

A CROP PRODUCTION TECHNICAL GUIDE



TANNIA

(*Xanthosoma sagittifolium*)

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INTRODUCTION

Tannia (*Xanthosoma sagittifolium*) is also known as new cocoyam and in the region is important in the islands of Dominica, St Vincent and the Grenadines, St Lucia and Grenada.

The origin of this crop is listed as the American Tropics. Both the leaves and subterranean tubers are eaten, but in the Caribbean the tubers are the preferred plant part eaten.

The tubers are said to contain the irritant substance calcium oxalate and saponins which are destroyed in cooking. Tannia is traded mainly in ethnic markets in the United Kingdom and North America.

LAND PREPARATION

Tannia grows best in well drained easily cultivated soils with no water logging and quick run off after rains. The site selected should not have been cultivated with tannia immediately before, particularly if the crop was diseased.

In the tannia producing islands, the crop is generally grown on slopes. It is recommended to make ridges along the contour 45cm high and 20cm deep.

Planting in mounds is not advised since they do not provide the adequate aeration and free drainage which allows for efficient production of the corms.

RECOMMENDED VARIETIES

Two main types are grown commercially, they both have smooth skin. One type though has purple leaf petioles and purple flesh while the other has green petioles and white flesh.

PLANTING MATERIAL

Tops, sprouted corms and suckers can all be used in propagating tannias. The suckers and tops are reported to give higher yields than the cormels. Damaged corms and planting material showing signs of decay should be discarded.

Planting material should only be taken from healthy, vigorous plants. Disease free planting material could now be produced by tissue culture which results in even higher yields.



Figure 1: Suckers used for propagating Tannia

PREPARATION OF PLANTING MATERIAL BEFORE PLANTING

Planting material; corms, headsetts or suckers, should be dipped in a fungicide (for 15-30 minutes) before planting.

Corms can be sprouted in moist mulch before planting. The sprouted corm can be cut into pieces each with at least one growing bud-eye.

PLANTING

Tannia can be planted year round, adequate water is however necessary for efficient growth. Planting usually coincides with the beginning of the rains, May/June. The crop is also planted September and November when there in some islands.



Figure 2: Tannia planted in field

Plants are normally spaced 60-90 cm along the ridges. Sprouted corms should be covered with 2 cm of soil while the tops and suckers are planted to a depth of 6-7cm. Tannia is often intercropped with black eyed peas, ochro, pigeon peas and corn. The intercrop is normally planted after the tannia.

CROP NUTRITION

Apply 60g of triple super phosphate to the planting hole. Usually, there are two applications of 16:8:24 at 2 weeks after planting, then again at 6 weeks after planting. The first application is approximately 5g/plant and the second 10g/plant.

PEST AND DISEASES

The most serious tannia disease is what is called “leaf burning disease” or “root rot disease”. The above ground symptoms of the disease are associated with rotting roots hence the descriptions for this disease indicate that the outer leaves of the plant gradually go yellow from margin to mid rib and finally the leaf dies. The roots of the plant also die. Plant growth is stunted. The diseased plant reportedly has no healthy roots. Production of marketable cormels is severely affected.

The causative agent of this disease is reported to be *Pythium myriothylum*. Main sources of the inoculum are infected soil and infected planting material. The development of the disease is helped by poorly drained soils.

Management of the disease

- Tolerant cultivars
- Clean planting material, disease free
- High soil fertility
- Use fungicide (Acrobate) as soil drench

HARVESTING

The smooth white variety of tannia usually matures in approximately 8-11 months after planting. The smooth purple tannia is later maturing. Harvested cormels should be washed after harvest.



Figure 3: Harvested tubers of white tannia

BIBLIOGRAPHY

CARDI Factsheet, Improving Tannia Production in the Windward Islands, Herman Adams et al.

CARDI Research Activities 1991-1994

Perspectives in the Tannia Leaf Burning and/or Tannia Root Rot Disease in Dominica, Pattan Jalidial, June 1984