



THEORETICAL BASIS OF PISTACHIO PRODUCTION AND PRODUCTIVITY IMPROVEMENT

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<https://doi.org/10.5281/zenodo.7676561>

Abstract. Handon pistachio is a highly nutritious product, rich in useful trace elements - fat, protein and sugar, and is widely used in folk medicine. In the works of Abu Ali ibn Sina on medicine, pistachio is given a great place as a wound healing agent in the treatment of several diseases of the liver and stomach. Pistachios are also used in the treatment of chronic lung diseases. For thousands of years in the East, pistachio has been a remedy for removing harmful substances from the human body.

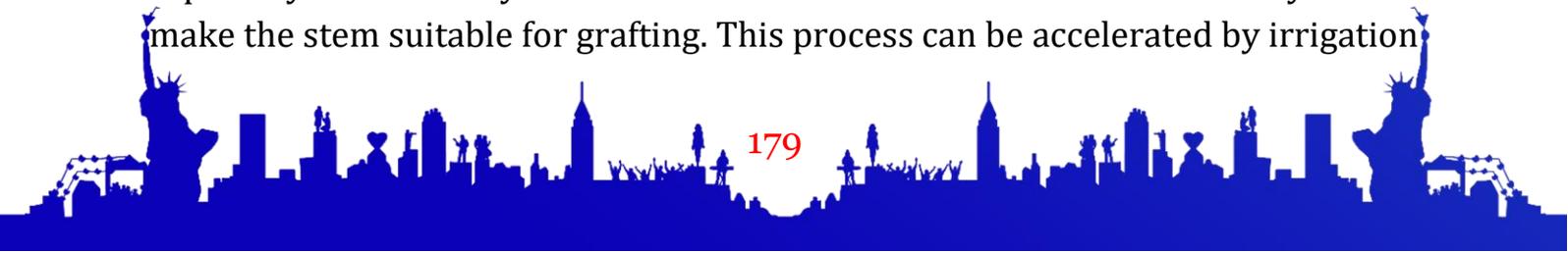
Key words: productivity, pistachio nuts, world market, plant, forestry

Pistachio is native to Central Asia. It is found naturally in almost all mountain ranges in Uzbekistan. Pistachio trees occupy a large part of the forest in the Bobotag ridge of Surkhandarya region. Almond has no rival in terms of growth and fruiting in extreme conditions, where the air temperature varies from +46°C to -40°C in summer and winter months. Pistachio trees bear fruit up to 1000 years old. Handon pistachio is a high dietary product, the kernel contains 49% to 60% oil, 15-20% protein, 3-8% sugar and other trace elements. Its fruit is highly valued not only in the domestic market, but also in the international market.

The fruits of wild pistachios are very tasty and small. Large-fruited pistachio varieties have been created through the efforts of breeders. These useful properties of the fruit have been strengthened in other plants through bud grafting, and some of them have been recognized as varieties. Pistachio can be grown in any land with such bud grafting method.

Some farmers are creating industrial plantations of high-yielding pistachios in the arid lands of the mountain slopes. This is a far-reaching event, which is very beneficial not only for the farmer's well-being, but also for the land itself.

The reason why this event is not popular is the slow development of pistachios, especially in the first years. It should be maintained for at least three years to make the stem suitable for grafting. This process can be accelerated by irrigation





in the fields. In order to achieve success in this regard, it is necessary to know the specific characteristics of pistachios.

1. First, the soil should not be saline, the underground water should be located at least three meters below;
2. Secondly, since pistachio is a light-loving crop, it is useless to grow it in cool places;
3. Thirdly, pistachio is dioecious, that is, it has male and female varieties.

It is necessary to determine this in advance, because male varieties do not produce, however mother varieties will not bear fruit without them.

If you want to grow pistachios in your garden, you should start preparing for it in autumn. For this:

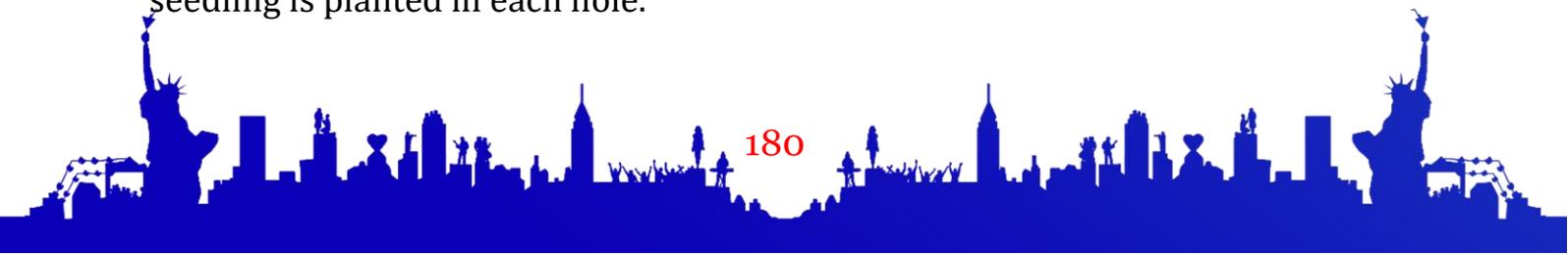
- whether the area meets the requirements, whether it is not salty, whether the underground water is deep;
- is there nothing shading the ground, no other trees growing, no tall houses and walls;
- in advance, it is necessary to determine how many seedlings can be planted in a space of not less than 4x4 m. Do not plant pistachios close together, as they do not like to be transplanted. Therefore, it should be planted in a stable place;
- consider where to plant male varieties. Take into account that for every ten female varieties there is one male variety. If you know where the breeze always blows, plant male varieties in that direction;
- today you should think about how you want to plant pistachio seedlings.

That is, by sowing seeds or by planting seedlings? Usually, pistachios are grown by sowing seeds in a permanent place. An experienced gardener calculates the germination rate and quality of seeds in advance. It's not that complicated, but it does require some additional knowledge.

First of all, it is necessary to assess the condition of the pistachio's nuts visually. For this purpose, pistachios are carefully split and cored and checked for insect damage and disease.

It is recommended to plant at least five seeds in each hole. If there are many infected seeds, more seeds are planted. It is necessary to plant a seed that has already rooted. These works are carried out in winter or early spring.

Our scientists are introducing new methods of planting pistachio seedlings, that is, planting them in small containers with roots. When using this method, one seedling is planted in each hole.



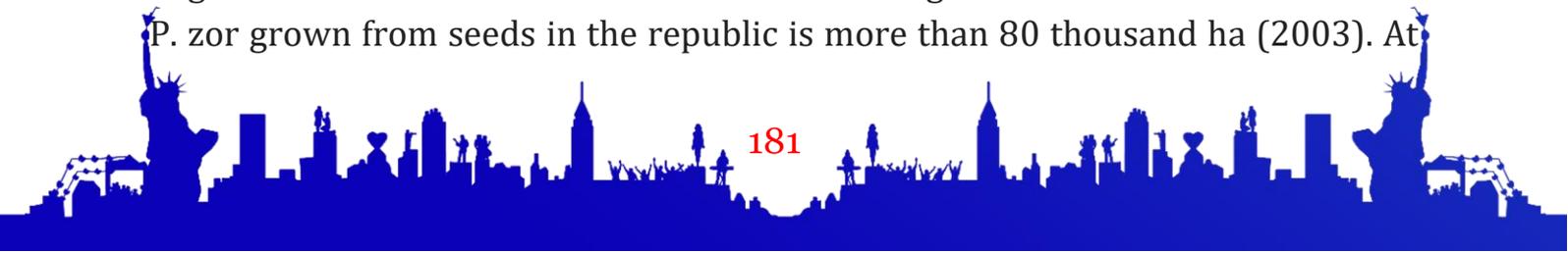


In a word, if you want to plant a seedling, you need to evaluate your acreage, determine how many seedlings can be planted on it, decide on the method of planting seedlings or seeds, get expert advice necessary.



Pista (*Pistacia*) is a shrub or a group of trees belonging to the pistachio family, a nut-bearing tree. Lives up to 300 years. There are more than 20 types. It grows in Southern Europe, Western, Central and Eastern Asia, Northern, Eastern Africa and Central America. In Central Asia, there are two types of *P. vera* and blunt-leaved *P. (P. mutica)*. It is 2.5–10 m tall, branches are scattered, 10–12 m wide. *P.* is a dioecious plant, tolerates -40° cold.

In April-early May, first the male and then the female trees bloom, the flower consists of a complex flower-shaped inflorescence, which is pollinated with the help of the wind. The fruit is a one-seeded pistachio. Pistachio ripens in August-September. The rind is thin, hard, and sometimes cracks at the end when ripe. The pulp is green, tasty, contains up to 63% oil, 22% protein, up to 7% carbohydrates, vitamins of group B, provitamin A; mainly eaten fried, used in confectionery. *P.* comes into harvest in 10-12 years in dry lands, in 7-8 years in irrigated lands. Wild ones bear up to 15 kg, grafted 8-10-year-old trees bear 30-45 kg. The tubers that appear on the leaves of *P.* contain tannins (30-40%), dyes. Drought resistant. It is propagated by seed and grafting, and by cuttings. *P.* wood is valued in carpentry. Planting of *P.* in Uzbekistan began in 1937 in the mountains of Bobotog (Surkhandarya region), more than 2 thousand hectares of *P.* gardens were established around the Kattakorgan reservoir. The total area of *P. zor* grown from seeds in the republic is more than 80 thousand ha (2003). At

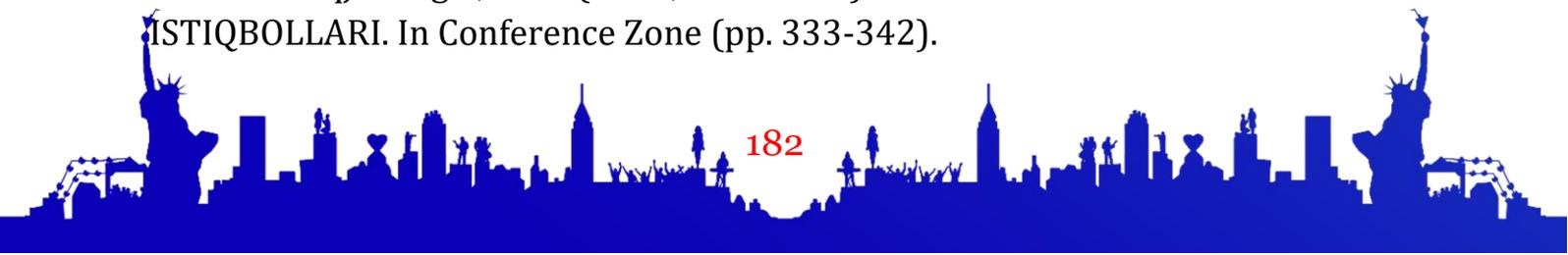




the Scientific Research Institute of Forestry of Uzbekistan, 6 varieties of P. have been created, a collection of more than 30 varieties of P. has been established.

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