Graviola And Cancer

Medicinal Properties

Cultivation

by J. Bilbao

The Soursop or Graviola, its botanical name is Annona muricata, but it is commonly known as the soursop or graviola tree. This tree is native to Central and South America, mainly from Peru. It is also scattered throughout many Caribbean countries in general throughout the American tropics. The soursop tree grows between 6 and 10 meters high, but its final height will depend on the terrain and the conditions in which it grows. The purpose of soursop cultivation is the production of its fruits, but its leaves, stems, roots and bark are also used to create natural remedies against many ailments, ranging from nervous ones, to those of the stomach and liver. In recent times, different studies have been carried out in several American universities, which attribute important properties to it for the prevention and cure of cancer.

The soursop tree needs a lot of sun, warm temperatures, and a relatively humid environment. Being as it is a tropical plant, it does not tolerate the cold too much. In addition, excessive changes in temperature can be harmful to the crop, especially during times of flowering or fruit growth.

Excess humidity can also harm both the tree and the fruit, since with an environment that is too humid it can contract fungi and these can cause certain diseases in the plant, on the other hand, climates that are too dry can also harm it , so the ideal is the average terms.

The soursop fruit is a large and very tasty fruit, it is generally sweet, although there are some trees that can produce slightly bittersweet fruits, it usually has a heart-shaped shape and is covered with semi-soft thorns, the interior of the fruit is full of black seeds covered by a white pulp.

Medicinal properties of soursop

Apart from the large amounts of vitamins and minerals that the fruit has, according to studies carried out by several American universities, the extract of the leaf of this plant Helps to Prevent and Cure Different Types of Cancer and Selectively Inhibits the Growth of Cancer Cells.

In traditional medicine its fruits are used to combat rickets. The root bark and leaves are used to treat diabetes, (in infusion) and also as an antispasmodic. The leaves crushed with salt, applied as plasters, are used to ripen tumors. The leaves are also useful, in cooking, as an anti-dysenteric.

However, its importance currently lies in the possibility of being used in the treatment of certain types of cancer, due to the presence in the leaves of substances such as acetogenins, which would have an activity

similar to that of certain products used in chemotherapy, such as adriamycin, with the quality of not presenting its side effects.

Action of acetogenins in cancer cells … acetogenins are waxy substances resulting from the combination of long-chain fatty acids (C32 or C34) with a 2-propanol unit at carbon 2 to form a terminal lactone, said lactone remains at the beginning of the string.

A study carried out at Pardue University in California showed that acetogenins can selectively inhibit the growth of cancer cells and also inhibit the growth of tumor cells resistant to adriamycin (chemotherapeutic drug) and according to that study this does so respecting the integrity of healthy tissue cells.

In another study conducted by scientists from the same University, it was shown that soursop acetogenins are extremely potent, turning out to be about 10,000 times the potency of adriamycin. Studies conducted in 1998-2000 by McLaughlin and by Chih Hw, Chui HF have revealed that acetogenins are inhibitors of complex I of the oxidative phosphorylation chain, thereby blocking the formation of ATP; energy needed by the cancer cell to activate its P-glycoprotein-mediated pump, which allows it to stay active.

Acetogenins also inhibit ubiquinone oxidase, an NADH-dependent enzyme that is peculiar to the plasma membrane of cancer cells.

Other studies carried out in the Caribbean suggest a connection between

the consumption of this fruit and atypical forms of Parkinson's disease due to the very high concentration of Annonaceae, so these studies recommend that patients with this disease do not consume soursop extract in any of their formats.

The concentration of annonacin in the fruit (15 mg/fruit) or in the commercial nectar (36 mg/can), is one hundred times higher than in the tea made from its leaves (140 µg/cup).

As you can see, the possibilities of therapeutic use of soursop leaves, helping in the treatment of certain malignant cancer processes, are very great.

Without a doubt, this is another important therapeutic weapon provided by nature to fight against different types of cancer.

Commercialization

Graviola is sold in health food stores, herbalists and through the Internet. There are different brands of Graviola on the market and the quality of most brands is generally very good, but we must be careful when choosing the brand that we are going to consume, if we decide to consume Graviola in capsules, it is important to keep in mind account the following questions:

- That it be 100% natural Graviola leaf extract (it may also contain natural gelatins for the capsules).
- That it does not contain other ingredients, only Graviola leaf extract, there

are some manufacturers that mix other ingredients with Graviola, this alters its composition, consequently an extract of Graviola leaves mixed with other ingredients in its composition loses effectiveness with respect to its original properties.

Presentations

Graviola is presented in different formats, being usual for many brands in Capsules. Graviola leaf extract in capsules is convenient for consumption in all aspects.

The content in milligrams of Graviola in capsules varies according to brands, there are various contents in milligrams, the most common measure in capsules is 300mg.

The presentations of the Graviola leaf extract also differ from one brand to another, depending on the brand we can find it in bottles of 100 capsules. The ideal amount to buy is the one that we are going to take for a month, although the expiration is long and it does not lose properties within the marked dates, it should be taken as fresh as possible, for example, if we buy 2 bottles of Graviola leaf extract of 100 capsules, they will last us 33 days.

How to use

Although studies indicate that the best results of Graviola Extract are

achieved by taking the equivalent of 1/2 grams per person per day, most brands recommend taking 1.5 and 2 grams per person per day, the average amount established by most manufacturers are in approximately 1,800 milligrams per person per day (6 capsules of 300mg divided into three doses, morning, noon and night).

The treatment time depends on the needs of each person, in cases of help to prevent problems it can be taken for periods of 3 months, resting between 60 and 90 days from dose to dose, in cases in which the problem of health has manifested must be taken without interruption. (To take the product, you must always follow the instructions that the manufacturer indicates in the prospectus).

Contraindications

The studies carried out on Graviola advise against taking this product for patients with neurodegenerative disorders with diseases such as Parkinson's, or if they are taking any antihypertensive (drug to lower blood pressure).

Other Information

Although Graviola has medicinal properties to improve people's health; it does not replace traditional medical treatments.

How to grow Graviola or Soursop

Types of soil: The cultivation of soursop is demanding with the type of soil, although it adapts well to other types of soil, its cultivation is better in soils that are fresh with deep topsoil, homogeneous, aerated and well drained to avoid the too much water that usually ends up suffocating the roots of this crop, in general they should not be too wet or too dry.

Conditioning of the land: The conditioning of the land depends on the topography and existing vegetation, in a flat land in which it has been cultivated previously, only the holes are marked and the holes are made to plant the plants, the holes will be approximately 60 cm deep, if they are previously uncultivated land, first and after natural fertilization of the land with natural organic manure, a deep plow will be carried out to later, after approximately 15/20 days, proceed to make holes 60 cm deep to plant the plants. On the date of planting we will pass the blade rotavator again in order to aerate the soil and leave it spongy to carry out the same.

The Plantation of fruit trees: The initial part of the soursop plantation is carried out in specialized nurseries, where the plants germinate and later they carry out the grafts of each variety. Once the land where we will plant the fruit trees is prepared, we will proceed to buy the plants already grafted with the variety that we wish to produce, in the specialized sales sites of

the most important geographical areas of production of this fruit, are sale plants with graft of one year, two years of grafting, even longer, although it is less common, if possible it is convenient to acquire a plant with two years of grafting or more. Next, we will proceed to plant the fruit trees, which is normally done in the fall, after which the holes will be covered, crushing their soil well so that the plants remain in place. Later we will nail a stake next to each plant, holding it to it by means of ties made with strips of cloth that do not damage the bark of the plant, this is done so that the plant does not have movement while it takes root and is strengthened in its new location.

The most suitable average distance between plants and rows varies, in the varieties that are most used for this crop, the distances are around 8 x 8 meters. During the first year it will be necessary to water the plantation regularly, especially in the dry or rainless months, later it will not be necessary to water as much, but it will be convenient to water it from time to time, so that the plants have enough moisture without going over the irrigation, in times of prolonged drought should be somewhat more intense, always taking care that the plants do not have too much water, since too much water is very harmful.

Harvest Yield per Ha. and Pruning: The first more or less important harvest of the soursop crop will be harvested when the tree is adult,

approximately three years after grafting, that is, a year after planting the first reasonable harvest would be harvested.

The average yield of soursop, depending on varieties and geographical areas, is around 6,000 kg per Ha.

The cultivation of soursop begins to be harvested when it is still somewhat green or not fully ripe so that the fruit does not suffer bruises from the beating, so it is important to collect it while it is still green.

Storage for the conservation of soursops is carried out in controlled atmosphere chambers and lasts approximately 2 weeks. Soursop is a fruit for immediate or short-term consumption once it has ripened.

The main purpose of pruning is to form well-shaped trees and balance the distribution of sap to obtain quality crops. Pruning should always be done during the time of low sage, when the tree has no leaves, although in this case the pruning will be rather selective because it is a tree that gives at least two annual productions in subtropical areas. In order not to complicate this section too much, I will only describe the general criteria that must be met for good fruit pruning. Regardless of the shape we want to give the tree in its annual development, branches that have sprouted in the last year are usually pruned, dry branches and those that exceed the foliage, the branches must be cut with a clean cut and at a distance of approximately 10 /15 cm from birth. Although there are those who, after pruning, cover the cuts with resin or special paste to cover wounds in the

bark of trees, when pruning is done in times of low sage, it is not necessary to cover the pruning cuts.

Season of soursop cultivation: Since soursop is grown almost exclusively in subtropical areas, it gives two annual crops, the first crop occurs in the months of February and March, the second soursop crop occurs in the months of June, July and August.

Pests of soursop crops: These are some of the pests and diseases that soursop crops can contract: Ashmead seed borer Bephratelloides cubensis (Hymenoptera: Eurytomidae), Fruit borer moth Cerconota anonella Sepp. (Lepidoptera: Oecophoridae), Annonaceae Weevil Optatus palmaris Pascoe (Coleoptera: Curculionidae), Fruit Borer Oenomaus ortygnus Cramer (Lepidoptera: Lycaenidae), Pink Hibiscus Mealybug CRH Maconellicocus hirsutus Green (Hemiptera: Pseudococcidae), Mealybug Planococcus citri (Hemiptera: Pseudococcidae), Striped worm GR Gonodonta pyrgo (Lepidoptera: Noctuidae).
And diseases such as: Anthracnose (Colletotrichum gloeosporioides), Branch dieback (Lasiodiplodia theobromae), Fruit rot (Lasiodiplodia theobromae).

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