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SELECTION OF PRIMARY SOURCES FOR DEVELOPING THE PROMISING PEAR VARIETY "FARIZI"

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Abstract

The article presents the selection of primary sources for creating the promising pear variety "Farizi." During the study of the pear varieties "Doctor Jules Guyot," "Forest Beauty," and "Clapp's Favorite," it was determined that the new variety was developed by crossing "Doctor Jules Guyot" and "Forest Beauty."

Keywords: Pear, variety, tree, fruit, flowering period, yield indicators.

Scientific research aimed at developing the promising pear variety "Farizi" was carried out during 2017–2024 at the Samarkand Scientific-Experimental Station of the Research institute of horticulture, viticulture, and winemaking named after academician M. Mirzayev.

Description of the Pear Variety "Doctor Jules Guyot. This variety was selected as the maternal parent in the development of the "Farizi" pear. It is a summer pear variety that originated in France at the end of the 19th century. Due to its high productivity and excellent fruit flavor, it has continued to successfully compete with modern pear varieties to this day. Mature trees of the Doctor Jules Guyot pear are characterized by their relatively short height, not exceeding 3–5 meters. The compact size of the tree facilitates easier harvesting. The tree has an orderly, broad-pyramidal crown with moderately dense branches.

The flowers of the variety are pure white, sometimes exhibiting a delicate pink shade on the reverse side. The flowers are notably resistant to late spring frosts, which distinguishes the variety from many others. The flowering period lasts for 14–16 days and typically occurs in April–May.

Figure. 1 Appearance of the Fruits of the "Doctor Jules Guyot" Pear Variety

The fruit has an elongated, sausage-like shape, weighing up to 200 grams, and in young trees, it can reach 300–330 grams. The skin is thin and golden-yellow, covered with small rust-colored dots across the surface, while the sun-exposed side develops a pinkish-red blush. The flesh is creamy-colored, tender, juicy, and aromatic, with a sweet-sour dessert flavor.

The chemical composition of the fruit includes 17.5% dry matter, 9.1% sugars, 0.6% acids, and 6.1 mg/100 g of ascorbic acid. The harvest period begins in the late July and continues through the first and second ten-day periods of August. The storage life of the fruits is 10–15 days.

The Doctor Jules Guyot variety exhibits a high degree of resistance to scab. It may be slightly affected only under unfavorable climatic conditions, such as cool and humid summers. The flowers are also distinguished by their remarkable frost resistance. Description of the "Lesnaya Krasavitsa" Pear Variety

The "Lesnaya Krasavitsa" variety was selected as the paternal parent in the development of the new "Farizi" pear variety. This variety originated in Belgium and was discovered in the early 19th century by the scientist Chatillon, who accidentally found it in a forest near Aalst, located in Eastern Flanders (Belgium).

The variety has become widespread and regionally adapted in Ukraine, Belarus, Moldova, Lithuania, Estonia, and the Central Asian republics.

Figure 2. Appearance of the Fruits of the "Lesnaya Krasavitsa" Pear Variety

The tree is of medium height and exhibits rapid growth during its juvenile stage. Its crown is wide and pyramidal, with branches slightly drooping. The shoots are thick, straight or slightly curved, and exhibit a dark red coloration with medium-sized lenticels. Buds are small with a metallic sheen. Leaves have finely serrated or slightly toothed margins; the petiole is slender and elongated. Flowers are small and pink, blooming in mid-season. The flowers are resistant to early spring frosts. The cultivar is partially self-pollinating.

The fruit is medium-sized, obovoid in shape. The skin is thin but relatively dense, slightly rough, greenish-yellow when harvested, turning golden-yellow upon ripening, with grayish specks, rust spots, and a bright reddish blush on the sun-exposed side. The fruit stalk is short, relatively thick, with a widened calyx at the apex. The core is broad, seed cavity outlined with small stone-like structures. Seeds are enclosed or semi-enclosed, elongated, ovate, well-developed, dark brown in color, with a pointed tip.

The fruit flesh is yellowish-white, tender, juicy, sweet-sour, and of high organoleptic quality. The fruit composition includes 8.5% sugar, 0.23% acids, 14.0% dry matter, and 7.4 mg/100 g of ascorbic acid. Harvesting occurs from 20–30 August, with a storage period of 15–20 days. Average yield for 12–15-year-old trees is 140–160 c/ha.

The pear cultivar "Lyubimitsa Klappa" has been classified as a model cultivar. It is a summer pear variety, selected in 1860 in the USA from the seedlings of the "Lesnaya Krasavitsa" cultivar. The breeder of the cultivar is T. Klapp. It is one of

the most widely distributed summer pear varieties, adapted to Central Asia, the North Caucasus, and the Lower Volga regions, and also widely grown in Ukraine, Moldova, Belarus, the Baltic States, and Central Asia.

The tree belongs to the spreading growth type, with juvenile seedlings growing rapidly and forming a rather sparse pyramidal crown. Within 5–6 years, the crown expands and rounds out, becoming more open, with slightly drooping branches. Leaves are medium-sized, elliptic or oval-obovoid, tapering towards the base, with a short apex, glossy, glabrous, and dark green. The petiole is long, slender, light green, and glabrous. Flowers are white, large, double, arranged in clusters of 6–7 per inflorescence. Flowering is mid-season and prolonged.

Figure 3. Appearance of the fruits of the "Lyubimitsa Klappa" pear cultivar

The fruits are medium-sized, elongated-ovoid in shape. The skin is smooth and thin. When ripe, the primary color is yellow, while the sun-exposed side develops a bright red blush. The fruit surface has noticeable small subepidermal spots. The fruit stalk is of medium length and thickness, or thick, slightly curved, and thickened at the point of attachment. Seeds are small, dark brown, and well-developed.

The flesh is white, tender, very juicy, melting in the mouth, with a sweet-sour taste. Chemically, the fruits contain: 13.7% dry matter, 8.3% sugars, 0.4% titratable acids, 6.6 mg/100 g ascorbic acid, and 39.4 mg/100 g P-active catechins.

The harvest period for this cultivar is from 28 July to 8 August, while in mountainous areas, it begins in the second ten days of August. The storage period is 10–15 days. Harvesting too early or too late can negatively affect fruit quality. Seedlings of this

cultivar reach full bearing in 4–5 years after planting, and as they mature, they produce regular and abundant yields. Average yield is 15.0–18.0 t/ha, and in low-mountain regions, it reaches 25–30 t/ha.

In conclusion, based on many years of selection work carried out on hybrids obtained by crossing the pear varieties “Doctor Jules Guyot” and “Forest Beauty,” an early-ripening, high-yielding, and large-fruited new variety named “Farizi,” which incorporates valuable economic traits, was developed, and patent No. NAP 445 was obtained.

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