

TOPIC: SELECTION OF EFFECTIVE VARIETIES OF POMEGRANATE IN THE SOUTH OF UZBEKISTAN IS A GUARANTEE OF PRODUCTIVITY**ТЕМА: СЕЛЕКЦИЯ ЭФФЕКТНЫХ СОРТОВ ГРАНАТА НА ЮГЕ УЗБЕКИСТАНА – ЗАЛОГ УРОЖАЙНОСТИ****МАВЗУ: ЎЗБЕКИСТОН ЖАНУБИДА АНОРНИНГ САМАРАЛИ НАВЛАРИНИ
ТАНЛАШ-ҲОСИЛДОРЛИК ГАРОВИДИР**

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ANNOTATION

This article describes the botanical description of the pomegranate plant, its biological properties, economic importance, cultivation techniques. The article also provides information on the work being done in the southern regions of Uzbekistan to select and introduce effective varieties for cultivation.

Keywords: Pomegranate, Camel Tooth Pomegranate, Kazakh-Pomegranate, Red Pomegranate, Gyulasha-Rozovaya, Pomegranate Collection, Medicinal Properties, Folk Medicine, Medicine, Food Industry, Agrotechnics.

Аннотация

В данной статье приведено ботаническое описание растения гранат, его биологические свойства, хозяйственное значение, приемы возделывания.

Также в статье представлена информация о работе, проводимой в южных регионах Узбекистана по отбору и внедрению в культуру эффективных сортов.

Ключевые слова Гранат, Гранат Верблюжий Зуб, Казахский Гранат, Гранат Красный, Гюлаша-Розовая, Сбор Граната, Лечебные свойства, Народная медицина, Медицина, Пищевая промышленность, Агротехника.

INTRODUCTION

Pomegranate has been cultivated in Central Asia for almost 2,000 years. More than 25% of anoraks in Central Asia are located in Uzbekistan. For many years, some anoraks have been established in Uzbekistan and special varieties have been planted. Such anoraks are located in the Fergana Valley, in some districts of Surkhandarya region. Pomegranates are planted in large areas of the Fergana Valley, Kuva, Namangan and Tashkent regions.

It is important to get a high quality crop of pomegranates from the blessings of the garden and to meet the needs of the population for them. Because it is healing from the root of the pomegranate to the tip of the leaf. According to the medicinal properties of pomegranate, it is a leader in folk medicine, medicine, food industry.

Pomegranate (*Punica granatum* L.) is a subtropical fruit plant, a tree or shrub up to 2-10 meters tall, belonging to the family Pomegranate (family Anorgulli). Homeland Central Asia, Azerbaijan, Iran and Afghanistan, wild species are found in the Mediterranean region, in the south of Central Asia, in the Crimea, the Caucasus, Iran, Afghanistan, Old Asia and Dagestan. In Uzbekistan, Kuva, Namangan, Denau, Sariosiyo (Dashnabad) and Kitab (Varganza) districts are famous for their excellent quality pomegranates.

Botanical Description - the leaves are small, lanceolate, the branches are thorny (less thorns in the sweet fruit). It blooms in June-July. The flowers are bisexual, large (up to 8 cm in diameter), bright red, one, two, sometimes up to five at the tip of the horn. The seed (mother) is normally developed, the calyx is fruitless, the seed is short, the bell-shaped flowers are usually fruitless. Pomegranate is pollinated from the outside. Fruits are large, round, reddish (red skin) or whitish (white skin), weighing 250–1000 g. Fruits have 6-12 cells (room), the seeds are light pink or dark red. The taste is sweet, sweet and sour, juicy (40-60%), contains 14-21% sugar, 0.3-9% citric acid, tannins, vitamins V, C. The husk is 29-50%, the grain is 10-20%. Fruit, peel, root bark contain up to 28% of nutrients.

Biological Properties - pomegranate is mainly propagated by cuttings. Fertile sand grows well in soils with sufficient moisture. Drought-resistant, but moisture-loving. Depending on the fertility of the soil, seedlings are planted at intervals of 4x4 and 5x4, and in gardens at 3x3 m. In Uzbekistan, it is covered with hay and reeds in late autumn or buried in the ground and opened in spring. Vegetation period is 180-215 days. Blooms from summer to autumn. Fruits ripen in 120-160 days - in the second half of September. - Withstands cold at 15° -17°, - At 20° the surface (body) is cold. Pomegranate begins to bear fruit at the age of 3-4 years, enters a full crop at the age of 8-10 years and bears fruit for 30-40 years. Yields up to 200 ts/ha.

Economic Importance - pomegranate is consumed mainly as a fruit. Pomegranate is widely used in confectionery and medicine, is used in skin tanning and dyeing fabrics. Dye is made from the

skin of the petals and fruits, and juice is made from the seeds. Citric acid is obtained from the wild. Some species are grown as an ornamental plant.

Agrotechnics - from the first year after planting pomegranate seedlings are given the form of a bush, leaving 4–5 main branches at a height of 30–40 cm, in the form of a low tree or leaving 3–4 main branches. Every year, withered, weakly developed, old stems are cut. During the growing season watered 6–10 times, row spacing is softened, weeded, fed.

More than 500 pomegranate varieties are grown in the world, and more than 40 in Uzbekistan. The State Register of agricultural crops recommended for planting in the territory of the Republic of Uzbekistan includes Achik-dona, Desertnyy, Kazake-anar, Kzyl uluchshenny varieties of pomegranate.

Pomegranate is one of the most common subtropical crops in Uzbekistan. The presence of favorable soil-climatic conditions led to the formation of a complex of local varieties. To date, the pomegranate varieties recommended for planting in Uzbekistan are mainly Red Pomegranate, Bitter Pomegranate, Pomegranate, Tuyatish, Ulfi, Desert and others.

Tuyatish Pomegranate Variety - a local variety is widely grown in the Dashnabad massif of Surkhandarya region, and now the area of this variety is declining. The tubers are of medium size, the branches grow branched, the fruits are round, and if not protected from the sun they burn from the heat. The weight of the fruit ranges from 350 grams to 650 grams, sometimes up to 800 grams. The color of the ripe fruit is pale yellow, with a reddish tinge to it, and the reddish color is less noticeable in the shaded fruit. Fruit teeth are hexagonal, the thickness of the skin is 0.5-0.6 cm, the weight of 100 grams of grain is 43 grams. Juice yield is 50.3% of the total mass, and the juice obtained from the grain is 83.7%.

The color of the grain is light red, large and coarse, juicy, the juice is sweet, less sour. The appearance is very beautiful, the sugar content is 17.8-18.1%, the acid content is 0.9-1.1%. The fruits can be sent to distant places and stored for up to 5 months.

Kazakh-Pomegranate (Cook-pomegranate) In the Republic of Uzbekistan fully zoning bushes are large, medium, the branches are scattered in all directions. The fruits are flat, round, some parts burn in the sun, the average size is 230-250 g, some 700-800 g, even up to one kilogram. The skin is hard, the color of ripe fruit is bluish-yellow, covered with dark red, in some parts there are dots or fine lines, the grains are large and of medium size. The juice is brown in color, has a salty taste, contains 15-17% of sugar and 1.4% of acid. Juice yield-55%. The fruits can be sent to distant places and stored for up to 8 months.

The red pomegranate bush is of medium size, the most common local variety, the fruit is spherical red or dark in color, the average weight of each is 200-270 gm, some 600-800 gm. The grains are large and small, the juice is red or dark red, the taste is salty, contains 15-16% sugar, the juice yield is 45%. This variety of pomegranate can be stored for a month or two. Shipping to remote locations is invalid. One bush can yield 35 kg. The yield of quality products is 58%, cracking is 31% and fineness is 11%. In autumn, pomegranate cracking increases by 60-70% in places where the temperature rises day and night and the wind is gentle.

Gyulasha-reddish. Widespread in Azerbaijan. It is recommended to plant this pomegranate variety in Uzbekistan as well.

The fruit is medium-sized, round, elongated, the fruit is medium-sized, weighing 200-260 g, in some cases 600-700 g. The shell is thin, accounting for 25% of the total weight. The main color is covered with yellowish white to dark red. The grains are large and medium. Sour has a sweet taste and contains up to 15% sugar and up to 2% acid. The juice is 53% of the output weight. Cannot be shipped to remote locations, it can be stored for 2-3 months.

In order to recommend the selection and production of effective varieties of pomegranate in the south of Uzbekistan, the Surkhandarya branch of the Scientific Research Institute of Horticulture, Viticulture and Enology named after Academician Mahmud Mirzaev is conducting research.

According to the research, in order to propagate the seedlings of the varieties in the pomegranate collection, 65 pomegranate cuttings were prepared and planted in the nursery in winter it was planned to plant so that it would be easy to bury with the soil. That is, there was a need to rejuvenate the collection pomegranate area.

Phenological phases in individual varieties of pomegranate

| № | Varieties | Awakenin g of the buds | Leaf formation | Гуллаш фазалари | | | | Fruit coloring |
|----|-----------------|------------------------------|-------------------|-----------------------------|------------------|---------------|-------|-------------------|
| | | | | The beginning of budding | The beginning | In general | Final | |
| 1 | Alice | 10.03 | 17.03 | 8.04 | 3.05 | 16.05 | 20.06 | 18.08 |
| 2 | Yeni Glusha | 1.03 | 9.03 | 5.04 | 3.05 | 16.05 | 20.06 | 20.08 |
| 3 | Azerbaijan | 1.03 | 9.03 | 6.04 | 3.05 | 16.05 | 20.06 | 20.08 |
| 4 | Sulu anor | 4.03 | 11.03 | 8.04 | 5.05 | 16.05 | 20.06 | 20.08 |
| 5 | Irاندالي | 1.03 | 9.03 | 6.04 | 3.05 | 16.05 | 20.06 | 20.08 |
| 6 | Yeni Kirmizi | 1.03 | 9.03 | 6.04 | 3.05 | 16.05 | 20.06 | 18.08 |
| 7 | Spring | 1.03 | 9.03 | 8.04 | 3.05 | 16.05 | 20.06 | 20.08 |
| 8 | Ruby Spanish | 10.03 | 17.03 | 8.04 | 3.05 | 16.05 | 20.06 | 10.09 |
| 9 | Oleg | 9.03 | 17.03 | 6.04 | 3.05 | 16.05 | 20.06 | 10.09 |
| 10 | Shirvan | - | - | - | - | - | - | - |
| 11 | Wonderful | 10.03 | 17.03 | 8.04 | 4.05 | 16.05 | 20.06 | 13.09 |
| 12 | Soft-seed sweet | - | - | - | - | - | - | - |

CONCLUSION

The results of the mechanical analysis of pomegranate varieties show that samples for analysis were taken on September 16-18 and measurements were made. In terms of fruit weight, the Spanish Ruby variety had a high index and weighed 352.5 gr. The minimum weight in the Vanderful variety was 225 gr. When studying the sugar content, it was found that the Myagkosemyanny sweet variety has the highest 18.1%. The sugar content of the remaining varieties ranged from 14.9% to 16.8%.

Results of mechanical analysis of pomegranate varieties and the amount of sugar in it

| № | Naming of varieties | Date of transfer | h | d ₁ | d ₂ | m | The amount of sugar % |
|---|---------------------|------------------|-----|----------------|----------------|-----|-----------------------|
| 1 | Rubin Spanish | 16.09 | 7.0 | 8.1 | 8.3 | 180 | 17.5 |
| 2 | Oleg | 18.09 | 7.0 | 7.2 | 7.0 | 188 | 16.4 |
| 3 | Vanderful | 16.09 | 7.4 | 8.2 | 8.4 | 190 | 15.1 |
| 4 | Soft-seed sweet | 16.09 | 6.9 | 7.3 | 7.2 | 175 | 18.5 |
| 5 | Early cooking | | 8.8 | 8.8 | 9.0 | 250 | 19.3 |
| 6 | Red pomegranate | | 7.8 | 8.2 | 8.3 | 215 | 18.1 |
| 7 | Kazakh | | 6.5 | 6.7 | 6.1 | 171 | 17.8 |
| 8 | The width is red | | 6.0 | 7.1 | 7.0 | 161 | 15.3 |

Tasting price of pomegranate varieties (5 b / shk)

| № | Naming of varieties | Date of transfer | Appearance | Taste | Taste price | Softness | Overall price |
|---|---------------------|------------------|------------|---------------|-------------|----------|---------------|
| 1 | Rubin Spanish | 16.09 | 4.0 | Nordon shirin | 4.5 | 4.0 | 4.3 |
| 2 | Oleg | 18.09 | 4.0 | Nordon | 4.5 | 3.5 | 4.0 |
| 3 | Vanderful | 16.09 | 4.3 | Sweet | 4.7 | 4.5 | 4.5 |
| 4 | Soft-seed sweet | 16.09 | 4.5 | Nordon shirin | 4.5 | 4.5 | 4.5 |

According to the results of tasting of pomegranate varieties, soft-grained pomegranates Vanderful and Myagkosemyanny sweet varieties scored the same 4.5 points, and pomegranate seeds differed from other varieties by their softness and non-sticking to the teeth when eaten.

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