

## Cultivation of Elephant Yam (*Amorphophallus companulatus*) in Sivakasi (Ramnad Dt.)

By

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Elephant yam "*Senai Kiyhangu*" as it is called in Tamil, is an important root crop noted for its high yield and keeping quality. It is cultivated to an extent of 1855 acres in Ramnad District, mainly concentrated in Sivakasi and surrounding villages. It is largely exported to various places up to Madras in the north and Tirunelveli in the south.

**Season and Soil:** It is mainly cultivated in April-May, though it can be cultivated in other months also. It is chiefly grown in garden lands in rich loamy soil. Red loam is preferred to black loam as the keeping quality of the produce is said to be higher in the former. Like other root crops, it is a heavy feeder and hence a high fertility is essential.

**Preparation of the land:** A good tilth is aimed at. Hence ploughing begins sufficiently early and continues at intervals until the surface soil has been thoroughly broken up to a depth of 6" - 9". five ploughings are necessary, if it is done by country plough. A basal dressing of 50 cart loads of Farm Yard Manure is applied after second ploughing and worked into the soil by subsequent ploughings. When the crop is four months old, a top dressing of 4 bags of groundnut cake or 10 cartloads of well rotted cattle manure are applied through irrigation water.

**Planting:** It is followed by onions and ragi in a two year rotation in garden lands. Bed system of planting is in vogue. Beds of 7' length and 3½' width are formed with irrigation channels. Planting starts from April onwards and continues till the middle of May. About 1,200 beds are formed per acre. Seed material is prepared from selected corms which are cut into 4 to 6 bits, each containing a portion of the bud ring at the centre depression. Small pits 6" - 9" depth are made with *manvetties* (harrow) giving a spacing of 1½' on either side. The cut bits of corm are so placed in the pits that the bud portion comes into contact with the soil and then covered over with one inch layer of soil. About 3000 lb. of seed material is required to plant an acre. Sprouting takes place after a month. Usually each bit will give rise to 3 shoots, one after another.

**Irrigation:** First irrigation is given immediately after planting and second irrigation on the 3rd day. A judicious method of irrigation according to the needs of the crop is adopted. For the first 3 months, irrigation is given at intervals of 10 days, at intervals of 6 days for the next 2 months and for the last 3 months, it is given twice a week.

**After cultivation:** Three weedings are done in the first 3 months by means of a small hand hoe called "*Kalaikilli*" followed by a earthing up by *manvelli* in the 4th month. Afterwards, practically no hoeing or weeding is done.

**Harvest:** The crop will be ready for harvest by the end of the eighth month when the shoot portions of the plants begin to wither indicating the maturity of the crop. Harvest is done by means of an implement called "*vachatthu*" (sickle). If the prices are high, the corms will be lifted even in the 6th month and if the market is dull, the harvest will be postponed by a month or so. It is said that corms will not be affected if they are allowed to remain in the soil even for a longer period. As a matter of fact the seed corms are allowed to remain in the soil till required for the planting.

**Yield:** The yield of a good crop ranges from 40,000 to 45,000 lb. per acre. Generally harvest is done by the merchants at their cost who purchase the entire crop in the field itself. The weight of a single, well developed corm will be about 10 lb. the average being 5 lb.

**Pests and diseases:** There is no serious pest or disease affecting this crop. Occasionally termites (white ants) attack the seed corms planted. This could be prevented by mixing crude oil emulsion in irrigation water. As regards diseases, *Alternaria* leaf blight is noted in the later stages of the crop. This can be controlled by spraying 1% Bordeaux mixture.

**Cost of cultivation:**

	Rs.	A.	P.
<i>Preparatory cultivation:</i>			
5 ploughings-10 pairs at Rs. 4/- per pair	40	0	0
Forming beds and channels	18	8	0
<i>Manures and Manuring:</i>			
Cost of 50 cartloads at Rs. 4 per cart load	200	0	0
Cost of 4 bags of groundnut cake	70	0	0
<i>Seeds and Sowing:</i>			
Cost of 300 lb. of seed corm	200	0	0
Planting charges	14	0	0
<i>After cultivation:</i>			
3 weedings - women	15	0	0
Manvetty hoeing	15	0	0
<i>* Irrigation charges:</i>			
44 irrigations at Rs. 12/- per irrigation by Mhote	528	0	0
<i>Harvest:</i>			
On contract at 4 as per bag 112 lb. for 400 bags	100	0	0
<b>Total</b>	<b>1,200</b>	<b>0</b>	<b>0</b>
<i>Receipts:</i>			
By sale of 400 bags of 112 lb. each at Rs. 6/- per bag	2,400	0	0
Net profit per acre	1,200	0	0

\* Irrigation charges can be reduced very much, if irrigated by pumpset.