

NUTRACEUTICAL RICH DRUMSTICK LEAVES FOR HEALTHY LIVING

Ms. A. Akhila¹, Dr. Jessie Suneetha. W^{2*},
Dr. B. Anila Kumari¹, Dr. J. Hemantha Kumar²,
Dr. V. Chaitanya² and Ms. A. Gnanakeerthana¹

¹PGRC, PJTS Agricultural University, Rajendranagar, Hyderabad

²Krishi Vigyan Kendra, PJTS Agricultural University, Wyra 507165, Khammam Dt.

INTRODUCTION

Drumstick tree (*Moringa oleifera*) is native to south Asia and growing well in tropical and subtropical regions of the world belonging to Moringaceae family. It is also commonly known as miracle tree, ben oil tree or horseradish tree. Drumstick is also known by several vernacular names such as shevaga in Marathi, shajan in Hindi, murungai in Tamil, muringnga in Malayalam and mulagakaya in Telugu. It can withstand severe drought and mild frost conditions and India is the largest producer of the drumstick with an annual production of 1-1.3 million tonnes of fruits. Due to its high nutritive value, every part of the tree is suitable for nutritional or commercial purposes.

It is a slender, deciduous tree growing to a height to 10-12 m with a trunk diameter of 45cm. The young shoots have purplish hairy bark and drooping branches that are fragile, and

leaves look like feathery foliage of tripinnate. The aromatic flowers are surrounded by five unevenly and thinly veined yellowish-white petals. Usually, the tree begins to flower six months after plantation. In a seasonal climate with good rainfall, flowering can happen twice or all-round the year.

Moringa leaves are rich in minerals, vitamins and other essential phytochemicals. The extracts from these leaves are used to treat malnutrition and enhance breast milk in lactating mothers. It is used as potential antioxidant, anticancer, anti-inflammatory, antidiabetic and antimicrobial agent. It is highly prized as every single part of the tree is valued, used as a superfood that can beat chronic diseases and a vital component in traditional medicine. The leaves of moringa are rich in minerals like calcium, potassium, zinc, magnesium, iron and copper. Vitamins like

β -carotene, folic acid, pyridoxine and nicotinic acid, vitamin C, D and E are also present. The phytochemicals like tannins, sterols, terpenoids, flavonoids, saponins, anthraquinones, alkaloids and reducing sugars are present along with anti-cancerous components like glucosinolates, isothiocyanates, glycoside compounds and glycerol-1-9-octadecanoate. These leaves also have a low calorific value and can be used in diets of obese people.

NUTRITIVE PROPERTIES:

Raw drumstick leaves give 64.0 Kcal per 100g serving along with 1.4g of fat, 9.4g of protein and 8.3g of carbohydrates of which 2.0g is present as dietary fiber and remaining as complex carbohydrates. It also provides 7564.0 IU vitamin A, 51.7 mg of vitamin C, 4.0 mg of iron, 185.0 mg of calcium and 337.0 mg of potassium.

MEDICINAL USES:

- Rubbing the drumstick leaves on the temples can give relief from headache to a certain extent.
- Application of its leaves on wounds or insect bites can be beneficial as it possesses antibacterial and anti-inflammatory properties.
- The poultice of drumstick leaves is useful to halt bleeding from grazes and small cuts.
- Dried drumstick leaf tea can help in reducing the intensity of gastric ulcers and diarrhoea.
- Its leaves are used to treat common fevers, bronchitis, eye or ear infections and painful mucus membrane inflammation due to the presence of antioxidant agents in it.
- Acts as an antiseptic for skin and cure acne due to its anti-inflammatory properties.
- Mixture of carrot and drumstick leaves juice was used to cure gonorrhoea in Ayurveda.
- It is also helpful in treating hair loss and reducing dandruff.
- Its leaves contain iron and its supplementation in diet can prevent anemia.



HEALTH BENEFITS OF DRUMSTICK LEAVES:

Healthy pregnancy:

Eating of drumstick leaves is helpful for pregnant as well as lactating women. It helps to overcome dizziness and vomiting in pregnancy. Regular intake of drumstick leaves powder promotes milk production.

Helpful for men:

Drumstick leaves are loaded with antioxidants that assist to combat oxidative stress. It ensures proper flow of blood and supports overall sexual function.

Weight loss:

High dietary fiber and complex carbohydrates in drumstick leaves assist to absorb more water and halt extra consumption of foods by making one feel full. The chlorogenic acid supports weight loss by normalizing blood sugar and burning fats. It offers nutrients with low calories and the use of it as soup can support weight loss regime.

Controls high blood pressure:

Drumstick leaves effectively lower blood pressure responsible for stroke, heart disease, congestive heart failure, stroke and kidney diseases. Its leaves also contain ample calcium, magnesium, potassium, zinc and Vitamin E required for person suffering from high blood pressure. Moreover, Vitamin C assists production of nitric oxide which is a crucial element for healthy functioning of blood vessels. It also normalizes the pressure on blood vessels.

Healthy hair:

Biotin, vitamin B6 and folic acid along with vitamin E are crucial for preventing hair loss and promote the blood circulation to hair follicles. The high content of vitamin E, A and B

with minerals like silica and zinc can stimulate natural growth of hair, prevent occurrence of dandruff and hair loss. It is used to treat the brittleness and dryness of hair and results in shining and healthy hair.

Rheumatoid arthritis:

Moringa leaf extract may lower fluid swelling, redness and pain as it is rich in phytochemicals with anti-inflammatory properties. The leaves have 7 times more vitamin C than oranges and 15 times more potassium than bananas. It also contains calcium, iron and essential amino acids that can help the body to heal and build muscles. It is packed with antioxidants that can protect cells from damage and may boost the body's immune system.

CULINARY USAGE OF LEAVES:

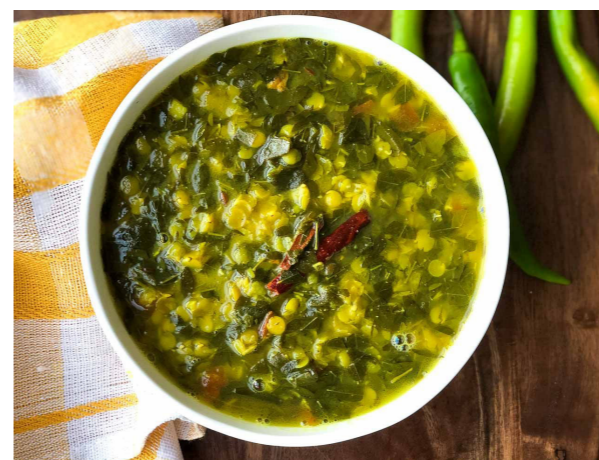
- Its leaves can be cooked as such or added to dal like spinach or any other leafy vegetables.
- Dried and crushed powder can be used in sauces and soups as well as karam similar to curry leaf karam podi.
- Fresh leaves can be added to salads or in salsas or stir-fried items with potato or other vegetables.
- Dried or fresh leaves can be used to prepare tea as it is loaded with ample antioxidants.
- It can be added to vada, parathas and other similar dishes.



Drumstick leaves pulao



Drumstick leaves paratha



Drumstick leaves dal



Drumstick leaves and potato fry



Sweet corn and drumstick leaves salad



Drumstick leaves karam podi