

## **Drumstick**

Drumstick leaves, seeds, seed pods, flowers and roots are very nutritious, rich in vitamins A and C, iron and calcium, which help to (a) keep the skin healthy and smooth, (b) to make people strong and resistant to cold and infections and (c) to keep our bones strong. The drumstick tree is also grown as a homestead crop. Drumstick leaves contain 7 times the vitamin 'C' in oranges, 4 times the calcium in milk, 4 times the vitamin 'A' in carrots, 3 times the potassium in banana and 2 times the protein in milk. The plant can be considered as a powerhouse of nutritional value.

The shade of the drumstick plant does not hinder the growth of other crops. It is a perennial, fast growing, drought resistant tree, which can reach up to 12 m in height at maturity. Drumstick is also suitable to grow as a mixed crop with a wide range of perennial crops.

**Temperature** -25- 30 degree celcius but can tolerate up to 48 degree celsius in the shade

**Soil** – well drained sandy loam soil with soil pH -6.3 to 7.0

**Seed rate** – 500 grams/ac

**Seedlings preparation** – use 200 guage polythene bag-mix top soil and sand 3:1 ratio , mix little bit of super phosphate and compost , fill the bag

**Seed treatment** – soak the seeds overnight in water, remove outer seed coat, remove the kernal and plant it 1 cm deep in each polythene bag. Germination will be noticed in 5-12 days

**When seedlings** are 60-90 cm height it is ready for transplanting in the main field

**Planting in the main field** – make 1-2 feet size pit based on the type of soil.mix top soil with 5 kgs of farmyard manure or compost and little neem cake . If possible apply azospirillum and phosphobacteria 20 grams each pit.

**Spacing of plants** – 3 meter between rows and 2 meter between plants

**Direction of planting** – East west direction ensure proper sun light and aeration

**Plant population per acre** – 666 plants

**Pruning and cooping** – when plant reaches 60 -90 cm height, pinch the tip 10 cm below the tip. About a week later several side branches will sprout and develop. When side branch reaches 60 cm long again cut it back to 30 cm long. And again do repeat it in subsequent sprouting and do 4 pinching within 3 months after planting in the main field.

Because by doing this it will induce profuse branching and more branches will give more pods/ fruits and tree size will also be manageable height.

**Manure and Fertilizers** : In rainfed areas 200 gm of fertilizer dose is given in September and December while in Irrigated areas 26 kg of Farm Yard Manuare and 250 gm of fertilizer is given in April followed by dose of fertilizer in September and December. The fertilizer dose may be increased at the rate of 500 gms per year as per requirement of the crop.

**Watering** – any excess water will cause root rot disease. so only limited soil moisture for first two months till it establish is necessary and there after irrigate as and when necessary based on your soil type and prevailing climate

**Weeding** – field should be weed free for first 5 months. so monthly weeding is advisable

If you want to get more yield better apply 5-7 kgs of Farmyard manure and 250- 300 grams of ammonium sulphate/tree. This will increase pod size and numbers.

Even apply HUMIC ACID WHICH FAVOURS DRUMSTICK plants growth and developments and more yield

**Disease** – root rot -avoid excess moisture

**Pest** – leaf eating caterpillar, termite, bud worm, aphid, leaf miner and fruit fly.

**Yield** – Minimum 250 -300 fruits will be born out of single tree

For about 666 plants \* 250 fruits = 1,66,500 fruits per acre- even if you take single fruit weight on an average as 100 grams-you will get about 16-17 metric ton of fruit per acre

Gross income – 1,66,50kgs @ Rs.10 per kg= Rs.1,66,500

Allow 10 % risk then gross income will be around Rs.1.50 lac

Cost of cultivation per acre- Rs.25,000

Net income per acre per year is Rs.1.25 lac