

Biological and chemical composition of pomegranate fruit grown in Azerbaijan and Uzbekistan

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Annotation - In the collections, 69 varieties of pomegranate were taken into account. But in farms specializing in Uzbekistan are planted mostly bitter and Kazakh pomegranate lot, picky pomegranate, red pomegranate, white pieces, ulfi and b. varieties are also widely scattered.

Keywords – Uzbekistan, Azerbaijan, leaves, pomegranate (*Punica granatum* L.), round reddish (red-brown coat), red pomegranate, spicy pieces, pile pomegranate, toasted, Ulfi, Shirvan region, goulash, Abseron, leaves of the plant, roots.

Pomegranate (*Punica granatum* L.) belongs to the family of anordates (anorgulians), is a subtropical plant.

The leaves are thin, scaly, dark-green, 8 cm long, 2 cm wide, the branches are prickly.

Blooms in April-may. The flowers are of two sexes, large (up to 8 cm in diameter) from light red to dark red, on the tip of the horn are arranged in one, two, sometimes five. The Seeder is short, normally developed, the eye-catching flower is over the fruit, the bell-shaped flowers are not over the fruit.

The fruit is a fake, large, round reddish (red-brown peel) or whitish (white peel), the weight of which is 250-1000 gr. In addition, there are a lot of fruits, namely 6-12 nests (room)li, the dog will be light pink or dark red.

The taste of the fruit is sweet, tender-sour and sour, hardcover (40-60 %), sugar content 14-21%, citric acid 0.3-9%, tannin, B, vitamins threeraydi.

29-50% of the fruit is peat, the Dogi is 10-12%.

In the fruit peel, the root peel contains up to 28% of the active ingredient.

Pomegranate begins to yield in 3-4 year of development, from 8-10 years to fully ripen, yields fruit in 30-40 years. The yield is up to 200 t/ha. Pomegranate fruits are well preserved up to 5 months.

Each Bush yields 30-35 kg. Pomegranate lives 50-70 years and more.

In the conditions of Uzbekistan, such varieties as red pomegranate, bitter pomegranate, goose pomegranate, Toytish, ulfi, Dessertny are grown.

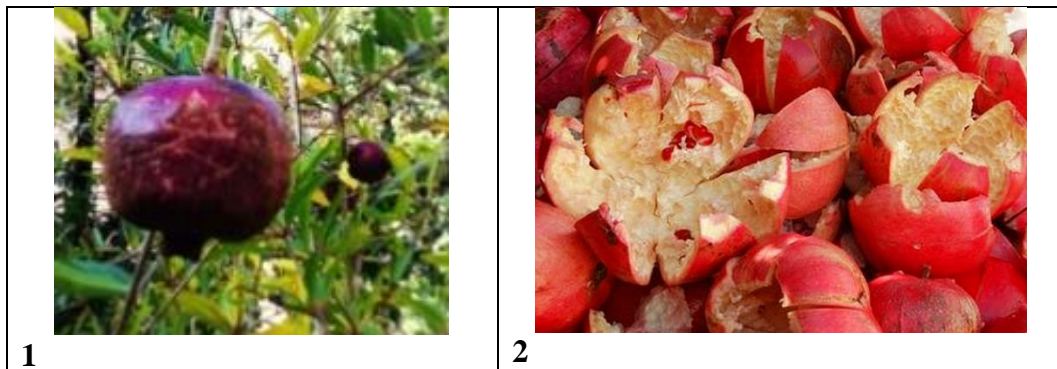
Wild NAR threeraydi in southern Europe and West Asia. Wild pomegranate Sharki in the CIS is widely dispersed behind the Caucasus. The history of pomegranate cultivation exceeds 3000 years.

In the collections, 69 varieties of pomegranate were taken into account. But in farms specializing in Uzbekistan are planted mostly bitter and Kazakh pomegranate lot, picky pomegranate, red pomegranate, white pieces, ulfi and b. varieties are also widely scattered. Bitter. Jeydari species. Fruit 400-600 g. Tasty sour cream, juice red, contains 15-16% sugar. The coat is thick, well kept up to 5 months. Tupi gives a yield of 30-35 kg. It is common in the Fergana Valley. Type of building The fruit is large (500-700 g). Sourdough, juice reddish. The composition contains 19-20% sugar. The thickness of the coat is average, it is kept until March. Tupi yields 35-40 kg. There are in all regions of Uzbekistan. Red Pomegranate-this is both a species of Gazelle. The composition of the juice is sugar 15-16%, the peel is thin, resistant to long storage. Kazakh pomegranate grown B-n through folk selection. Fruit 250-300 g, some 600-700 g. Tasty sour cream

dessert, juice cranberries. The composition contains 18-19% sugar. The coat is thick, stored up to 6 months. Tupi yields 50-60 kg. It is widely distributed in Tashkent, Andijan, Surkhandarya regions. White pieces (sweet pomegranate) pomegranate. Jeydari species. Fruit 250-350 g, some 500-600 g. It's sweet. The juice is pink, it contains 19-21% sugar. The coat is kept thin or of medium thickness, reddish-pink, some white, 2-3 months. Tupi yields 25-30 kg. It is grown in most regions of Uzbekistan.

Chemical composition of pomegranate fruit and peel

Today, increasing the volume of exports of fruit products in our country is the most priority task. Among the exported fruit products, the fruits of subtropical plants occupy a special place. In subtropical plants, the pomegranate (*Punica granatum* L.) and its coat is of particular importance with its many features (picture 1).



1-picture. Pomegranate (1) and its peel (2).

That is why it is one of the urgent issues to look for promising varieties of pomegranate, ripen, make a pear at the table of our people.

The energy value of the consumed portion of pomegranate fruit is 63 -78 calories, in 100 ml of juice 44 - 64 calories. The fruit contains 1,6% protein, 0,1 - 0,7% fat, 0,2-5,1 cutlet, 0,5-0,7% ash.

In fruit peel and leaves, uric acid (0,6-0,45%); from the root, pulp pulp, fruits and seeds, β -cytosterol, D-mannit, D-maltose and fridelin trierpenoid are distinguished.

As a result, plums and fruit coats are rich in skin-enhancing substances (28%), making them gel-like, separated from flavogallol. The fruit contains vitamin C, flavonoid isocvercitrin in its roots, anthocyanin in its flowers (in the form of chloride) is detected, a combination of pelargonii and two glucose molecules is goulized. From the pomegranate fruit is obtained 54-59% juice, which is characterized by a high content of anthocyanins. Antocians are manifested by delfinidine, malvidine and its glycosides in intensive buyukli varieties. In the juice also found 9% citric acid, apples, shovels and other organic acids, glucose and fructose. From seeds it is possible to distinguish Punic acid, oils.

Pomegranate fruit consists of 38,8-63,4% juice, 27,8-51,7% peel and 7,2-22,1% seeds. The depleted portion of the highest cultural pomegranate varieties grown in India is 68%, the juice is 78,5-84,2%. The color of the juice varies from ochpushti in different varieties to Orange.

Pomegranate juice contains 12,4-23,2% dry matter. The main component of the dry mass consists of carbohydrates, the content of which varies from carob to regions:

- 8-20 In Central Asia%,
- 13,5-17,5 in Georgia%,
- In the Crimea 14-20%,
- It accounts for an average of 11,6% in the US.

Carbohydrates include glucose, fructose, and sucrose in low quantities. In the juice of some varieties, sucrose is not determined.

The presence of organic acids determines the quality of pomegranate juice: in Central Asian pomegranates in the amount of 0,2-0,9%, in the Caucasus in the amount of 1,7-2,6%. It contains citric acid 2,4 % Gach, contains wine, apple, camomile, as well as borate (a chemical compound in the form of crystals) acid. In Indian varieties, 0,14% of shovulic acid is anic.

The purity of pomegranate juice is determined by the presence of additives, the composition of which varies according to the variety and region of growth. The amount of skin - enhancing substances in the coat is significant-from 6,3 to 11,8% in cultural varieties, and in wild varieties-from 35% in quantity.

Juice contains vitamin R, biologically active compounds rich in phenols, it can reach up to 1% of the total amount. Among them, the antocian, which forms the color of the juice and peel, plays an important role. In its juice there is also a small amount of leukoantocian concentration of catechins.

The composition of the Juice includes vitamins kompleksi - C (from 8,7 mg to 100 g), V1 (from 0,004-0,36 mg to 100 grams), V2 (from 0,032 mg to 100 grams).

The composition of the Juice includes biologically active phenolcarbonate acids: chlorineogen, neoxlorogen, n-kumarov, protokatex acids, a sufficient amount of Gallic and ellag acids in the peel.

Pectin substances in the juice are detected on a low scale, but the amount in the porridge is higher than 6%. The protein content in the juice is 0,2%. There were 15 amino acids, of which 6 were irreplaceable amino acids.

Mineral substances in the composition are 0,2 %, in the porridge 0,9 %. They include in relation to 100 g of dry mass: kaltsiy (3-10 mg), phosphorus (8-70 mg), iron (0,3 mg), potassium (133 mg), sodium (1-7 mg), magnesium (12 mg), as well as manganese, silicon, copper, sulfur, chromium, aluminum, nickel, lithium.

The total amount of biologically active substances in the coat is 3,62%, in the inner coat 2,5%. Among them, there is a large amount of catechins: in the coat 0,82-2,12%, in the inner coat 0,25-0,50%. Vitamin C is from 20,7 to 193,0 mg compared to 100 g mass.

Toptan made up of cellulose (15-16%) and gemicellulose (7-8%), a large amount of excipients in the peel.

The content of pomegranate seeds exceeds cellulose - 22,4 %, starch - 12,6 %, nitrogen-3,4 %, ash-1,54 % , fat-20%.

Red orange pomegranate seed oil is considered a product of high quality. It is rich in unsaturated fatty acids (about 67%), which can not be replaced by it, the amount of vitamin E is able to equate to the bug'doy buds.

There are tannins in all parts of the tree: in dry bark up to 26%, in the root up to 28%, in the leaves up to 11% contain tannins, and at the same time in the bark there is enough to distinguish Gallic and ellag acids.

Types of Anor in Azarbaijan

Bala Mursal: this variety is common in NAR Shirvan region. The height of the tree is average, the branches are hanging, and the Thorns are few. The fruit is large enough to reach 400-500 Gramm. The fruit peel is thick, the color is dark magenta. The membrane of the fruit is thick. The arils are large, red, in sequence, and the taste is bitter-bitter.

Azerbaijani Guluisha: this variety is grown on the plant Shirvan, Karabakh and Ganja regions. The toad of the tree is wide, its branches are hard and vertical. The fruit peel is thin, the seeds are thin and thin. The taste is sweet and fruity.

Valas: this variety is common Absheron Peninsula, Goychay and Agsu regions. The color is dark red, the coat is thick. The Taste is bitter-sweet. Juice dark magenta.

Red coat: this variety is common in Ganja-Gazakh economic districts. The shape is round, the average mass is 200-250 g, the color is light red, the crust is thin. It is harvested in the second half of October or at the end.

Maxati: this variety is grown in Abşeron Peninsula and Goychay region. It is round, bright, dark red, and the thickness of the rhinestone is average. Juice dark magenta. It is harvested in the first half of September.

King nar: the distribution regions of this variety are mainly Agdam and Goychay regions. Round with a small, solid shape with an average weight of 330-350 g, its main color is yellow, the color of the coating goes from light red to dark red. The shell is moderately thick or thick, very dense, shiny, and the spots under the Shell are pale.

The total area NAR Gardens Azerbaijan around 24000 hectares. Of the pomegranate-producing economic regions, Chekhrayi Gulovsha, Bala Mursal, Azerbaijan Guloysha, Nazik Qabiq, Valas, Iri gila and

other varieties are grown in Ganja-Gazakh and Aran economic districts. The best pomegranate varieties are 800-1000 grams and the average weight is 200-400 grams. The productivity of pomegranate varieties is not the same. Pomegranate varieties such as Mahsati, Bala Mursal and Czechrayi Shell have the highest yields.

Make-up

* Fun!

* Caloric content of the drink

- Benefits and harm of pomegranate juice in Azerbaijan
- Read more about the benefits of pomegranate juice in Azerbaijan

* Healthy and tasty!

• Comments

Did you know that one pomegranate tree weighs up to 60 kilograms? A beautiful tree is called Royal - pomegranate juice has a number of healing properties. Leaves, roots and even branches of the plant can be used for medicinal purposes. And in general, since the highest quality product in Russia is Azerbaijani pomegranate juice, we will continue to name it so throughout the article.

In different countries, the pomegranate tree received different names: Carthage fruit, a grain or a puny Apple. The benefits of this fruit drink were known to Hippocrates. Pomegranate juice of Azerbaijani Origin today enjoys unprecedented popularity.

Caloric content of the drink

Many people know that pomegranate itself is a low-calorie product. And the juice from its fruits, according to dieticians, reaches only 100 kcal per 65 grams. The composition of the drink is so rich and original that it is often recommended to include it in the diet of children, it is recommended to eat it to people who have survived severe diseases, pregnant women, as well as people after surgery.

Azerbaijani pomegranate juice contains a huge amount of nutrients, minerals and vitamins ombor. This includes:

* magnesium, phosphorus, potassium, magnesium, sodium;

• iron;

• Vitamins A, PP, B1, B2, C, E;

• food fiber;

* beta carotene;

• carbohydrates, fats, proteins;

* folic acid (folate);

• oxalic, lemon and malic acids;

* extract, tannin substances;

* tannin;

* pectin.

The saturation of the drink with useful vitamins and biologically active compounds can not be compared with other natural drinks.

Benefits and harm of pomegranate juice in Azerbaijan

It is worth mentioning in more detail about the effect of the product on the human body. The benefit of Azerbaijani pomegranate juice directly depends on the content of a large amount of iron and potassium (substances necessary for the process of hemopoiesis and for the normal functioning of the heart). Drinking alcohol helps reduce the likelihood of anemia due to its ability to qualitatively increase the amount of hemoglobin in the blood.

Due to the fact that in the fresh juice of ripe pomegranates there are a lot of acids, nitrogen compounds, it not only helps, but also can harm your body. Contraindications to the use of pomegranate juice concern people with diseases of the digestive tract. To prevent exacerbations caused by an increase in the acidity of oshqozon, you can consume the drink in a diluted form.

There are several more contraindications for the use of pomegranate. Azerbaijani pomegranate juice is not recommended in the following cases: tushirilgan bosim ostida;

- with allergies to the components of the drink;
- gastritis, with ulcers of the mucous membrane of the digestive organs;
- increased acidity of the stomach, frequent burning of the stomach;

- with hemorrhoids, pancreatitis, constipation.

Tooth enamel is also a risk factor: the abundance of acids contained in the drink practically does not contribute to its strengthening. Therefore, dentists recommend using a healthy product in a slightly diluted form and always Somon. After drinking pomegranate juice, rinse your mouth thoroughly with water.

Doctors note that during lactation, the drink can be consumed only with extreme caution. A clear picture of the color of the fruit can cause redness, rash and stomach cramps in the child. Consumption of juice starts from 30 Gramm. It is better to dilute it with water in equal proportions.

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