

GROWING SWEET POTATO

INTRODUCTION

Sweet potato (*Ipomoea batatas*) originates from Tropical America and belong to the Convolvulaceae family. It grows well in areas of latitudes of 40 degrees north to 30 degrees south of the Equator. Presently, in Sarawak, sweet potato is planted mostly for home consumption and the surplus that reaches the market is still negligible.

In some countries, sweet potato is a staple food of the people. It is either boiled or roasted. Sweet potato is a good source of carbohydrate, vitamin A and traces of other nutrients, essential to human body.

SOIL

Sweet potatoes are best grown on sandy loam soil with high content of organic matters, and good drainage. Very sandy soil is not suitable for sweet potatoes as this will tend to produce long tubers. Neither is clay soil. However, sweet potatoes can grow on poor soil provided that they get proper manuring.

Good drainage is important since the crop cannot withstand water logging. Soils with high bulk density or poor aeration tend to retard tuber formation and result in reduced yields. A soils pH 5.6 – 6.6 is preferred for sweet potato. It is sensitive to alkaline or saline soils, and such soils should be avoided.

LAND PREPARATION

The land must be ploughed and turned over. Generally, one ploughing and turning over is sufficient. Planting beds of 60 cm wide and 30 cm high is prepared. This will facilitate weed and water flow control.

PLANTING MATERIALS

Sweet potato can be propagated in two ways, by its tuber and by its cuttings. Cuttings are cheaper and easier. The use of setts derived from the tuber for direct planting of sweet potato is, however, not recommended as a general practice, because it usually results in very low yields. To obtain cuttings for field planting, stems are cut at 20–30cm from 50–60 days old plants.



Cuttings ready for planting

FIELD PLANTING

The cuttings are planted slanting, with about 20cm of the cutting under the soil and 10cm above the soil surface. Planting distant recommended is 1.0m x 0.3m. The planting of sweet potato cutting also can be done by transplanter. If the weather is very hot and dry, water the newly planted cuttings once a day. The creeping plants should be collected and placed onto the beds to avoid the roots from growing from the nodes along the stem or branches. If this is allowed, small tubers will be produced at the main stem. This could be carried out once a month depending on the growth.



Single row transplanter



Planted cuttings

WEED CONTROL

Weeds are a problem in sweet potato only during the first two months of growth. After this period, vigorous growth of vines results in rapid and effective coverage of the ground surface and smothers the weed presents. It should be destroyed by using hoe or weedicide. Pre-emergence herbicide do not endanger the newly planted cuttings. But it is advisable to carry out the spraying before planting.

MANURING

Liming would be done 3 weeks before planting depend on the soil acidity. Sweet potato responds well to fertilizer, particularly if the land has been planted for some time. The exact type and rate of fertilizer will, of course, depend on the soil type, the environment, and variety grown. A 15:15:15 compound fertilizer at the rate of 1120 kg per hectare may be used as a general recommendation. Manuring at the rate of 500 kg fertilizer 15:15:15 per hectare is applied one week after planting. One and a half month after planting, another 620 kg of fertilizer 15:15:15 is applied.

The fertilizer is applied around each plant. Additional fertilizer at a reasonable rate is applied if the growth is not encouraging. An imbalanced manuring can cause the plant to produce more leaves and less tubers.

HARVESTING

Sweet potato is ready for harvesting in 3-8 months after planting. In most parts of the tropic the crop requires 4–6 months to mature. The exact duration of the crop varies with variety and with the environmental conditions under which it is grown. Most of the sweet potato grown in the tropic is harvested manually.



Manual harvesting

Based on evaluation carried out by Agriculture Research Centre, Semongok, “Cina”, “Unggu” and “Gendut” varieties can yield up to 20–25t/ha, provided that the recommended agronomic and management practices are observed. ‘Cina’ and ‘Gendut’ also can be planted on peat soil but the yields are lower with only 10–15t/ha of fresh tubers. All of the three varieties were suitable for fresh consumption. ‘Unggu’ and ‘Cina’ varieties were also suitable for making sweet potato chips.



'Unggu' tubers



'Cina' tubers



'Gendut' tubers

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