

Moringa oleifera- Natural and important bioproduct

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Moringa oleifera, more commonly known as Drumstick, a popular vegetable in India is in the news lately and many hail it as a miracle tree, attributing many features unique to it. The latest to come in full glare is its effectiveness in water purification as the powdered preparations made from the seed can produce clean water. It is called the miracle tree because this plant, commonly found in equatorial region as a food tree, also finds extensive use in traditional medicine and as a biofuel. Due to its multitude of benefits and uses – is a slender, drought resistant tree that can grow up to 9 metres on reaching maturity. It is a very adaptable plant, growing best in dry, sandy soil and tolerating poor soil. Virtually every part of the tree can be used; the leaves can be eaten fresh or cooked and have significant quantities of Vitamin A, B, C, calcium and protein; the bark yields a coarse fibre, and the seed pods yield 50-60% of a clear burning non-edible oil that is clear burning and can be used to create biodiesel. The *Moringa oleifera* has a higher recovery and quality of oil than comparable crops, and has no direct competition for food crops as it is an edible source of fuel, with no direct competition with existing farmland as trees can be grown for both purposes simultaneously.

It is also grown as an ornamental tree in the southern United States. Because the tree is easy to establish and grows rapidly, it might lead some to question its invasive tendencies. The animals love to eat the tree. In some areas young plantings have to be protected from animals, although in other regions *Moringa* is grown as a forage crop just for animal grazing.

The property of drumstick seed has been known for a long time and the de-oiled residue of the seed was used as a flocculent in water treatment traditionally. The dried seed contains about 40% oil which has commercial value though the current practice of growing the plant does not permit its large scale utilization. What is new in these findings is the anti-septic value of the proteins present in the seed and the potential it offers in making drinking water safe with no infection possibilities. Interestingly the oil is also known as Ben oil because of high content of Behenic acid in it. Its special property of absorbing and retaining odoriferous materials makes it valuable for perfumery industry.

Biography

Akshi Gupta is a student pursuing B. Tech Biotechnology from Amity Institute of Biotechnology, Amity University Rajasthan, Jaipur. She has presented poster at various National and International conferences. And has recently been selected for 3rd world congress on Biotechnology-2012, another OMICS group Conference.

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