

# *Moringa Oleifera*

## TAXONOMICAL CLASSIFICATION:<sup>[1]</sup>



- *Kingdom- Plantae*
- *Order – Brassicales*
- *Family – Moringaceae*
- *Genus - Moringa*
- *Species – M. oleifera*

## INTRODUCTION:<sup>[2]</sup>

*Moringa oleifera*, commonly referred to simply as Moringa, is the most widely cultivated variety of the genus *Moringa*. It is of the family Moringaceae. It is an exceptionally nutritious vegetable tree with a variety of potential uses. The tree itself is rather slender with drooping branches that grows to approximately 10 m in height; however, it normally is cut back annually to one meter or less, and allowed to regrow, so that pods and leaves remain within arms reach. The Moringa tree grows mainly in semi-arid tropical and subtropical areas. While it grows best in dry sandy soil, it tolerates poor soil, including coastal areas. It is a fast-growing, drought-resistant tree that apparently is native only to the southern foothills of the Himalaya. Considered one of the world's most useful trees, as almost every part of the Moringa tree can be used for food or has some other beneficial property. In the tropics it is used as foliage for livestock. The immature green pods, called "drumsticks" are probably the most valued and widely used part of the tree. They are commonly consumed in India, and are generally prepared in a similar fashion to green beans and have a slight asparagus taste. The seeds are sometimes removed from more mature pods and eaten like peas or roasted like nuts. The flowers are edible when cooked, and are said to taste like mushrooms. The roots are shredded and used as a condiment in the same way as horseradish, however it contains the alkaloid spirochin, a potentially fatal nerve paralyzing agent, so such practices should be strongly discouraged. The leaves are highly nutritious, being a significant source of beta-carotene, vitamin C, protein, iron and potassium. The leaves are cooked and used as spinach. In addition to being used fresh as a substitute for spinach, its leaves are commonly dried and crushed into a powder, and used in soups and sauces. The seeds may be crushed and used as

a flocculant to purify water. The Moringa seeds yield 38–40% edible oil (called Ben oil, from the high concentration of behenic acid contained in the oil) that can be used in cooking, cosmetics, and lubrication. The refined oil is clear, odorless, and resists rancidity at least as well as any other botanical oil.. The bark, sap, roots, leaves, seeds, oil and flowers are used in traditional medicine in several countries.

### **PROPERTIES AND USES:[3]**

- Anitumor activity
- Antipyretic activity
- Antiinflammatory activity
- Antispasmodic activity
- Antihypertensive activity
- Antioxidant activity
- Antidiabetic activity
- Hepatoprotective activity
- Antibacterial activity
- Antifungal activity



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### **DOSAGE: [4]**

- Moringa Powder - ½ -1 teaspoon or as per your requirement.
- Moringa Oil - 2-5 drops or as per your requirement.

### **RESEARCH:**

Moringa Oleifera is one of the most useful tropical trees. Its leaves are extremely valuable source of nutrition for people of all ages. Nutritional analysis indicates that Moringa leaves contain affluence of essential, disease preventing nutrients. The young leaves are edible and are commonly cooked and eaten like spinach or used to make soups and salads. Moringa, is a natural as well as cultivated variety of the genus Moringa belonging to family Moringaceae .It is one of the richest plant sources of Vitamins, Calcium, Copper, Iron, Potassium, Magnesium, Manganese and Zinc. It has more than 40 natural anti-oxidants. The leaves,

Pods, seeds, gums, bark and flowers of Moringa are used to relieve mineral and vitamin deficiencies, support a healthy cardiovascular system, promote normal blood-glucose levels, neutralize free radicals, provide excellent support of the body's anti-inflammatory mechanisms, enrich anemic blood and support immune system. It also improves eyesight, mental alertness and bone strength. It has potential benefit in malnutrition, general weakness, lactating mothers, menopause, depression and osteoporosis. We need to explore therapeutic, nutritional and benefit of this gift of nature reported to be one of the world's most useful trees.[6]

Moringa oleifera seeds are a promising resource for food and non-food applications, due to their content of monounsaturated fatty acids with a high monounsaturated/saturated fatty acids (MUFA/SFA) ratio, sterols and tocopherols, as well as proteins rich in sulfated amino acids. The rapid growth of Moringa trees in subtropical and tropical areas, even under conditions of prolonged drought, makes this plant a reliable resource to enhance the nutritional status of local populations and, if rationalized cultivation practices are exploited, their economy, given that a biodiesel fuel could be produced from a source not in competition with human food crops. Despite the relatively diffuse use of Moringa seeds and their oil in traditional medicine, no pharmacological activity study has been conducted on humans. Some encouraging evidence, however, justifies new efforts to obtain clear and definitive information on the benefits to human health arising from seed consumption. A critical review of literature data concerning the composition of Moringa oil has set in motion a plan for future investigations. Such investigations, using the seeds and oil, will focus on cultivation conditions to improve plant production, and will study the health effects on human consumers of Moringa seeds and their oil.[7]

### **SPECIAL PRECAUTIONS & WARNINGS:**<sup>[8]</sup>

**Pregnancy:** It's **POSSIBLY UNSAFE** to use the root, bark, or flowers of moringa in pregnancy. Chemicals in the root, bark, and flowers might make the uterus contract. In traditional medicine the root and bark were used to cause miscarriages.

**Breast-feeding:** Moringa is sometimes used to increase breast milk production. It seems to be safe for the mother when taken for several days. But there isn't enough information to know if it is safe for the nursing infant. Therefore, it is best to avoid moringa if you are breast-feeding.

**Diabetes:** Moringa might lower blood sugar levels in people with diabetes. Watch for signs of

low blood sugar (hypoglycemia) and monitor your blood sugar carefully if you have diabetes and use moringa.

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### **INTERACTION WITH MEDICATIONS:[9]**

**Levothyroxine** Interaction Rating: Levothyroxine is used for low thyroid function. Moringa might decrease how much levothyroxine your body absorbs. Taking moringa along with levothyroxine might decrease the effectiveness of levothyroxine.

**Medications changed by the liver** Interaction Rating: Some medications are changed and broken down by the liver. Moringa might decrease how quickly the liver breaks down some medications. Taking moringa along with some medications that are broken down by the liver can increase the effects and side effects of some medications. Before taking moringa, talk to your healthcare provider if you are taking any medications that are changed by the liver.

**Medications for diabetes (Antidiabetes drugs)** Interaction Rating: Moringa might lower blood sugar. Diabetes medications are also used to lower blood sugar. Taking moringa along with diabetes medications might cause your blood sugar to go too low. Monitor your blood sugar closely. The dose of your diabetes medication might need to be changed.

**Medications for high blood pressure (Antihypertensive drugs)** Interaction Rating: Moringa might lower blood pressure. It has the potential to add to blood pressure lowering effects of antihypertensive drugs.

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