

CINNAMON

Presented By : Kamanie Jayalath



Botanical name :

Cinnamomum Zeylanicum

Cinnamon and Sri Lanka are
synonymous in world spice trade

True cinnamon which is popularly termed as "Ceylon cinnamon" is a derivative from the bark of an aromatic perennial tree, *Cinnamomum Zeylanicum* indigenous to Sri Lanka

Sri Lanka catering to over 70% of the total requirement of the world demand

Balance 30% is from

- Seychelles
- Madagascar
- India

Cinnamon is the only crop from
Sri Lanka enjoying such a high
share of world trade

“Ceylon cinnamon” was
doubtlessly the finest in the world
&
Still enjoys a monopoly

Major buyers

- Mexico (45% of total exports)
- USA
- Colombia
- Peru
- Ecuador
- Guatemala

The closest competitor to cinnamon is CASSIA (*Cannamonum Cassia*) produced cheaply (one third) in China, Indonesia, Malaysia & Vietnam

History

Taprobane or Ceylon had been the largest supplier of cinnamon to the world.

Cinnamon indigenous to the Island from the mid 14th century.

It was one of the principal attractions for arrival of Portuguese. In 16th century where the king of Ceylon was to supply 250,000 pounds of cinnamon to Portuguese Governor in return for protection from enemy invasions.

Cinnamon cultivation

Propagation :

The easiest and most widely adopted method of cinnamon propagation is by seeds. It can also be propagated by planting cuttings and layers.

Cinnamon cultivation

Seeds:



Cinnamon cultivation



Cinnamon cultivation



Cinnamon bushes

When coppiced from time to time, it could be maintained as a bush of 2m -2.5m height .



Cinnamon cultivation

SOIL :

Cinnamon is a hardy plant which can grow well in almost all types of soil under a wide variety of tropical conditions.

In Sri Lanka it is cultivated under varying conditions ranging from semi-dry to wet zone conditions and soils varying from the "Silva sands" of Kadirana, Ekala & Jaela to loamy and lateritic gravelly soils of Kalutara, Galle & Matara districts.

Cinnamon cultivation

SOIL :

The quality of bark is greatly influenced by the soil and ecological factors.

The best quality cinnamon is produced on white silicaceous sandy soils like the "Silver sands" of negombo district. Yield is higher in other soils but quality is coarser than in sandy soils.

Cinnamon cultivation

CLIMATE :

The most suitable temperature is between 20c and 30c.

Rainfall should be in the region of 1250mm-2500mm.

Cinnamon cultivation

Varieties in Sri Lanka :

1. Panni Miris Kurundu
2. Thitta Kurundu
3. Kahata Kurundu
4. Veli Kurundu
5. Sevel Kurundu
6. Naga Kurundu
7. Penirasa Kurundu

Cinnamon cultivation

It has been observed that under field conditions these cannot be identified. Also no description of such varieties are available.

Cultivated areas

- Galle - 9827 hectare yards
- Matara - 7813
- Hambantota - 1725
- Other districts - 5767
- All Island -25132

80 % contribution is from southern province

7000 Bushes per hectare yards

Produce a low yield of about 450kg – 500kg per hectare yard.

But under well managed conditions yields up to 1000kg of cinnamon quills and 10,000kg of leaves can be obtained per hectare.

Harvesting & Processing



Drying



Cinnamon Bales



Exports

8236 metric tons exported in year 2003

Earnings from exports Rs 4000 million

Cinnamon production mainly in the forms of

Quills
Feathering
Chips
Bark oil
Leaf oil

Generally exported in 45kg bales of 106cm long pipes

Chemical ingrediance

- Phenyl propanoids
- Cinnamaldehyde
- Eugenol
- Camphor
- Terpenoid

Cinnamon as a spice

- To make curries delicious
- To make bakery food delicious
- To preserve food

Cinnamon as a medicine

- Controlling diabetes →
- Cinnamon gum found to kill bacteria in the mouth →
- Cinnamon shown to help control blood sugar and cholesterol levels
- Cinnamon oil kills mosquitoes better than DEET →
- Cinnamon is an antiseptic that helps to kill bacteria causes tooth decay and gum disease →

Cinnamon as a drink

- Cola drinks
- Kidney tonics
- Cinnamon herbal tea
- Cinnamon liqueur

Other products

- Tooth paste
- Mouth wash
- Perfumes
- Soap
- Lipstick
- Insecticides

Cinnamon oil kills mosquitos better than DEET, research shows

Original news summary:

(<http://www.sciencedaily.com/releases/2004/07/040716081706.htm>)

- Cinnamon oil shows promise as a great-smelling, environmentally friendly pesticide, with the ability to kill mosquito larvae more effectively than **DEET**, according to a new study.
- Besides being a summer nuisance, mosquitoes pose some major public health problems, carrying such deadly agents as malaria, yellow fever and **West Nile virus**.
- "These problems have highlighted the need for new strategies for mosquito larval control," says **natural products** chemist Peter Shang-Tzen Chang, a professor in the School of Forestry and Resource Conservation at National Taiwan University and lead author of the paper.
- Chang and his coworkers tested eleven compounds in cinnamon leaf oil for their ability to kill emerging larvae of the yellow fever mosquito, *Aedes aegypti*.
- "The LC50 value is the concentration that kills 50 percent of mosquito larvae in 24 hours," Chang explains.
- All four compounds had LC50 values of less than 50 parts per million (ppm), with cinnamaldehyde showing the strongest activity at an LC50 of 29 ppm.
- For comparison, the LC50 of DEET--- an extremely popular pesticide and mosquito repellent --- is more than 50 ppm.

Cinnamon: May help control diabetes

17 million Americans have diabetes. Nearly 6 million don't know it. Now that 17 million people may have a spice inside of the kitchen cabinet that could help to regulate their diabetes. That spice is cinnamon. "Cinnamon may help by playing the role of an insulin substitute in type II diabetes, according to cellular and molecular studies at the University of California, Santa Barbara, Iowa State University and the U.S. Department of Agriculture." "Cinnamon itself has insulin-like activity and also can potentiate the activity of insulin," said Don Graves of UCSB. "The latter could be quite important in

treating those with type II diabetes. Cinnamon has a bio-active component that we believe has the potential to prevent or overcome diabetes. " The latin name is *Cinnamomum zeylanicum*. Some studies have shown that Cinnamon helps people with diabetes metabolize sugar better. In adult-onset (Type II) diabetes, the pancreas produces insulin, but the body can't use it efficiently to break down blood sugar. Researchers discovered that Cinnamon reduces the amount of insulin necessary for glucose metabolism. "One-eighth of a teaspoon of cinnamon triples insulin efficiency," say James A. Duke, Ph.D., a botanist retired from the U.S. Department of Agriculture and author of *The CRC Handbook of Medicinal Herbs*. Dr. Duke suggest that people with adult-onset diabetes discuss Cinnamon's benefits with their doctor. Taking 1/2 to 3/4 teaspoon of ground Cinnamon with each meal may help control blood sugar levels.

Safety Considerations:

The amounts of Cinnamon normally used in food are non-toxic, although some people experience allergic reactions after eating this spice. Cinnamon oil is a different story. Applied to the skin, it may cause redness and burning. Taken internally, it can cause nausea, vomiting and possibly even kidney damage. **Never ingest Cinnamon oil.** Culinary Cinnamon is on the Food and Drug Administration's list of herbs generally regarded as safe. The effects of cinnamon can be very dramatic...so watch those glucose readings because we do not want them to drop to fast and to much. The most recent study, which appears in the December issue of the journal *Diabetes Care*, showed that, after 40 days, 30 diabetics who had taken 1 to 6 grams of

cinnamon extract daily reduced their risk factors for cardiovascular disease. Specifically, their mean fasting glucose fell 18 percent to 29 percent, their triglycerides 25 percent to 30 percent, their LDL ('bad') cholesterol 7 percent to 27 percent and their total cholesterol 12 percent to 26 percent. To all my readers please note that diabetes is a very serious and life threatening disease and you need to always see a health professional about anything that may harm your life span. However with that said I will say this you know yourself the best. Natural medicine is safer in my opinion than man made medicine but if one or the other is not working then you need to seek professional assistance. Try this sprinkle a table spoon of cinnamon on your oat cereals in the morning or make a cinnamon tea- Mix cinnamon in luke warm water, add splenda and drink up. If any of the readers have any new recipes ideas email them to me and I will add them to the post. Stay well and stay informed.

Healing with Cinnamon:

Here's how to put Cinnamon's medicinal powers to work for you. This fragrant spice:

- **Fights tooth decay:** Several toothpastes are cinnamon-flavored-for good reason. "Cinnamon is an antiseptic that helps kill the bacteria that cause tooth decay and gum disease," says Daniel B. Mowrey, Ph.D., director of the American Phytotherapy Research Laboratory in Salt Lake City and author of *The Scientific Validation of Herbal Medicine*. Cinnamon also kills many disease-causing fungi and viruses. Cinnamon toothpastes can be found at supermarkets, drugstores and health-food stores.
- **Soothes upset stomach:** Like many culinary spices, Cinnamon helps calm the stomach. But a Japanese study of animals revealed that this spice may also help prevent ulcers. To brew a stomach-soothing tea, use ½ to ¾ teaspoon of powdered Cinnamon per cup of boiling water. Steep for 10 to 20 minutes. Drink up to three cups day.
- **Clears up urinary-tract infections:** One German study showed that Cinnamon "suppresses completely" the cause of most urinary-tract infections (*Escherichia coli* bacteria) and the fungus responsible for vaginal yeast infections (*Candida albicans*).
- **Allows diabetics to use less insulin:** Some studies have shown that Cinnamon helps people with diabetes metabolize sugar better. In adult-onset (Type II) diabetes, the pancreas produces insulin, but the body can't use it efficiently to break down blood sugar. Researchers discovered that Cinnamon reduces the amount of insulin necessary for glucose metabolism. "One-eighth of a teaspoon of cinnamon triples insulin efficiency," say James A. Duke, Ph.D., a botanist retired from the U.S. Department of Agriculture and author of *The CRC Handbook of Medicinal Herbs*. Dr. Duke suggest that people with adult-onset diabetes discuss Cinnamon's benefits with their doctor. Taking ½ to ¾ teaspoon of ground Cinnamon with each meal may help control blood sugar levels.