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Properties of Pomegranate and Prospects for Its Growth

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ABSTRACT

This article describes the properties of ornamental plant pomegranate, as a subtropical fruit. prospects, resources and favorable climatic conditions in the countries where it grows and the role of pomegranate in the development of agriculture.

Keywords agriculture, properties of pomegranate in medicine, subtropical plants, wrinkled fruits, soils.

I. Introduction

Today, the world pays great attention to agriculture, and the demand for quality agricultural products is very high. In this regard, one of the urgent tasks is to develop resource-efficient modern technologies for growing reliable, environmentally friendly agricultural products, including quality pomegranate fruit and seedlings of its varieties. Life itself demands the creation of new modern agro-technologies for pomegranate selection, seed production and cultivation. That is why pomegranate selection and seed production is one of the problematic scientific research works.

In recent years, short-term frosts in the spring after warm winter days in the Fergana Valley have reduced the resistance of trees to diseases due to strong damage during the first growing season, and trees are weakened due to diseases and pests during the growing season.

Therefore, one of the most pressing issues in the soil and climatic conditions of Fergana region is the identification of high-yielding, disease-resistant and pest-resistant forms of pomegranate fruit and the development of specific agro-technical measures for the creation of new varieties.

It is known that the pomegranate is one of the best fruits and ornamental plants as a subtropical fruit. Pomegranate is a waste-free fruit and is used as a medicine in medicine because it has a large amount of healing properties in both the root peel and the peel of the fruit. Squeezed juice is used to dye a variety of things from the various seeds left over after extraction. In addition, acetic acid is obtained from it. The pomegranate tree, which is considered a waste, is a valuable wood, and the peel of the pomegranate fruit is a valuable medicine [1].

II. Research methods

The research was conducted on the basis of the methodology of the Research Institute of Horticulture, Viticulture and Enology named after Academician M. Mirzaev. In addition, stock materials were used in the data analysis.

III. Research results

Pomegranate is also found naturally on the coasts of Central Asia, Turkey, Azerbaijan, the southern part of South America, North-West India, Northeast Afghanistan, the Greater

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Caucasus Mountains in Transcaucasia, Asia Minor, and the Arabian Sea.

Wild pomegranate is widespread in the eastern Caucasus, in the Lenkorn-Astarin massif of Azerbaijan. It is also found in Uzbekistan and Tajikistan on the slopes of the Gissar, Darvoza and Qorategin mountain ranges.

As a subtropical crop, pomegranate is very drought tolerant, but grows well even on irrigated lands. Growing up in more rocky steppes, foothills and foothills has been of constant interest to many scientists since ancient times. They have conducted scientific research at different times and periods.

IV. Main Part

The emergence of the Punica L. series dates back to very late geological times, the end of the Cretaceous and the beginning of the third period. According to A. Decandol et al. On the genus Punicf granatum L., the pomegranate found in the interior of France and in Azerbaijan was based on the internal remains of its flowers and leaves [2]. These data also include the time of emergence of this type of pomegranate in the Upper Oligocene or Lower Miocene, taking into account the geography of distribution of the pomegranate.

Pomegranate has a history of at least 2000 years in our country. According to historical sources, Sahibkiran Amir Temur regularly served pomegranates on his table. During the reign of Babur, the taste and sweetness of “Dono kalon” and “Sammon” pomegranates were especially noted in Margilan. Among the subtropical plants, the pomegranate (Punica granatum L) is of particular importance with its important properties. The fact that the fruit is a natural ecologically clean product is radically different from other fruits with pomegranate.

Pomegranate is distributed in the southern regions of Uzbekistan, Denau, Dashnabad and Kashkadarya regions of Surkhandarya region. It is also grown in Pakhtachi and Kattakurgan districts of Samarkand region. Kuva district is a real masterpiece of pomegranate cultivation in the Fergana Valley. The farmers of this land are notorious for their diligence, and there is nothing that comes before them, especially in the cultivation of pomegranates. Therefore, Kuva pomegranates are known and popular not only in our country, but also abroad.

As a result of studying local, folk selection and imported varieties, there is an opportunity to develop high-yielding, high-quality, cold and drought-resistant varieties that ripen at different times, long-term storage of fruits, pomegranate orchards develop special techniques for agro-technical activities.

Pomegranate plant usually grows in the form of a shrub to 2-5 m in height. The flower is large, beautiful, solitary or ball-ball dark red, orange-red. In one pomegranate there are two different elongated crown-shaped flower-shaped flowers. The first of these bears fruit, and the second is a male flower, in which the maternal part is not well developed and is small and does not bear fruit. In addition, there are intermediate flowers, which are finished with small wrinkled fruits. Pomegranate begins to turn blue in early April, when the air temperature rises to 12 - 14 ° C. In autumn, when the hot temperature drops below this level, it stops growing. The growing period of pomegranate lasts 180-215 days, depending on the navigation, climate. Pomegranate blooms in early May, the first winter buds bloom, and 10-15 days later, mass flowering begins. Pomegranate ripens in 120-160 days, depending on its navigation, soil and climatic conditions.

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Pomegranate seedlings begin to bear fruit in 2–3 years after planting in the ground. Full harvest starts in 7-8 years and lasts for 50-60 years. This means that if a pomegranate mother garden is built, it will be possible to use the mother garden for at least 50 years. Pomegranate grows in a variety of soil-climatic conditions, from sandy, rocky to heavy mechanical soils, loamy, alkaline and acidic soils. Grows well, especially in fertile soils. In the soil and climatic conditions of Fergana region, pomegranate cultivation is particularly effective in low-yielding soils.

Pomegranate fruit is the highest grade juice with 75% content, 20% sugar, 3% fat, up to 15% protein, up to 4% citric acid and many vitamins. Pomegranate juice restores appetite, lowers body temperature, blood pressure, reduces the damage of viruses and microbes in the stomach.

In the medical world, the juice of sweet pomegranate fruit removes stones from the kidneys, urinary tract and gallbladder from the pomegranate peel and skin of the ancient Egyptians in the treatment of dysentery, vomiting, Sri Lankans in the prevention and treatment of eye infections with pomegranate flower decoction. The world-famous medical laws of Abu Ali Ibn Sina also wrote about the healing properties of pomegranate: "If you get used to eating pomegranates for breakfast, onions for lunch and honey in the evening, your blood will be as pure and clear as tears." One of the invaluable qualities of pomegranate identified in medicine is that its juice prevents the development of endocrine diseases in the human body, in the blood.

It also has the properties of cleansing the blood, activating the activity of the liver and kidneys. Squeezed pomegranate juice contains 20% starch and not less than 4% fat, which is processed and used in medicine and cosmetology. The skin and roots of the fruit are used to dye fabrics with natural dyes in black, yellow, brown and pink.

For pomegranate seedlings, cuttings are selected from fertile, healthy tubers pre-selected from the pomegranate garden. In the laughter of these cuttings retains the average yield of this variety and keeps it flawless.

The twigs from which the cuttings are prepared are cut before burying the pomegranate in the fall. The side branches and unripe rod ends of these are cut off. The cut cuttings are tied in bundles of 50-100 pieces, then the pomegranate variety, place and date of picking, the label is sent to the place where it will be stored for the winter. There is a plan to bury the cuttings, and each variety is stored in a separate pit. Pits should be dug where groundwater is at least 2 meters below. Its depth is 0.75–1.0 m and the width is 1.0–1.5 m, depending on the length of the cuttings.

According to the recommendation of Academician M. Mirzaev, the rods are buried in the pit in 2-3 layers, each layer is filled with moist soil 4-5 cm thick. The top layer should be flush with the top edge of the pit. Then on top of the pit buried cuttings are pulled moist soil to a thickness of 30–40 cm, the surface is leveled. A ditch will be built around the pit to allow rainwater and puddles to flow.

Pomegranate cuttings should be prepared mainly in the fall. In some cases it is allowed to cook in a moist spring, that is, until the pomegranate buds open and sprout. In such cases, the branches are immediately cleaned of thorns on the side branches, the cuttings are cut and buried in moist soil until they are planted in bunches. Cuttings prepared in the spring are made from twigs cut during the thinning of pomegranate branches. According to academician M. Mirzaev, cuttings prepared in spring hold less than cuttings

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prepared in autumn. This is because pomegranate cuttings prepared and buried in the fall have a high germination capacity because they are already saturated with soil moisture.

The land on which the cuttings are planted should be flat, easy to irrigate, protected from sun, dry and cold winds, especially well supplied with water in spring and summer, the soil should be light or moderately compacted, fertile, 35-40 cm deep and well plowed.

It is not recommended to establish a nursery in saline or swampy soils. Such soils must be washed with salt to remove the salt floor. The land set aside for planting is plowed to a depth of 35-40 cm in November-December, and at one time 100-120 kg of pure phosphorus, 15-20 tons of humus or other types of organic fertilizers are applied per hectare. In order to keep the soil moist, plowing is carried out in early spring. If the soil is compacted, it is best to dig in the spring without chiseling or tilting.

In the southern regions of Uzbekistan, the planting of cuttings should be completed on March 15-20, and in the northern regions on April 5-10. In this case, the cut cuttings should not escape moisture. It is also necessary to ensure that there is enough moisture in the soil, after which it may not germinate.

After digging the buried cuttings are separated from the damaged and rotten, the cuttings are cut with a sharp ax 20–25 cm long, vine scissors, or on a special machine the lower end of the cuttings slightly bent under the bud. The upper end of the cuttings is cut 0.7-1.0 cm from the top of the last bud, and the lower base is cut slightly diagonally from the bottom instead of the bud or cut branch, preventing moisture evaporation from the sharply cut twigs and ensuring good root development. This will make it easier for Collus and young roots to emerge. The cut cuttings are first tied in 50-100 pieces and soaked in running water for 10-12 hours, so that the body of the cuttings is more saturated with water. After that it is ready for planting. If the prepared cuttings are not planted for various reasons, it is buried in moist soil before planting and stored here until planting.

With the help of a tractor, cuttings are dug at a depth of 25-30 cm in the furrows taken in the west-east direction with row spacing of 70 cm. During sowing, the surface of the cuttings is buried in the soil, which allows it to hold well. When planting cuttings, the upper end of the cuttings should protrude about 5 cm from the level of the total land area. Once the cuttings have been planted, a nursery plan is drawn up, showing the number of cuttings in each row and for each variety.

As soon as planting is completed, it is watered satisfactorily. In irrigated fields, between rows of crops are cultivated as soon as the soil is well drained, and at the same time soil is added to the exposed cuttings and planted by mistake.

During the growing season the cuttings should be watered in a timely manner, weeds should be removed regularly, and special attention should be paid to moisture retention. Otherwise, the cuttings will not take root well and will lag behind in growth and development. Depending on weather and soil conditions, cuttings are irrigated and cultivated 10-12 times during the entire growing season: 1-2 times in April, 3 times in May-June, 1 time on September 2 in August, and the last time in mid-September in the northern regions.

Seedling row spacing is loosened three to four times per season. In June, before the next irrigation, nitrogen is applied at the rate of 40-50 kg of pure substance per hectare. If at least three years of rotten manure is applied, the soil moisture

is better preserved, the air circulation is further improved by increasing productivity. If pests appear on the pomegranate seedlings, they are immediately treated with herbicides.

By the end of autumn, cuttings planted in the spring, the branches of pomegranate seedlings grow to a height of 50-60 cm. Seedlings are dug in November. If the seedling soil is dry at this time, the seedlings are watered a few days before digging. Seedlings are usually dug to a depth of at least 35–40 cm using a special plug, then sorted and divided into two varieties: the first variety has a well-developed root system 30–60 cm. twigs, the second variety includes roots shorter than 20 cm, height not exceeding 20-25 cm, which are left for planting again next year.

Seedlings left for winter storage are sorted, laid out one or two rows into the pit, and the soil is piled on top. The soil is compacted so that the row spacing of the rod does not open. Seedlings sent to distant places are cut into 100-130 pieces, each layer is covered with wet straw or sawdust to prevent the roots from drying out. The root of the sapling is wrapped tightly in a chip or bag and a label with the variety is affixed. The tarpaulin is covered and tied to the seedlings, which are sent to the nearest places. Seedlings delivered to the planting site are immediately re-buried in moist soil.

Conclusion

From the roots of the pomegranate plant to the body, leaves, flowers, fruits are also medicinal plants used in the prevention and treatment of various diseases. This is why pomegranate is valued as a source of health in many parts of the globe. In the cultivation of pomegranate, if all the above agro-technological processes are carried out in a timely and quality manner, a high and quality yield is achieved.

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