

The East London Garden Society

Plant Facts

Cassava



Cassava, or manioc (*Manihot esculenta*), is a root crop native to tropical America that is now consumed by millions of people throughout the tropics and is used in food preparation in many industrialized processes. Although it is not well known outside the tropics, cassava now accounts for about 30 percent of the world production of roots and tubers. It is an exceptional producer of carbohydrates and a plant better able to tolerate seasonal drought than other major food crops.

The cassava plant is a perennial woody shrub that grows from about one to three meters in height. The leaves are palmate, hand-shaped and dark green in colour. The cone-shaped roots are starch storage organs covered with a papery bark and a pink to

white cortex. The flesh ranges from bright white to soft yellow. Over five thousand varieties of cassava are known, each of which has its own distinctive qualities and is adapted to different environmental conditions.

The cassava plant is hardy and better able to tolerate drought and poor soil conditions than most other food plants. It can grow in extremely poor, acidic soils because it forms a symbiotic association with soil fungi, it is one of the most productive food plants in terms of carbohydrate production per unit of land, unequalled in its ability to recover when foliage is lost or damaged by diseases or pests.

The cassava plant is somewhat unusual, and even infamous, because both the roots and leaves can be toxic to consume. The toxicity of cassava is due to the presence of compounds of cyanide and glucose, which liberate hydrogen cyanide, a potent toxin, when the plant tissue is damaged. The flesh of the root can be peeled and cooked like other root vegetables. Those referred to as bitter, or high cyanide, have higher levels throughout the root therefore require more extensive processing before they are safe to consume.

The potential toxicity of cassava foods depends on the effectiveness of processing and preparation techniques; high-cyanide roots can be processed to remove all most all traces of cyanide-containing compounds. Many farmers prefer to cultivate the high-cyanide varieties for reasons that are not entirely clear.

Cassava was domesticated sometime in the distant past, maybe five thousand years ago. Exactly where is not known, but the current consensus is that domestication took place somewhere in Central or South America, perhaps

along the southern border of Brazil, where wild relatives of cassava are currently found.

Cassava was the staple crop of the Amerindians of South America when the Portuguese arrived in 1500 just south of what is known as Bahia, Brazil. The Amerindians living in the area were the Tupinamba, who relied on cassava as a dietary staple, processing it into bread and meal using techniques similar to those still used by Amerindians in the twenty-first century.

When the Portuguese began to import slaves from Africa in about 1550, they used cassava in the form of meal to provision their ships and began cultivating cassava at their stations along the coast of West Africa soon afterward. From their stations near the mouth of the Congo River, cassava diffused to all of central Africa. The Portuguese were also responsible for introducing cassava to East Africa, Madagascar, India, Ceylon, Malaya, and Indonesia by the 1700s.

Cassava was probably first introduced into Asia during Spanish occupation of the Philippines and was distributed throughout tropical Asia by the beginning of the nineteenth century. Expansion of cassava cultivation was pushed by colonial administrators who saw cassava as a famine reserve (especially the Dutch in Java, and the British in India), and as an export commodity (Malaya and Java in the 1850s).