

Plus

Miracle tree in Asia

With experts warning of a global food crisis in the future, could the Drumstick Tree, found in Asia, be an answer? Here Managing Director of Bibile Plantations Shrinath Perera discusses its nutritional value

Packed with nutrition: Studies have shown that Moringa leaves contain seven times the Vitamin C of oranges, four times the Vitamin A of carrots, four times the calcium of milk three times the potassium of the bananas, three time the iron of spinach, three times the vitamin E of almonds and twice the protein of milk. Basically this shows no other plant source or food stuff can beat Moringa.

Moringa Oleifera commonly referred to as Murunga in Sinhala, Drumstick Tree in English, Murungai in Tamil, is known in over 82 countries and by over 200 different names. Perhaps it is the tree in the Garden of Eden referred to in the Bible called the Miracle Tree. The Moringa was highly valued by the Greeks, Romans and Egyptians as early as 2000 B.C. for its medicinal properties. Some ancient writings on it date back to 1500 A.C.

A perennial small shrub or tree that can reach 12m (36ft) in height at maturity, it can live up to 20 years. It is the fastest-growing of all trees as it can reach 3m(9ft) in just 10 months after the seed is planted. It has deep roots (therefore it can survive in dry regions) and a wide-open crown with a single stem. It thrives well in high temperatures and more sunlight.



The immature green pods called "drumsticks" are probably the most valued and widely used part of the tree. They are commonly consumed in Sri Lanka and India, generally prepared like 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 leaves are highly nutritious, being a significant source of beta-carotene, Vitamin C protein and potassium. The leaves are cooked and used like spinach, salad, greens, pickles, seasonings and in vegetable curries. Also leaves are commonly dried and crushed into powder, and used in soups and sauces. This dried powder can be stored for many months without refrigeration, and reportedly without loss of nutritional value.

Moringa leaves and pods are helpful in increasing breast milk in nursing mothers. One tablespoon of leaf powder provides 14% of the protein, 40% of the calcium, 23% of the iron and most of the Vitamin A needs of a child aged

one to three. Six tablespoons of leaf powder will provide nearly all of a woman's daily iron and calcium needs during pregnancy and breastfeeding. Moringa capsules, juice and Moringa tea and energy drink are manufactured from 100% pure Moringa leaves. These products are gaining popularity because of the fact that it is nutritious and 100% natural.

According to Ayurveda, about 300 diseases can be cured with the help of various parts of this tree. In traditional Indian medicine, children and adults used to drink a cup of decoction (kasayam) every Sunday, normally after a bath, made of ginger, garlic and a piece of Murungai tree bark (Murungai pattai in Tamil) . The Moringa leaves are believed to have a stabilizing effect on blood pressure and control glucose levels. They are also used to treat anxiety, diarrhoea and inflammation of the colon, skin infections, scurvy, intestinal parasites, venomous bites and many other conditions.

Studies have examined certain compounds of the plant for their cancer prevention potential. Recently two of these compounds were shown to be potent inhibitors of activation of lymphoblastoid (Burkitt's lymphoma) cells. One of these compounds also inhibited tumours in mice bred to be prone to tumours. Another study, examined skin tumour prevention following ingestion of drumstick seedpod extracts. In this mouse model, which included appropriate positive and negative controls, a dramatic reduction in skin tumours was demonstrated. More rigorous study is required in order to achieve a level of proof required for full medical endorsement of Moringa as, in this case, a cancer preventative plant.

Also research done in Johns Hopkins school of Medicine and Cuilmun Cancer Chemo Protection Center, Maryland USA observed that Moringa contains Hypertensive anticancer, and antibacterial activity including for benzyl isothiocyanate, 4- isothiocyanate, niazimicin, benzyl isothiocyanate and benzyl glucosinolate. These compounds are relatively unique to the Moringa family.

Moringa seeds yield 38 - 40% edible oil called Ben oil - there is a high concentration of behenic acid contained in the oil. The refined oil is clear, odourless and resists rancidity at least as well as any other botanical oil. The nutritional value of the oil is very similar to olive oil. The seed cake remaining after oil extraction may be used as a fertilizer or as a flocculent to purify drinking water. The seed cake remaining contains the active components for removing turbidity (solid particles) from water. Because bacteria adhere to the solids, this seed-cake also effectively removes bacteria. This is one of the best ways to clean water and cheaper than mechanical methods. Two researchers from University of Leicester, England show Moringa oleifera as effective as Aluminum sulphate (alum) for water treatment



Other Plus Articles

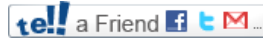
- ▶ **'Help save my fourth child at least'**
- ▶ **Chop, chop**
- ▶ **Letters to the Editor**
- ▶ **Appreciations**
- ▶ **Taking note of new notes**
- ▶ **Living on the edge**
- ▶ **Dear Juliet,.. all my love...**
- ▶ **Exquisitely Iranian**
- ▶ **A musical duo for life**
- ▶ **Everyday life gets surreal with Alex Stewart**
- ▶ **Jaffna to beat to the rhythm of folk artistes**
- ▶ **A feast of fashion**
- ▶ **Fascinating story on the evolution of temple laws from colonial days**
- ▶ **Miracle tree in Asia**
- ▶ **From Kandyan period to present day: Saga of the Jaya Sri Maha Bodhi**
- ▶ **'Exciting time to be working in astrobiology'**
- ▶ **'Yes we can, Sri Lankans can be innovative and productive'**
- ▶ **Whose Kingdom for some saving grace?**
- ▶ **People and events**

in removing suspended solids from turbid water. Moringa oil has a potential to become a useful source of fuel both industrial as well as domestic in the years to come. The seeds are also considered an excellent source for making biodiesel.

India is the largest producer of Moringa, with an annual production of 1.3 million tons of tender fruits. Moringa is also actively cultivated in Taiwan to reduce poverty and malnutrition in developing countries through improved production and consumption of vegetables. In south India, pods are used to prepare a variety of sambar dishes. In other parts of India especially in west Bengal and in Bangladesh, it is made into a variety of curry dishes by mixing with coconut, poppy seeds and mustard or boiling until the drumstick is semi-soft and consumed directly without any extra processing or cooking. In Sri Lanka dry zone areas like Kalpitiya, Jaffna, Monaragala, and Mahiyanganaya are the main areas where Murunga is commonly available. This local variety bears fruit twice a year and prices vary between Rs. 50-100 depending on the supply available in the market.

In South India, various agriculture institutes and the private sector are involved in research and experiments for the development of Moringas. New hybrids, new products like energy drinks and Moringa capsules were the product of this. In Sri Lanka it is very hard to find any experiments or research done in the past decade.

 |  E-mail | views[927]



theSUNDAY
TIMES

Reproduction of articles permitted when used without any alterations to contents and a link to the source page.

© Copyright 1996 - 2011 | Wijeya Newspapers Ltd.Colombo. Sri Lanka. All Rights Reserved | Site best viewed in IE ver 8.0 @ 1024 x 768 resolution