



HAWAII COOPERATIVE EXTENSION SERVICE

College of Tropical Agriculture and Human Resources

HOME GARDEN VEGETABLE SERIES No. 12

SWEET POTATOES

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There are two types of sweet potatoes (*Iopomoea batatas*) grown. The one referred to as the "sweet potato" is the dry-fleshed type with white to pale yellow and purple flesh used by many for boiling or frying. The other, popularly termed the "yam", is of the moist-fleshed baking type with orange flesh.

Varieties

Moist, or yam-type, include Kona-B, Onolena, Centennial and Iliula. Kona-B has a wide adaptability and is the best yielding sweet potato under Hawaii's growing conditions. Dry type: Onokeo, Kaneohe Red, HSPA-3, Miyashiro and Waimanalo Red.

Soil Type

Although sweet potatoes may be grown on various types of soil, best results and highest yields will be obtained on soils that are loose, free from rocks, fairly fertile with a pH of 5.0 to 6.0 and with good drainage. Sweet potatoes grown in tightly packed or rock-filled soils will produce many misshapen roots.

Planting

Sweet potatoes can be grown throughout the year in Hawaii. A crop will mature in 4- to 5-months during the warmer and longer day length periods. During late fall and winter months, the crop will require 5- to 6-months before it is ready for harvest.

Sweet potatoes are best propagated by means of tip cuttings which are usually free of insects and diseases. The cuttings are made about 8- to 12-inches in length with all except two or three terminal leaves removed from the vine. The cuttings are planted at an angle with two-thirds of the vine covered with soil. They are spaced 6- to not more than 12-inches apart in rows set 3-feet apart. Wider spacings tend to produce large, jumbo-sized roots.

Fertilizer

The exact amount and formula of the fertilizer used will depend upon the soil in which your sweet potatoes are grown. Sweet potatoes require a fer-

tilizer with medium amounts of nitrogen and larger amounts of phosphate and potash. A fertilizer as 5-10-10 applied at the rate of 1¼- to 2¼-pounds per 100 square feet is recommended on soils of average fertility. The fertilizer should be applied 2- to 3-weeks after planting. It should be placed 3-inches deep and 4-inches to the side of the plants in a band 3- to 4-inches long. Fertilizers high in nitrogen should be avoided because they will cause excessive vine growth and deeply ridged roots. Manure should not be used on the crop because of danger from disease infection to the developing roots.

Cultivation

Weeds should be controlled when the vines are young. Once the vines start crawling, weeds will be shaded out and become less of a problem.

Irrigation

Irrigate the crop whenever necessary. Irrigation after prolonged periods of drought may cause growth cracks on the potatoes. Irrigation should be stopped 3- to 4-weeks before harvest. This will allow the soil to dry and facilitate digging. Irrigation after the crop matures may cause sprouting of the potatoes.

Pest Management

Pests which most commonly attack sweet potatoes are weevils, stem borers and spider mites. Insecticides such as diazinon and malathion may be used to control the weevil and stem borer. If cuttings are dipped in an approved insecticide solution prior to planting, this gives good protection against early insect injury, especially from sweet potato weevils. Sulfur dust or spray will control spider mites if they become troublesome. Field sanitation, the destruction of infested crop residue, will reduce weevil injury in future crops.

The diseases of sweet potatoes are usually not of any great importance in Hawaii if disease-free tip cuttings are used as planting material. Root-knot

nematodes may become troublesome, causing pimple-like growth on the roots. Preplant soil treatment with a nematicide will control the nematodes.

CAUTION: When using pesticide chemicals, always read the label carefully and follow the directions for use, storage and disposal and all other precautionary measures.

Harvesting

Sweet potatoes will be ready for harvest from 4- to 6-months after planting date. Plants left to grow more than 6-months will produce large, jumbo roots. They also have a greater chance of becoming infested with the weevils or infected with diseases. The crop should be harvested with care so as to prevent bruising of the roots. The vines are cut at the base and removed before digging which should be done when the soil is dry, to get clean roots free from any adhering soil. If the digging must be done in wet soil, the potatoes should not be washed but left exposed in the rows, or in a sheltered area, until the adhering soil dries out and is easily brushed off of the potatoes.

Curing & Storing

The primary purpose of curing sweet potatoes is to heal cuts and bruises quickly, with a minimum of shrinkage. They should be cured for about 10-days after digging. Also in the curing process, some starches are converted to sugars, thus giving the potatoes a sweet flavor. Curing takes place faster at 85°F., with a high relative humidity. In most low-land areas, the temperature and humidity are such that curing can be done merely by storing the sweet potatoes in a ventilated, rat-proof shed for 2- to 3-weeks. After curing, the roots should be stored at a temperature of 55°F. to 70°F. Temperatures below 50°F. will damage the roots. Temperatures above 70°F. may cause excessive shrinkage and sprouting.

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NOTE: Use of trade names is for the convenience of the readers, only, and does not constitute an endorsement of these products by the University of Hawaii at Manoa, College of Tropical Agriculture, Cooperative Extension Service, or their employees.

March, 1978 (revised)