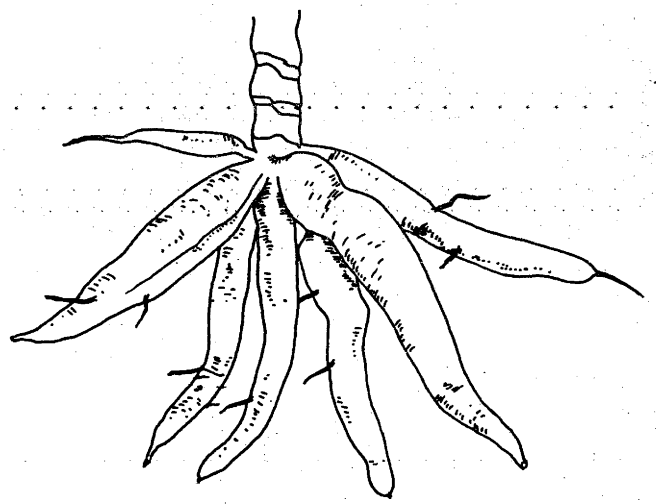
Cassava is mainly a lowland tropical crop but it grows up to 1800 m a.s.l. in Papua New Guinea. It cannot withstand frosts or long periods of cold. However once it is established, cassava can withstand long periods of drought so it is a useful crop in areas which have a long dry season (e.g. Central Province and the Markham Valley).

SOILS AND FERTILIZERS

Cassava grows best on sandy soils, but it can be grown on most soil types as long as they are not water-logged, too shallow or stony.

You can plant cassava at any time of the year, but do not plant it when the soil is very dry. In areas with a long dry season, plant cassava at the beginning of the wet season.

Cassava is usually grown on mounds or ridges but it can be grown on flat land if



Cassava tubers - about one eighth natural size

the soil is well drained. Cassava gives good yields even if the soil is not very fertile. So it is often planted as the last crop in a rotation.

Cultivating (digging) the soil improves the yield. After planting, cassava needs very little attention, except weeding.

VARIETIES

There are two groups of cassava varieties: sweet and bitter. Sweet varieties are better for eating, as they need less cooking.

HOW IT IS GROWN

Cassava is usually grown from thick stem cuttings. For best results, plant sticks 20 cm to 30 cm long, which have at least two buds. Choose sticks from plants which are at least 10 months old. Take them from the lower part of the stem.

The best spacing to use is 1 m between plants in the row, and 1 m between rows. Push planting sticks into the soil either upright or at an angle. Two-thirds of the stick should be below the soil surface.

Weed the crop until it shades the ground. If you plant cuttings in the dry season, irrigate them until they are established.

TIME TO MATURITY, HARVESTING AND STORAGE

The tubers can be dug after 10 to 12 months. They keep very well in the ground so the crop can be harvested gradually over a long period of time. However once the tubers are dug they do not keep well for more than 2 to 3 days. In some African countries and Fiji, tubers have been stored for several months in boxes or bags of moist sawdust.

A common practice in Central Province is to harvest all the tubers and cut back the stems to just above ground level. The stems then grow back and a second crop of cassava is produced.

HOW IT IS USED

The tubers of cassava contain starch, so they are an energy food. They are low in protein, but they contain some calcium, phosphorus, iron and vitamin C. The leaves of cassava are high in protein, fibre, calcium and iron. They can be used as a green vegetable.

The tubers and leaves contain small amounts of cyanide compounds and may be poisonous if eaten raw. Soaking the tubers in water for 3 to 4 days, or peeling followed by normal cooking will remove the poison.

Usually cassava is boiled before being eaten. It can also be made into a cake by grating the cassava, mixing it with coconut milk and a little sugar and baking in an oven until cooked.

Cassava can be chipped and dried in the sun to produce a meal which can be fed to poultry and pigs as a substitute for grain. (See HARVEST, Volume 7, No. 4).

PESTS AND DISEASES

Cassava has very few pests and diseases. Scale insects are occasional pests. These are carried on the stems used as planting material. A bug (*Amblypelta* sp.) can cause severe damage to the growing tips. The feeding holes are sites for infection by the fungus *Colletotrichum* sp., which causes the disease anthracnose. Anthracnose can also be carried on the planting sticks. See Horticulture Note No. 4 (Yams) for more information about this disease.

The best way to control scale insects and anthracnose is to select clean planting material.

Amblypelta can be controlled by spraying 0.1% Orthene. If anthracnose becomes a problem after planting the crop should be sprayed with Benlate.

FURTHER READING

Abdelsamie, R. (1981). Cassava as a livestock feed? *Harvest* 7(4): 172-175.

King, G.A. (1984). Horticulture Note No. 4. Yams. *Harvest* 10(3): 126-130.

Thaman, R.R. and Thomas, P.M. (1982). The cassava invasion: The cultural, nutritional and ecological impact of cassava on Pacific Island food systems. In *Proceedings of the Second Papua New Guinea Food Crops Conference*. R.M. Bourke, v. Kesavan (Eds). Department of Primary Industry, Port Moresby, pp. 330-350.

FURTHER INFORMATION

For further information and advice on vegetable growing contact the Area Horticulturist in your region. The addresses for the Area Horticulturists are as follows:

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