



<b>Botanical name:</b>	<b>Dioscorea alata</b>
<b>Common name:</b>	<b>Yam</b>
<b>Tongan name:</b>	<b>'Ufi</b>
<b>Other names:</b>	<b>'Ufi tokamu'a, 'Ufi tokamui, 'ufilei etc..</b>

## DESCRIPTION & USES

Yams are one of the most important crops in Tonga; they are an essential feast food and are traditionally given as gifts. They are also a valuable cash crop for the domestic and export markets. In the 1993 Land Use and Crops Survey, it was found that yams was grown by 83 percent of households surveyed with 1489.5 acres of yam were grown yielding about 7346 tonnes of tubers.

There are three types of yams grown in Tonga:

- Early yam: Scientific name - *Dioscorea alata*; Tongan name - 'ufi tokamu'a;
- Late yam: Scientific name - *Dioscorea alata*; Tongan name - 'ufi tokamui;
- Sweet yam: Scientific name - *Dioscorea esculenta*; Tongan name - 'ufilei.

The early yams have long, thick tubers; late yams have smaller, spherical tubers; and sweet yams are smallest and taste sweet. Yams are normally the first crop to be planted after a fallow period.

# Yam

## PRODUCTION NOTES

**Climate:** Requirements are at least 1500 mm of well-distributed rain per year, and for high yields temperatures of 27-30°C are best. Yam requires daylength of less than 12 hours for tuberization.

**Soil:** Yam requires deep, loose, well-drained, deep, fertile loamy soils. Sweet yams grow well in sandy soils.

**Fertilisers:** No fertilisers are required for fallowed land. In overcropped land, use 15g each of urea and potash per hill. Do not band fertiliser, apply evenly around the mound.



**Propagation:** Cuttings of large tubers, small whole tubers and aerial tubers for some varieties are used for propagation. For early yams the average set size is 0.67 kg and for late yams the average is 0.25 kg.

**Planting:** Three major planting times: early yams are planted from May to July; main planting (*ta'u lahi*) – August to September; and late yams are planted from October to December. Fill dug holes with topsoil. Place set on the ground level, skin downward and the top end facing the side of the hole. Cover set with soil to form a mound. Use one tuber piece per planting holes for early yam. For late yam, use two sets if the using smaller size sets.

**Planting density:** Average planting densities for each type of yam are: Early yam (1000-2300 plants/ac); Late yam (1300-2700 plants/ac); and sweet yam (1700-2666 plants/ac). Orient row parallel to wind direction for quick drying to reduce disease.

**Inter-cropping:** Yams are commonly grown as an inter-crop with giant taro, plantain or American taro.

**Growth period:** Early yams usually grow for 9 to 12 months and late yams normally grow for 8 to 12 months. Sweet yams may remain in the ground for more than one year.

**Disease and pest control:** Yams can be affected by insects such as the rose beetle and caterpillars, and by

land diseases such as seed piece rot, yam tuber rot, anthracnose, and stem rot and leaf spot diseases. **Nematodes:** Use fallowed land. **Rose beetles and caterpillars:** spray weekly with Sevin, 1 tablespoon per gallon. **Anthracnose:** use resistant varieties or spray fortnightly yam either with Benlate, ½ tablespoon, or weekly with Mancozeb, 2 tablespoons, per 5 litres or spray them alternately to prevent anthracnose developing resistance to Benlate. **Tuber scales:** dip for 10 minutes in Perfecthion, 1 teaspoon per 5 litres. **Tuber rots:** dip sets for 10 minutes in Benlate (½ tablespoon) or Mancozeb (1 tablespoon) plus Sevin (½ tablespoon) and Agral (1 teaspoon) per 5 litres. Sand and ash are used also.

**Weeding:** Hoe every two weeks. Hoeing during dry times provides a dry soil mulch which reduce evaporation losses.

**Storage:** Yams store better than other root crops and can be kept for 3 to 6 months if kept in a well-ventilated cool store. Careful harvest and post-harvest handling will also ensure longer storage life.

### Marketing notes:

Yams are the most expensive of the root crops. The average prices at Talamahu Market from 2019-2025 were early yam (T\$10.01/kg); late yam (T\$7.37/kg); and sweet yam (T\$6.93/kg). About 8,697.68 tonnes of yams were exported annually during this period.

For more information

Address: Ministry of Agriculture, Food and Forests (MAFF)