

Prospects For the Cultivation of Citrus (Lemon - Meyer, Orange, Mandarin, Grapefruit) Fruits in The Greenhouses of The Book District

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Annotation: This article provides feedback on the prospects for the cultivation of citrus fruits in the greenhouses of Kitobtumani and recommendations on the cultivation of citrus fruits.

Keywords: citrus fruit, greenhouse, lemon, Meyer, Orange, export.

Introduction:

Today, in the conditions of new Uzbekistan, wide changes and reforms are being carried out in all areas. Among other things, we will be able to observe changes in the field of Agriculture. Especially in agro-farming, the demand for citrus fruits is increasing day by day. Compared to 2016, exports of its lemons entering Uzbek citrus fruits have doubled, and by 2021, amounted to 5,097 tons. Also, new types of lemons, tangerines and oranges are being developed in laboratories in our country. In this regard, in 2022, the total area for citrus production was increased to 4,218 hectares. You can familiarize yourself with many other information on this in our article¹.

The Uzbek variety of oranges created by Uzbek Breeders, The Tashkent variety of Mandarin, as well as about ten varieties of lemons grown in our republic have gained great popularity on the domestic and foreign market.

Theoretical and practical work is being carried out on the cultivation and culturing of citrus fruits in the greenhouses of the book District. There is a growing interest in this area by entrepreneurs using wisely many opportunities given on the side of the state.

Analysis And Discussion.

As for the prospects for the cultivation of citrus fruits in greenhouses: the agency for horticulture and greenhouse development under the Ministry of Agriculture of the Republic of Uzbekistan is ready to cover 30% of the cost of purchasing heating equipment with an alternative source of energy installed in greenhouses to support farmers who are ready to organize the cultivation of citrus fruits.

There is an increase in the volume of lemon exports and imports in Uzbekistan. In particular, if in 2016 Uzbekistan exported 2,431 tons of lemons, by 2021 this figure was increased to 5,097 tons. There is further growth in lemon imports: in 2016-64.7 tons, and in 2021-1,099 tons of lemon imports.

Analysts compared the wholesale prices of fruits in Uzbekistan in January 2022 with those recorded at the same time a year ago, and found that the price of most of the domestic fruits has increased significantly. At the same time, it turned out that the price of imported fruits, such as citrus and bananas, fell. The fall in prices for bananas, oranges and tangerines is due to the decision of the Uzbek government on the temporary abolition of the duty to import several fruits of October 21, 2021. As a result, as of January 28, 2022, the wholesale price of oranges has decreased by 22% compared to the same period last year, the price of mandarin – by 23%. During the year, the Uzbek sum was only 3% devaluation. With this, it can be said that real prices in the domestic market have decreased even more².

When culturing citrus fruits in greenhouses, we need to get acquainted closely with the conditions of greenhouses and laboratories. Today, Specialists of Uzbekistan pay special attention to the cultivation of

¹ <https://www.agro.uz/11-0016/>

² <https://www.agro.uz/11-0016/>

new varieties of citrus seedlings in greenhouses and open soil, as well as bunches (biennial crop seedlings sorted for seed purposes), the fight against diseases and pests. Scientists working in laboratories and specialists in the greenhouse are dizzy on the development of varieties of lemons, oranges and tangerines that are suitable for export and transportation to other countries.

In accordance with the decree of the president of the Republic of Uzbekistan dated February 19, 2020 PQ-4610, academician M. The Association of Citrus, subtropical and tropical plant growers and exporters was established under the Research Institute of horticulture, viticulture and winemaking named after Mirzayev. The association was founded in order to increase the volume of production of high-quality industrialized and exportable citrus fruits based on the development of the limes sector in the Republic again, expansion of the scope of research, application of advanced and modern resource-saving technologies. Scientists of the Institute have developed new varieties for the purpose of planting citrus trees on the territory of our republic, inclusion in the State Register. Among them, the following can be noted:

- Two high-yielding varieties of lemon "Meyer" and "Uzbekistan". It is recommended to grow them in greenhouses and ditches. These varieties give an early harvest.



❖ *The hamlet of Orange is a sort of "Hamlet". Fruits ripen in November. The yield is good and suitable for transportation.*

❖ *The Clementina of the Mandarin is a nave. Ripens in November and gives a good harvest.*

Also, the specialists of the institute continue research work on the following varieties of citrus fruits: "Meyer", "Uzbek firstborn", "Uzbek derivative", "Tashkent" lemon varieties; "Gamlin", "Washington Navel", "Korolyok Grushovidny", "Glodkokoriy", "F1 29221" orange varieties and "Clementine", "Kavano Vase", "Okitsu Vase", "Ponkan" mandarin varieties.

Interestingly, the variety "Meyer", for example, limoninng, which is very popular in Central Asian countries, is adapted to the climatic conditions of Georgia. In addition to Uzbekistan, Tajikistan produces 12-15 thousand tons per year.

Uzbekistan can strengthen its position among the world's leading countries by exporting citrus fruits. For this, specialists in institutes, laboratories and greenhouses continue to work on improving the quality and safety of products, obtaining, storing, cooling, cleaning and packaging of modern varieties. All these comprehensive works will undoubtedly contribute to an increase in yield, an increase in exports and, in general, the development of Agriculture.

Methodological Recommendations.

In hot summer, fragrant flowers and shiny, shiny leaves make citrus an excellent decoration for sunny verandas, but the rest of the time these subtropical plants should be kept in heated hot greenhouses (at temperatures not lower than +18°C). The fruits in them are rare and ripen slowly, but the taste is amazing³.

Planting procedure. Citrus roots prefer a slight constriction. Plants are transplanted into slightly larger containers only in spring using citrus compost or a mixture of loamy compost and sand (or perlite) taken in a 3:1 ratio. For large potted plants, replacing the top layer of soil is preferable to transplanting. The minimum temperature that lemon can tolerate is +7°C, while other citrus fruits can withstand +10°C. In summer, they feel good in the open air, heated by the sun, in places protected from the wind. They need good ventilation and a little moisture. Water for watering should be soft, for example, rainwater (citrus fruits do not like Lime very much). Watering is necessary so that in the middle of watering the soil almost dries out, since waterlogging is harmful to citrus fruits. If no special fertilizer for citrus fruits is found, then in the summer they should be fed with fertilizers with a high nitrogen content.

It is difficult to guess whether citrus fruits are ripe or not. After receiving the color, they ripen for another 2 months. Check them from time to time: they have become a little soft, which means they will be ripe. But don't let them soften too much.

Save. The fruits can be harvested slightly unripe so that they ripen in a dry dark warm place or are removed as needed.

Let's now give citrus fruits a little taversion: when citrus plants are grown indoors above them, strict requirements are imposed on the compact structure of their branches. From years of research and extensive production experience, it turns out that of all the tested lemon varieties, only the Meyer Variety has been found to be the most optimal variety for growing in trenches and greenhouses: this variety differs in its sluggish growth and fertility compared to other varieties. Also, the Uzbek cultivar, the Uzbek firstborn, has received good indicators. The Uzbek firstborn variety stands close to the Meyer variety in terms of average growth and yield. In terms of the quality of the fruits (in terms of aroma, content of lemon and ascarbic acid), it is superior to it.

It is worth mentioning separately the Gamlin, Washington Navel, Korolyok grushovidnoy, Gladkokoro varieties of oranges. These varieties differ in the quality of their fruit, enter the crop in the 3rd year after planting. An average of 100 pieces of fruit can be obtained from a 6-year-old Bush of oranges. The Washington Navel variety Orange has a lower yield than other varieties, but its fruits surpass them in quality. The fruits are large, succulent, aromatic, and the ratio of sugar and acids is also high.

The varieties of Mandarin Kilimintin, Chimera give good results in greenhouses and trenches. The most abundant harvest is obtained from the miagawa Vase Variety, the average yield of a 6-year-old Bush is 8-10 kg. Kavano Vase and Abkhaz khartapishar varieties are also promising in terms of yield. Six years after planting, 5 kg of fruit can be obtained from each Bush of these varieties.

In closed areas, it is preferable that the Citrus Bush is smaller. In this aspect, the Unshu form, in which the pakana (tall) Tangerines grow energetically, is useful. Low-growing Tangerines enter the early harvest, the fruits are laid 20-25 days in advance.

Selection in the proportions recommended for the production of varieties when building new citrus fruits. That is, it is necessary to plant in an amount of 70% lemon, 15% orange, 10% mandarin, as well as 5% other citrus fruits.

At this point, we all have different questions that come to mind for example the following:

1. *Are hybrid varieties grown in our country similar to citrus fruits in your state?*
2. *What other aspects would you like me to highlight citrus in my article?*
3. *What is the cultivation of citrus fruits in America? Under what conditions does it give a good harvest?*
4. *What other innovative ideas do you give us to get a high harvest in our state?*

Of course we will all be able to look for and learn the answers to these questions, if there is aspiration and interest.

³ <https://sad6sotok.ru>

Conclusion.

As a conclusion, it should be noted that when citrus plants are grown in greenhouses heated in winter, the yield and quality of their fruit from a long period of growth is usually higher than when grown in trenches, since in connection with a natural decrease in temperature in trenches and the onset of the annual cold season, the vegetation period is completed early.

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