

Organic production of elephant foot yam

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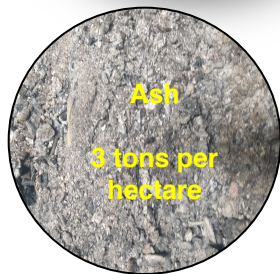
ELEPHANT FOOT YAM, known as the ‘King of Tubers’, is an important tuberous vegetable cum food security crop with high production potential, nutritive value, good taste, cooking quality and medicinal values. The corms also contain moderate amounts of protein, calcium and vitamin C. It has great scope for commercial exploitation as a medicinal crop in pharmacological industry due to the presence of various nutraceuticals and the corms find wider use in traditional ayurvedic preparations for the treatment of inflammation, piles and gastrointestinal disorders. The growing public concern about environmental and personal health issues have generated great consumer interest in organic farming and organically produced foods. Protocols for organic production of elephant foot yam are described here.

Raise green manure cowpea with 20 kilograms per hectare of seeds prior to elephant foot yam and incorporate green matter at 45-60 days. Use organically produced planting material. Treat corm pieces of 500-750 grams with slurry containing cowdung, neem cake and *Trichoderma harzianum* (5 grams per kilogram seed) and dry under shade before planting. Apply *Trichoderma harzianum* enriched farmyard manure (FYM) at the rate of 36 tons per hectare (3 kilograms per pit) in pits at the time of planting (FYM: neem cake mixture (10:1) inoculated with *Trichoderma harzianum* at the rate of 2.5 kilograms per ton of FYM neem cake mixture. *Trichoderma* can be multiplied in FYM alone but it will take 15 days to form sufficient inoculum as against 7-8 days, if neem cake is also used along with FYM). This is effective against collar rot caused by *Sclerotium rolfsii*. Apply neem cake at the rate of 1 ton per hectare (80-85 grams per pit) in pits at the time of planting. Inter-sow green manure cowpea at a seed rate of 20 kilograms per hectare between elephant foot yam pits and incorporate green matter in pits at 45-60 days. The green matter addition from the two green manure crops should be 20-25 tons per hectare. Apply ash at the rate of 3 tons per hectare (250 grams per pit) at the time of incorporation of green manure in pits. Apply *Trichoderma* enriched vermicompost at the rate of 150 grams per plant twice after weeding and interculturing as a precaution to avoid collar rot infection. Remove the collar rot infected plants and apply *Trichoderma* enriched vermicompost at the rate of 150 grams per plant in the collar region of the adjoining healthy plants.

Protocols



Use of FYM incubated with bio-inoculants



Organic Corms

Seeing is believing!



Advantages

- Higher yield (+20% over conventional)
- Safe and quality corms (+7.42% dry matter, +12.67% starch, +12.09 protein, -20.51% oxalate, + K, +Ca & +Mg)
- Higher soil quality index (1.93)
- Higher net income (Rupees 215,776 per hectare)

Crop Production Technical Leaflet

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