

A Review on Drumstick Plants (*Moringa Oleifera*) Medical Uses and Nutritional Properties

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Abstract— *This plant is small or medium in size. It is used in cosmetic and as a medicinal plant. It was a crucial medicinal plant in traditional method of treatment. Sujna (*Moringa oleifera*) is multipurpose tree basically native of India and wildy found in subHimalayan regions of northern India. According to Ayurveda Aushadi dravyas are virya Pradhan and Ahariya dravyas are Rasa Pradhan, Horseradish possess both properties which makes it unique from other plants. It has an impressive range of medicinal use with high nutritional properties. *Moringa oleifera* is also known as —Miracle Tree Its cultivation is extremely simple and requires fewer efforts. It plays an important role in conservation of soil, water, and mitigating climatic change. It is highly nutritious crop cultivated mostly altogether parts of the planet. It is a valuable food crop, grows in no time and even beyond food it serves many benefits. It has been used to fight against malnutrition, especially among young ones and lactating mothers. Its various plant parts are used for different purposes. It is the richest plant source of Vitamins A,B, C, D, E and K. Minerals present during this tree include K, Mg, Ca, Mn, Zn, Cu, and Fe. Its various parts are used for the treatment of varied diseases. This review article provides a quick overview about the nutritional importance, health benefits, and their production technology*

I. INTRODUCTION

Moringa oleifera is locally name as “Sohanjna” Sanskrit name of *moringa oleifera* is “Sigrū”. *Moringa* is the highly valued plant of the genus *moringa* belonging to family *moringaceae*. Almost all parts of the tree may be. *Moringa* is cultivated in Tamil Nadu, Andhra Pradesh, Kerala, and Karnataka in Indian states. Fuglie (1999) described many uses of *Moringa* tree like: biomass production, animal forage, biogas, domestic cleaning agent, in feeding programs to fight against malnutrition especially in Africa like countries, as blue dye, for fencing purpose, as fertilizer, manure, for gum extraction and honey juice-clarifier, various medicines, as ornamental plantation, as bio pesticide against seedling plant disease, rope making, tannin purpose for tanning hides and water purification.

II. CULTIVATION PRACTICES

Moringa oleifera is a perennial multipurpose vegetable tree well suited to adverse climatic conditions and marginal land. Since all the parts of the tree such as leaves, flowers, fruit, pod is useful in one or other way it is a good choice for home garden. *Moringa* tree will be best suited for intercropping system as it offers semi shade so sunlight is not scarce

III. PROPAGATION

Moringa are often propagated by direct seed planting, seedling transplanting and mature stem cuttings.

Direct seeding is preferable when the germination rate is high. Seeds must be sown at a maximum depth of two cm as deeper seeding might reduce the germination rate. There are around 4000 Moringa seeds (with their shell) in a kilo with the germination percentage of 78-94%. Moringa seeds germinate 5 to 12 days after seeding.

IV. HARVESTING

Moringa trees are often harvested after reaching a height of 1.5m and 2 m during high density cultivation. The leaves should be harvested by cutting the leaf stems with a pointy knife or snapping leaf stems from branches at 20 cm to 45 cm above the ground. This method promotes the development of new shoots. It can be harvested up to 35 to 40 days. But just in case of fodder harvesting, the tree should be harvested at every 75 days. The harvested leaves shouldn't be heaped together, since they will spoil easily. Early Morning is that the best time for harvesting which prevent excess loss of water. For selling the fresh leaves, they ought to be sold the same day since they lose moisture quickly after harvesting.

V. BOTANICAL CLASSIFICATION

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| Species | M. Oleifera |
| Genus | Moringa |
| Family | Moringaceae |
| Order | Brassicales |
| Class | Magnolipsida |
| Division | Magnoliphyta |
| Kingdom | Planate |

VI. NUTRITION PROPERTIES

Every part of *M. oleifera* is a storehouse of important nutrients and ant nutrients.

Leaves - The leaves of *M. oleifera* are rich in minerals like calcium, potassium, zinc, magnesium, iron and copper. It contains Vitamins like beta-carotene of vitamin A and also vitamin B such as folic acid, pyridoxine and nicotinic acid, vitamin C, D and E also present in *M.oleifera*. The leaves are considered to supply great potential for those that are nutritionally in danger and should be considered a protein and calcium supplement.

Seeds – Seeds are contain oleic acid and antibiotic termed as pterygospermin, along with several fatty acids like linolenic acid, behenic acid, and . It also contain some phytochemicals like phytate flavanoids tannins lectins, saponin, terpenoids and phenolics. some minerals, proteins, along with vitamins like A, B, and amino acids and fats are also present in seeds
 Root and Bark-The roots and bark are contain some alkaloids substances like moriginine ,morphine and also contain minerals like magnesium, sodium and calcium.

Flawors – The flawors are Contains Ca, K and amino acids.

Pods- The pods are Rich in lipids non-structural carbohydrates, protein, fiber and ash. The various fatty acids are present like linoleic acid etc.

VII. MEDICINAL USES

- The Fresh juice of the root bark is used to relieve otalgia when poured into the
- The root of the young trees is used in several of conditions like intermittent fever, epilepsy, hysteria, chronic rheumatism, dropsy, enlargement of the spleen and dyspepsia.
- The pods act as a preventive against intestinal worms.
- The Moringa is useful in the treatment of cancer.
- The tumor growth in mice delay by the intake of fruit and leaves extract.
- The leaves extract of moringa can decrease the blood glucose level in rat .and also show the antidiabetic effect in streptozotocin-
- Induced diabetic albino rats.
- Dried seeds powder of Moringa are useful in the treatment of bronchial asthma.
- Moringa is also used in decrease the cholesterol levels.
- The leaves are shows the anti-fungal, anti-viral, anti-abortion. And act as a flocculating agent and stimulant.
- Moringa powder used as a substitute for iron tablet hence a treatment for anaemia



CONCLUSION

M. oleifera is a multipurpose plant which dependence on expensive conventional protein supplements, Moringa has almost all essential nutrients in adequate amounts for maintenance and production; provide macro and micronutrient to boost the nutritive value of the feed. The future prospects of *M. oleifera* to be explored in terms of the right sowing densities and harvesting frequencies, information on agronomical practices, planting densities and cutting frequencies for getting maximum biomass with good nutritional quality need to be explored, studies directed towards the detection and commercialization of bioactive compounds.

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