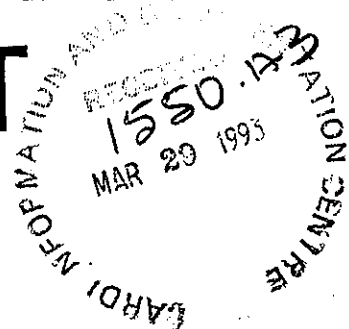


A GUIDE TO PRODUCING DASHEEN FOR EXPORT

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Introduction

The islands of the Eastern Caribbean are well suited to grow dasheen (*Colocasia esculenta* var *esculenta* (L) Schott) particularly where there is more than 70 in (175) cm) rainfall a year well distributed. These parts of Dominica, St. Lucia, Grenada and St. Vincent maintain dasheen crops all year round and dasheen is a traditional staple food. The dasheen is distinguished from the eddoe by its large edible central corm and reduced cormels. Eddoe (*Colocasia esculenta* var *antiquorum*) grows under drier conditions and matures in 5 months.

Owing to the high adaptability of dasheen to the sub-region, its high potential yield (around 25 metric tons per hectare), the long tradition of dasheen cultivation, the relatively good demand for the product both within and outside the region and the recent research success in extending dasheen shelf-life to 4 weeks, the time is right to step up commercial production and encourage dasheen export.

Farmers should ensure the following before planting:

1. Availability of markets

2. Regularity of supply to satisfy exporters.
3. Planting at the right time to meet the demand
4. Availability of good quality planting material in sufficient quantities.
5. Sufficient fertilizers, weedicides, slug bait, fungicides etc.

Varietal Selection

The export market requires round, oblong or cylindrical corms about 1.5 – 2 lb in weight. The variety which produces a good yield and the right kind of corms is the one called "Dasheen Common" in Dominica; but it is also found in all the islands under different names. The main traits of this variety are:

- the corms are of regular round, oblong or cylindrical shape without "forks";
- the petiole (leaf stalk) is dark green turning purplish at point of attachment to leaf.

corm pulp is white and turns bluish upon cooking;

- the cormels are almost sedentary on the corms for the cormels "stalk" is very short.
- it grows well in upland conditions;

Planting material selection and treatment

The lateral suckers (setts) with a basal diameter around (55 - 65 mm) (2.3" - 2.6") give the quickest initial growth and highest yields.

The suckers should be harvested from only the most vigorous and healthy plants, cleaned of all roots and mildly disinfected in a mixture of water and sodium hypochloride (1 gallon water + 6 tablespoons or 90 ml bleach).

Setts (suckers) can be stored for a few days in moist and shaded conditions. Cut back petioles to a length of 17 cm - 30 cm (7 inches - 12 inches). Cut off whole leaves attached to planting sett.

Plantings

About 10,000 - 20,000 plants per acre of pure stand dasheen will give a quick ground cover and the best yields. Space plantings holes 100 cm x 20 cm (40 inches x 8 inches), or 100 cm x 30 cm (40 inches x 12 inches). Other spacings can be 60 cm x 60 cm (2 ft x 2 ft). For the export market, plant in pure stands and straight rows to make field operations lighter. However, good quality dasheen can be obtained when intercropped with string beans, first planting of bananas and other vegetables.

Avoid continuous cropping of the same field with dasheen so as to prevent a build up of pests and diseases.

On new clearings, pile up rocks and remains of bush in windrows along the contours. Avoid burning. The moderately deep loams are easily forked to a depth of 25 cm - 50 cm (10 inches - 20 inches) which allows dasheen to be planted to a favourable depth of 10 cm - 17 cm (4 inches - 7 inches). No ridging is necessary since dasheen thrives under moist conditions.

Fertilizer application

In some soils it may be desirable to spread dolomitic limestone at a rate of 1 ton per acre, once in every 3 years. After the limestone application leave the land to weather for a few weeks.

Compound (NPK) fertilizer used on bananas gives good dasheen yields. The suggested rate of application is 28 g (1 oz) per plant at 1 - 2 weeks after planting, again at 2 - 3 months.

The fertilizer is best applied in a band running along the row on the up-hill side about 12 - 20 cm (5 - 12 inches) away from the base of the plants. Work the fertilizer into the soil with a hoe. Fertilizer left on the surface will be washed away by heavy rains.

Weed control

Use pre-emergent herbicides Maloran or Gesapax followed by post-planting applications of Fusilade or Gramoxone. Fusilade is useful where the weeds are predominantly true grasses but Gramoxone will kill both grasses and broad-leaf weeds. Fusilade sprayed over the top of the crop kills grasses in 2 - 3 weeks and the dasheen is not affected, but the broad-leaf weeds then have to be hand weeded.

Gramoxone will kill all weeds and the crop also and therefore it must be applied with a spray shield to prevent drift onto the dasheen leaves.

Pests and Diseases

A crop rotation programme helps to keep down pests and diseases. Dasheen in the Eastern Caribbean, has not yet been observed to suffer from the serious pests and diseases reported in other parts of the world. There may be, however, sporadic attacks of slugs and snails which should be dealt with immediately by the use of slug baits.

The most prevalent insect pests are white flies and aphids, and these are sometimes accompanied by moulds on leaves. If severe, they can be controlled by insecticidal sprays. Leaf moulds and leaf spots can be controlled by copper based fungicides. Only apply insecticides or fungicides when the damage to the dasheen leaves is over 10 to 15 per cent.

Harvesting

Upland dasheen varieties will mature in 7 – 8 months. Upon maturity, the rate of wilting leaves is quicker and the large corm tends to move upwards and can sometimes push its top above the ground. Sample a few plants to make sure the harvest is ready. Forks are used to dip out the corms but extreme care must be taken to avoid damage to corms at this stage. Cut, bruised and battered corms rot faster during the 1 – 3 weeks trips for export. Sound corms will keep up to 4 weeks if a fungicide dip is done immediately after harvest. Use rigid containers like wooden or plastic crates and baskets to move dasheen corms.

For Fungicidal Dip

1. Wash dasheen corms in clean running water to remove all soil, roots and dead tissues; rubbing with a rough rag or medium hard scrubbing brush will help.
2. Discard rotted corms, abnormally shaped corms less than 1 kg (2 lb) in weight.
3. Cut off “tail” end of corm to leave about 6 – 12 mm ($\frac{1}{4}$ – $\frac{1}{2}$ inch) on the corm. Cut the top to leave one inch-long “stalk” attached to the dasheen corm.
4. Dip corms for 2 – 3 seconds in a solution of 28 litre (6 gallons) water plus 14 g teaspoon of Ridomil mbc 60 WP. Mix well with a wooden stick. Use dip until the level drops too low or the mixture becomes discoloured, whichever comes first.

5. After dipping, place corms in crates to air dry in shade.
6. Pack in 15 – 20 kg containers for shipment. If carton boxes or crates are used they can be lined with plastic to retain moisture released from the corms without all effects.
7. Packing in coconut fibre dust (coir) can also be used to keep dasheen corms moist and fresh.



Corms being dipped in fungicide solution.

Some Economic Considerations

An acre of dasheen (18,000 – 22,000 plants) cultivated carefully will cost up to EC\$ 3000.00. Assuming wholesale prices around EC\$ 0.35 per pound, and average yields of graded marketable corms around 20,000 – 30,000 lb per acre, a profit of around EC\$ 3000 per acre can be expected.

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