

## QUINCE FRUIT AND ITS USEFUL PROPERTIES

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### ABSTRACT

*Fruits grown in Uzbekistan differ in appearance, taste and quality. Bexia is also one of the rarest fruits and is in short supply today. Bexia fruit is also widely used in medicine, as this fruit and seeds have healing properties. The quince tree is light-loving, grows slowly in the shade and gives low yields. Fruits are harvested in September-October; weight, 150-500 g depending on the navigation. The fruits of the quince tree, sown from seed, are small, stale, of poor quality, unfit for consumption and bear fruit in 8-10 years. However, seed seedlings and seedlings are a good graft for quince.*

**KEYWORDS:** *Quince Fruit, Quince Varieties, Soil-Climatic Conditions, Jam, Compote, Seedlings, Horticulture, Quince Flowers, Medicine And Yield.*

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### INTRODUCTION

The soil and climatic conditions of Uzbekistan are very favorable for the growth of all fruit crops, which requires the cultivation of fast-growing, high-yielding intensive types of seeds, grains and other fruits, their seedlings and the establishment of intensive orchards. The development of horticulture, on the one hand, contributes to the development of the economy of our country, on the other hand, enriches the social status of the people. [1]

Fruit growing is one of the oldest branches of agriculture. The first information about fruit trees dates back to the 5th century BC. Fruit and its products have been branded since the 10th century AD. Since then, trade in fruits and berries has been established with neighboring countries. By the 19th century, fruit growing had a significant place among other branches of agriculture. [2]

Quince is a fruit tree belonging to the Rano family. 80% of the homeless in Uzbekistan are in the Fergana Valley. The leaves are simple, green, the edges are whole. Flowers solitary, white or pale pink, blooms in April. After transplanting, the seedlings are formed in 3-4 years and live for 30-40 years. Older trees yield an average of 60-70 kg. Fruits are harvested in September-October; weight, 150-500 g depending on the navigation. Quince fruits are lemon-colored or

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orange, covered with feathers; When done, the hair falls out, fragrant. Fresh fruits are rarely consumed. Quince entomophilic (pollinated by insects) plant. [3]

Quince is actually an intensive fruit crop, ie seedlings begin to bear fruit in the third year after planting in a permanent field. The quince tree crop grows fast.

Many species of quince are good welders of low height for pears. Quince is demanding to heat and moisture. Enters early harvest and yields abundantly for 35-45 years. [4]

There is one wild species of quince that grows wild - the quince species.

Prospective development of horticulture in Uzbekistan cannot be achieved by expanding orchards alone. To do this, it is necessary to correctly determine the processes of soil fertility, tillage, variety selection, cultivation technology, fertilization, irrigation, disease and pest control, as well as many other, let's say, harvesting and storage. [5]

Quince is mainly a canned fruit. However, most quince varieties grown in Uzbekistan are also eaten as desserts. Although quince fruit is eaten fresh, it is often used in processed products (jam, compote, jam, candied fruit, marmalade, quince syrup, etc.).



When quince jam made from quince fruit is added to juices made from fruits such as apples and pears, it makes the taste of the juice more delicious and fragrant. Quince is one of the most ancient plants of our republic planted and cared for in the provinces. [6]

Quince grown in Uzbekistan contains 75-80% water (when freshly picked); Contains 8.5% to 15.2% sugar, 1.5-2.0% malic and citric acids, 0.4-1.0% various acids, 0.4-0.7% additives. Quince contains vitamins C, V1, V2, RR and provitamin A. Mineral salts include sodium, potassium, calcium, magnesium, phosphorus, iron, cobalt, aluminum, boron, nickel, titanium, copper, manganese, zinc and others. [7]

In addition, up to 20% of mucous amygdalin glycoside in quince seeds and seed pods; Contains more than 8% oils and dyes. [8]

Quince underground root system - consists of a vertical main root, lateral bud roots and root collar. Quince root system grows horizontally 20-70 cm above the ground in the soil, vertical roots 110-160 cm deeper than the apple, pear tree, so it can grow even in places where

groundwater is close to 1-1.5 m. The aboveground parts of the quince tree consist of a body (stem), a central horn, a growing horn, mother horns and orderly branches. [9]

Quince blooms late, so spring short-term cold does not cause much damage to fruit buds. It is harvested faster than apples and pears - in 2-3 years. Quince is drought tolerant, more demanding to heat than apples and pears, and more resistant to cold (-27 S0). At very low (-30 S0) temperatures, fruit buds, annuals and old branches are damaged. [10]



The growth and development of the quince tree is different from other trees, i.e., it grows in a spiral (as a spiral) as the sun rises and sets.

There are two species of quince in Uzbekistan: the common quince (*Cydonia oblonga* Mill) and the Japanese quince (*Chaenomeles Japonica*Hinde). Culturally, the common quince is widespread. Produces many root bachki. In Uzbekistan, it is grown mainly as a tree. Along with all types of fruit crops, environmental factors play an important role in the care of quince plant. [11]

Light is one of the key factors for the photosynthesis process to go well. The quince tree is light-loving, grows slowly in the shade and gives low yields. Another important factor is soil and air temperature. It grows well in sandy, loamy soils and gives good yields. [12]

The quince plant is heat demanding. The average optimal temperature for its good growth and formation of fruit buds is 15-20 degrees. Moisture is also important for the quince plant, but it can withstand drought well in the absence of moisture. In doing so, it reduces evaporation and folds the leaves against excessive moisture in the soil. Gives quality and abundant yields when soil moisture is normal. [13]

Variety selection is of great importance in all fruits, vegetables, melons and other crops grown in agriculture. Varieties are selected taking into account the soil and climatic conditions of the area, the influence of external factors and other conditions. [14]

Quince varieties grow in all regions of the country and give good yields. Currently included in the State Register are: Aromatnaya; Izobilnaya; Sovkhoznaya; Samarkand krupnoplodnaya; Quince varieties such as Konservnaya, Otlichnaya are grown. [15]

**Aromatnaya variety** - is very suitable for late ripening and canning. It is planted and cared for throughout the country. The height of the tree ranges from 2.7 m to 4.0 m in average height. The branches are up to 5 meters wide.

The period of fruit picking is the second decade of October. The storage period is until the end of January. Transport resistant. [16]

**Izobilnaya variety** is recommended for planting in all regions of the country. It is a high-yielding, medium-ripe, conservative variety.

The dialing period is from late September to early October. High quality jams and compotes are made from the fruits. Canned variety is the best pollinator.

**Samarkandskaya krupnoplodnaya variety** - recommended for all regions of the republic. The tree is 3.5-4.6 m high, the branches are oval, relatively thick and up to 3.3 m wide. It is harvested in the 5th year, later than other varieties. [17]

The harvesting period is the first half of October, when high-quality jams and compotes are made from the fruit. Requires high agrotechnics. Izobilnaya and Sovkhoznaya varieties are the best pollinators.

**Canned variety** - large-fruited, late-ripening variety, the fruits are medium (300 g) to large (600 g), the shape is apple-shaped, firmly attached to the branch, almost does not shed. [18]

The fruits are harvested in the second decade of October. The variety is canned, compote - 4.5, jam - 5.0 points. The fruit does not crack, the taste of fresh fruit is 3.5 points. It is grown in the south-western regions of Uzbekistan. [19]

**Otlichnitsa variety** - created in the Nikitin State Botanical Garden. The average height of the tree is 2.5 m, the branches are thick, the yield is relatively late 5 years. The color of the fruit is pale yellow, slightly hairy. The taste value of the fruit at the time of ripening is 4.7 points. [20]

**Sovkhoznaya variety** - winter-hardy, productive, universal variety. It is grown in all regions of the country. Some weigh up to 540 grams. In processing, compote and jam are prepared. The best pollinator is Izobilnaya variety. [21]

**Cultivation technology.** Quince is propagated mainly by grafting. The fruits of the quince tree, sown from seed, are small, stale, of poor quality, unfit for consumption and bear fruit in 8-10 years. However, seed seedlings and seedlings are a good graft for quince. Quince seed seedlings are a low-growing graft for pears. In the context of farms, the urgent task is to expand the area under quince, to plant new orchards. Quince is more resistant to drought, heat, disease and pests than other fruits, yields quickly, and every year, consistently gives a good harvest. [22]

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