



**WATER AND SOIL OF THE PLANT WORLD IN PROTECTION  
ACHIEVEMENT**

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A B S T R A C T	K E Y W O R D S
<p>When I went to Bobotog in Surkhandarya region, I was surprised by the fact that pistachio trees have decreased a lot these days, that their price is high in the market, and that the indigenous people of Bobotog value pistachios very much. All this made me want to know more about this tree.</p> <p>Currently, pistachios are found only in the Bobotog regions of Samarkand region and Surkhandarya region. Bobotog forestry is famous for its pistachios. Of the farm's 77,000 ha area, 27,000 ha are occupied by pistachio trees. Bobotog almonds are smaller and differ from pistachios grown in other countries by their taste and richness in nutrients. Since "foreign" pistachios are more moist and saturated with a large dose of sunlight, pistachios grown in Uzbekistan are dry and caloric. In fact, pistachios are a priceless gift of nature.</p>	

**Introduction**

**Importance.**

According to experts, the original homeland of pistachios is Central Asia. Pistachio nuts are very nutritious and contain 60% oil, 20% protein, 3-8% sugar and other elements. Pistachio oil surpasses olive oil in its pleasant smell and taste. Pistachio confectionery is widely used in food and pharmaceuticals. In folk medicine, pistachio fruit, oil, and pods were used to treat liver, stomach, and external wounds. The most interesting thing is that this tree is dry,

- it grows even in places with little water, and at the same time it gives an abundant harvest;
- improves the microclimate on the mountain slopes;
- it retains moisture and is also an amelioration agent that forms the forest biocenosis.
- It is a plant that prevents mountain erosion.

This tree bears fruit for 350 years in dry rocky places on mountain slopes

Handon pistachio is one of the most important nut-bearing plants in Central Asia. In addition to providing valuable fruits and timber, it is of great importance in land reclamation. With a well-developed vertical and horizontal root network, this plant prevents flood flows and erosion processes. Its extensive root networks protect the soil from erosion, protect water and regulate its direction.

Therefore, protection of natural pistachio forests and restoration of previously established artificial plantations are of great importance at the state level.

Depending on the purpose and the category of land, its plantations and forests are being established. Plantations are being established on relatively flat slopes (not higher than 20°), while plantations are being established on higher slopes or rocky soils (Fig. 1).

In practice, all mountainous and low mountain slopes and dry areas of Uzbekistan are suitable for growing pistachios. It is advisable to establish pistachio groves near large reservoirs, along roads and railways. The pistachio "green ring" established around the Kattakurgan reservoir (in the Saraykurgan forestry area) guarantees that this plant species is of great ameliorative value.



Picture. 1. Handon pistachios on stony soils.

Handon pistachios are important in horticulture and soil conservation. Pistachio groves play an important role against water erosion and floods in all semi-arid foothills.

Handon pistachio seeds should be planted in a permanent place for growing for the above purposes. In arid regions, pistachio nuts grow and develop well if they are planted without mixing with other tree species. Its spreading root branches prevent soil erosion. However, some irresponsible people are constantly feeding livestock in pistachio plantations. In addition, during bitterly cold days, the peoples living in the mountainous regions use the tree as firewood.

Senior forester Abduraim Lolaev, one of the specialists of Bobotog forestry, shared his experiences on pistachio tree cultivation:

Handon pistachios grow very slowly for the first 3-4 years, at the age of 5-6 their height is 3-5 m. From the age of 15-20, vertical and horizontal roots develop well; the main tap root grows to a depth of 200-250 cm. Therefore, pistachio trees planted for the purpose of anti-erosion become thicker when they are older than 15 years (more than 1000 per 1 hectare) and their development slows down.

#### Planting order

Such biological properties of Handon pistachios create a basis for good growth even in the dry season, and are of great importance in water and soil conservation.

After full ripening, the seeds begin to be peeled. They are cleaned from the shell surrounding the seeds, damaged, diseased and small ones are removed, and then they are dried in the sun for 5-6 days. The seeds are then stored hanging in a dry, well-ventilated room.

Good seeds are used for planting. A month before planting, the seeds are stratified in trenches. To do this, they are mixed in thoroughly washed river sand in a ratio of 1:3 (1 part of seeds and 3 parts of sand). Every 5-6 days, the mixture of seeds and sand is mixed and moistened.

When it is necessary to plant a small amount of seeds (per 10 kg) in a short period of time, they are kept in water for 3 days, put in bags (carboza-type bags) and kept in a warm room in a hanging place, moistened every 1-2 days, after a week the seeds grow. starts and it will be ready for planting.

Sowing seeds is done in early spring, usually at the end of February-early March, in mountainous areas, at an altitude of 500-800 m above sea level, in the first or second ten days of April. The seeds are covered with soil. The seeds are placed in 6-8 evenly (normally) in the grooves, and as much as possible, the sown seeds are covered on top with shavings or rotted manure, straw 1-2 cm thick.

Seeds should be placed at a distance of 40-50 from the external slope carved on the surface of the terrace. In micro-terraces - hand-made plots, seeds should also be placed close to the carved slope.

Based on the biological characteristics of Khandon pistachios, seeds are planted in flat areas in 8x8; They are placed at intervals of 8-10 or 10x10 m, and the distance between planted rows should be 8-10 m along the surface of the terrace.

If plantations are established to protect soil and water, seeds are placed at 3-5 m intervals along the surface of the terrace.

Caring for pistachios is as follows: tilling the soil, feeding the plants, giving them care.

Cultivation of the soil consists mainly of maintaining the maximum amount of moisture in it. For this, the soil is plowed to a depth of 27-30 cm in the fall, and the fields are loosened by 10-15 cm in the spring (April, May). At the same time, the soil around the body of the plants is also treated, during which foreign plants are destroyed.

In order to improve the development of plants, they are fed with nitrogen, phosphorus and organic fertilizers. This study begins in the second year after planting the seeds and is repeated every three years.

## Conclusions

In crops that play the role of ikhota, the side branches are cut, and the main branches are left, that is, good light conditions should be created for the pistachios.

If the above rules are observed, the plantations will grow well, develop and perform the task of forest reclamation in the mountainous regions of Uzbekistan. However, high yields are negatively affected by natural disasters, hail and rainfall. Hail breaks small branches. Precipitation prevents sufficient pollination of plant flowers. Increasing pistachio plantations helps preserve natural biodiversity.

## Bibliography:

1. Горномелиоративные работы в республиках Средней Азии. Труды СредазНИИЛХ, выпуск 17. Ташкент, 1978. 180 с.
2. Турдимуродова З.З. Эколого-мелиоративные проблемы в орошаемом земледелии узбекистана в первые годы государственной независимости, «Экономика и

социум»№10(101)2022

[https://www.iupr.ru/\\_files/ugd/b06fdc\\_1137a9fe181b454e99c0a6f54e9741e6.pdf?index=true](https://www.iupr.ru/_files/ugd/b06fdc_1137a9fe181b454e99c0a6f54e9741e6.pdf?index=true)

3. Турдимуродова Заринабону Зафаровна, Турдалиева Гулбахор Охангарон сув омборининг лойқа босиш муддатини аниқлаш, "Involta" Innovation Scientific Journal, No. 11 (2022), <https://www.involta.uz/index.php/iv/article/view/336>
4. Turapov, F. Kh. "USE OF HEAT INSULATION WALL MATERIALS IN CONSTRUCTION." American Journal of Technology and Applied Sciences 5 (2022): 27-30.
5. Kh, Turapov F., et al. "Features Of The Structure Formation Of A Filling Mixture Based On Industrial Waste." The American Journal of Engineering and Technology 3.05 (2021): 150-155.
6. Khursanovich, Turapov Farkhod. "PRODUCTION OF INSULATION BOARDS BASED ON CRUSHED COTTON AND CEMENT." American Journal of Pedagogical and Educational Research 12 (2023): 232-235.