

## ARROWROOT

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**A** CONSIDERABLE quantity of arrowroot flour or starch is imported annually into Ceylon when it is possible to produce all our requirements in the Island. Arrowroot flour is obtained from the rhizomes of two plants—*Maranta arundinacea* (Sin. *hulankeeriya*) and *Canna edulis* (Sin. *butsarana*). The former is known commercially as West Indian or Bermuda arrowroot and the latter as Queensland or Australian arrowroot.

*Maranta* is a herbaceous plant with leaves somewhat like those of turmeric and is a native of Tropical America. The plant grows to a height of about three feet: the flowers are white. The rhizomes are white, with a shining skin, and are produced in clusters adhering to the roots.

*Canna edulis* is a species allied to the ornamental garden canna and is a native of the West Indies. Plants may grow to a height of six or seven feet and may form clumps of 15 to 20 suckers. The flowers are red and the leaves are similar to those of the garden canna but usually have a bronze margin. The rhizomes are formed in a compact mass.

Both of these can be successfully grown in the wet zone of Ceylon from sea level up to about 3,000 feet on most types of soils except gravelly and very heavy wet clay soils. The most suitable is a deep, light loamy soil.

*Maranta* and *Canna* are propagated by rhizomes or by the young plants that shoot from them. Crops can be harvested in 9 to 10 months and both are heavy yielders. Under favourable conditions *Maranta* has yielded 5 tons of tubers per acre and *Canna* double this quantity.

### CULTIVATION

The soil should be worked to a depth of about 12 inches, the deeper the better. The rhizomes or young plants should be planted about 6 inches deep, never shallower, and in rows 2 feet apart and 10 to 12 inches in the row for *Maranta* and in rows 4½ feet apart and 3 feet in the row for *Canna*. When the plants show above ground one or two weedings will be necessary.

# PREPARATION OF ARROW-ROOT FLOUR

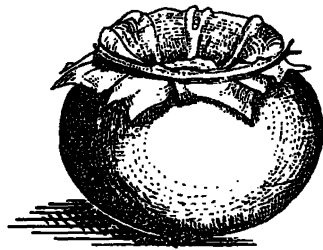


Fig. 1

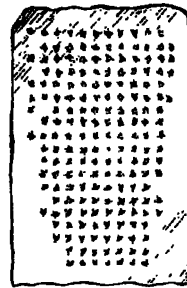


Fig. 2



Fig. 3

Loosening the soil between plants and throwing up a furrow against roots ("hilling") are very beneficial. When the *canna* plants are about 3 feet high the leaves will cover the soil sufficiently to smother weeds but with *Maranta* further weedings may be necessary. Some advocate the removal of flowers as they appear.

#### HARVESTING

With *Maranta* the crop is ready to be lifted when the leaves begin to fall and with *Canna* the plants will begin to die back. Harvesting is best done by lifting the whole plant with a fork. Rhizomes of *Maranta* can be easily removed from the plants but *Canna* rhizomes adhere firmly and are bound by the masses of rootlets from the rhizomes and therefore have to be cut off.

#### USES

The principal use of both *Maranta* and *Canna* is for extracting the starch, which is the arrowroot of commerce, but the rhizomes can be boiled and eaten. *Maranta* can be cooked as a vegetable and the young rhizomes make a fine curry.

#### A SIMPLE METHOD OF EXTRACTING ARROWROOT

The rhizomes should be well washed and all the rootlets removed. They should then be skinned or peeled and again well washed. They are then reduced to a pulp in a wooden mortar (*wangediya*) or may be grated on a rough surface. A simple, but efficient, grater is easily made by punching a number of holes close to one another in a tin sheet. The holes as they are made have ragged edges on the reverse side of the tin and these form a rough, sharp, cutting grater (Fig. 2).

A vessel, of which the top is loosely covered with a piece of cheese-cloth or muslin to form a sieve (Fig. 1), and a good supply of water are necessary. The vessel is filled with water till some of it is above the cloth sieve. The grated rhizome is then put on the cloth and is worked—squeezed—by hand (Fig. 3) till the starch is separated and washed down. In a short time the starch settles in the vessel. The water is drained off, fresh water is added and the starch is stirred and thoroughly mixed in the water and is allowed again to settle down. If the starch is not absolutely white and clean, the process is repeated and thereafter the starch is dried in the sun.

The above is a simple cottage method of extracting arrowroot starch. This method is popular and is practised in our homes. The time will come, if arrowroot cultivation is extended, when it will be necessary to consider the use of machinery for the extraction of the arrowroot starch.