PLANT FACT SHEET

Dioscorea esculenta (Loureiro) Burkill

GENUS *Dioscorea* **FAMILY** Dioscoreaceae

COMMON NAMES Lesser yam

EDIBLE PARTS AND USES

Edible parts: Tubers, Root, Vegetable

The tubers are cooked and eaten. They can be used in soups, stews, mashed or fried.
The tubers are often cut into pieces, steeped in water, and boiled prior to eating.
Young leaves are also recorded as being cooked with coconut milk and eaten.

DESCRIPTION

A yam which has a spiny vine. It is a prickly climber. It can climb 1.2-2.4 m high and spread 1.8 m across. The vine twines to the left. The leaves are round with a gap where the leaf stalk joins. They are almost heart shaped. The leaf is about 12 cm long. This yam produces a cluster (5-20) of tubers under the ground. In many varieties there are sharp thorns just under the ground. In China forms occur without these spines. Often the tubers are sticky when cut. Many kinds occur. The flowers are green, 4 mm across and borne on long slender spikes. These are singly in the axils of leaves. There are many cultivated varieties and these vary in quality around the world.

HABITAT

A tropical plant. It grows from sea level up to about 1500 m but is mostly below 800 m. It cannot tolerate water-logging. It needs a reasonably long rainy season. It needs a loose fertile soil. It does poorly on sandy soils and becomes misshapen in heavy clay soils. High levels of organic matter promote growth. In the Philippines it occurs throughout Luzon and is also found in the Batanes Islands. It suits hardiness zones 9-12.

PRODUCTION

Cultivation

Normally small tubers are planted (50 - 75 g) but cut portions of a tuber can be used. Using either the top section or the bottom section of a tuber gives better establishment and yield than middle portions. Using larger tubers gives larger individual tubers and higher yields for individual plants. Using a plant spacing of 30 cm between plants and 100 cm between rows about 2,000 kg of planting material are used if 70 g tubers are used. Tubers are planted 8-12 cm below the ground.
It is possible to grow plants from stem cuttings where a leaf and node are propagated under mist. This method is normally only for increasing the amount of planting material of a selected variety.
Planting in mounds makes harvesting easier. It also assists drainage and improves aeration. A spacing of 80 - 100 cm between plants is suitable.
Planting is normally adjusted to fit in with the beginning of the rainy season. The growing season of 9-10 months

is long and an extended wet season is therefore desirable. Stakes are required. Stakes 2 m long are sufficient. Lesser yams compete poorly with living plants used as shade.
Weed control is probably most crucial during the first 3 months. As early growth of the plant is sustained from the tuber, fertilisers can be applied slightly after planting. Added nitrogen fertiliser is more effectively used when plants are staked. Nitrogen is of more benefit for leaf growth in the early stages of plant development.
Potassium is beneficial but often phosphorus applications do not give significant responses as lesser yams are efficient at extracting it from the soil. High yields can be obtained.

Harvesting and Seed Production

High yields can be obtained. Plants take about 9 months to reach maturity. In some varieties and under some conditions leaves do not die off and tubers must be harvested to avoid tubers deteriorating as new growth commences. Tubers need to be harvested and handled carefully. They must often be cut from the vine and can be washed and dried. Tubers will store for about 3 months. They need to be stored under ventilated conditions. Fungal growth and rots easily occur on cut or damaged surfaces under damp conditions. Storage probably needs to be at temperatures above 15 °C. Tubers need to be peeled either before or after cooking.

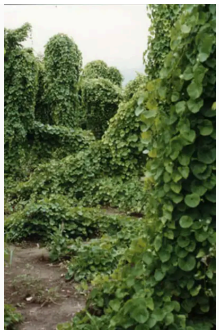
NOTES

The cultivated varieties in Papua New Guinea are the best in the world. There are about 650 species of Dioscorea.
It possibly has anti-cancer properties.

PICTURES



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)



Credit: Food Plants International (Bruce French)

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