

## MORINGA' THE MIRACLE TREE'

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ARTICLE ID: 091

### INTRODUCTION

*Moringa oleifera*, also known as the drumstick tree or horseradish tree, is a fast-growing, drought-resistant tree native to the southern foothills of the Himalayas in north-western India. It can reach a height of 10–12m, it has fragile branches, delicate, feathery leaves and long, three-sided seed pods which hang down in clusters. It can be growing at any place of India and even as in every house backward

### HISTORY

Moringa is a tree that has been used for thousands of years in India for everything from food, to building materials, and also for its beneficial properties. This 'wonder tree' truly is wondrous in that each part of the tree is useful. The roots, stems, leaves, seed pods, resin and flowers are considered to be healing herbs in Ayurvedic and Unani (traditional Middle Eastern healing system) folk medicine.

The generic name is derived from the Tamil (language spoken in southern India and northeast Sri Lanka) word 'murunga' meaning twisted pod. And 'oleifera' is Latin meaning 'oil-bearing' due to the seeds high oil content.

### Cultivation of Drum stick

*Moringaoleifera* is believed to be native to sub-Himalayan tracts of northern India but is now found worldwide in the tropics and sub-tropics. It grows best in direct sunlight under 500 meters altitude. It tolerates a wide range of soil conditions, but prefers a neutral to slightly



acidic (ph. 6.3-7.0), well-drained sandy or loamy soil. Minimum annual rainfall requirements are estimated at 250mm with maximum at over 3,000mm, but in waterlogged soil the roots have a tendency to rot. Presence of a long taproot makes it resistant to periods of drought. Trees can be easily grown from seed or from cuttings. Temperature ranges between 25-35 °C (0-95°F), but the tree will tolerate up to 48° in the shade and it can survive a light frost. Moringa seeds have no dormancy period, so they can be planted as soon as they are mature and they will retain the ability to germinate for up to one year. Moringa trees will flower and fruit annually and, in some regions, twice annually. During its first year, a Moringa tree will grow up to five meters in height and produce flowers and fruit. Left alone, the tree can eventually reach 12 meters in height with a trunk 30cm wide;

The tree can be annually cut back to one meter from the ground. The tree will quickly recover and produce leaves and pods within easy reach. Within three years a tree will yield 400-600 pods annually and a mature tree can produce up to 1,600 pods.

### Nutritional value of Drumstick

Moringa has many important vitamins and minerals. The leaves have 7 times more vitamin C than oranges and 15 times more potassium than bananas. It also has calcium, protein, iron, and amino acids, which help your body heal and build muscle. It's also packed with antioxidants, substances that can protect cells from damage and may boost your immune system. There's some evidence that some of these antioxidants can also lower blood pressure

### Traditional Medicinal Uses of MORINGA



and reduce fat in the blood and body

#### **Uses of Drum stick-**

**Rheumatoid arthritis:** Moringa leaf extract may lower fluid swelling, redness, and pain.

**Diabetes:** Several early studies show that insulin-like proteins found in moringa may help lower blood sugar. Plant chemicals found in the leaves might help the body process sugar better, and it may affect how the body releases insulin.

**Cancer:** In lab tests, leaf extracts slowed the growth of pancreatic cancer cells and helped chemotherapy work better. Other lab studies show that moringa leaves, bark, and roots all have anti-cancer effects that might lead to new drugs.

**Memory:** Some experts think the antioxidants and other health-promoting plant chemicals may heal stress and inflammation in the brain.

**Water Purifier-** Moringaoleifera seed powder is natural, biodegradable, safer compared to traditional inorganic chemical coagulants (like Alum) used for Water Purification

**Uses in Agriculture-** Moringa leaf extract can be used as bio stimulants, hence its leaf extract in water contains growth enhancing substances

Foliar appliance of moringa (Moringaoleifera L.) leaf extract helpful for the vigorous growth, deeper root development, seed germination, and delay of fruit senescence

#### **Future prospect**

As Drum stick Is an incredible food and fodder which will gain the international market as the use of organic cultivation. There are many constraints which make difficult for Moringaoleifera L. Plant to commercialization, the only method which can solve all challenge of commercialization is Biotechnology like Micro propagation, In-vitro metabolic production, Pathway identification and engineering

## CONCLUSION

Moringaoleifera has potential dietary vitamins and minerals and it is easily cultivated in any area of India. As every part of plant is used for some beneficiary use either to human, Animal and plant. Hence, it concludes that it will develop huge converge in near future and help farmers to gain more income.

