



## GREENING OF CITY AND DISTRICT CENTERS. TECHNOLOGY OF PLANTING AND GROWING OF BLACK PINE (PICEA PUNGENS ENGEL) SEEDLINGS.

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**Abstract.** Today, various types of ornamental trees and shrubs are widely used in the field of beautification of cities and district centers in our Republic. One such tree species is introduced here. Thorny black pine. Thorny black pine is considered one of the species that gives a very beautiful appearance. This type of plant is planted in gardens and parks for greening. Today, it is a decorative tree with an excellent compositional appearance, which is being propagated in ornamental and decorative gardens.

**Key words:** Prickly black pine, family of pines, seedlings, decorative gardens, landscape trees, phytoncides, grafting, conifers, branches, seeds.

### THE MAIN PART

Prickly black pine (*Picea pungens* Engel) belongs to the pine family (Pinaceae). The blue form of the thorny black pine is mainly distributed in the rocky mountains of North America at an altitude of 2000-3000 meters above sea level. Its height reaches 20-45 meters, it is a tree with upright trunk and branches. This type of pine was introduced to Europe in the 17th century, then to Russia, and is widely planted as an ornamental tree in landscaping. It was brought to Tashkent in the 60s of the last century, and then it was brought from the Moscow region and acclimatized. In the territory of Uzbekistan, mainly introduction- (introductio-means introduction, relocation, means to bring or move a plant species to a place where it did not grow before) and acclimatization- (grown in some climatic conditions as a result of moving a plant species to another area with different climatic conditions and adapting to these new conditions).





### *The appearance of black pine in landscaping*

It can be found in the centers of many cities and districts of our republic, near government buildings, near the puppet theater building in Termiz.

(*Picea pungens*)-"blue diamond" means "blue diamond" in translation. The blue form of the thorny black pine is not suitable for cultivation in our country, because the blue form of the thorny black pine is a cold-resistant type of plant, it is a plant that adapts to irrigation and cool weather. It is possible to grow seedlings in the mountainous and sub-mountainous regions of Uzbekistan. The blue thorny spruce is a very beautiful and decorative tree, the leaves of which are 2-3 cm long, covered with thorny, bluish or silvery powder, and it can be found in various colors. For example: It is available in blue, silver and green colors. In general, the leaves last 4-6 years, then they fall off, and in most cases its color is blue. It blooms mainly in May-June, and its seeds mature in pods, and the pods ripen mainly by October. The shape of domes is mainly cylindrical, their length 5-10 cm long, light-brown, after the seeds are shed, the domes usually remain on the tree until the autumn of the following year.

The color of the seeds is usually gray and its length is 3 mm. The weight of 1000 seeds is only 4-5 g. There are several ways to plant the blue form of the prickly black pine (goluboy yell). For example: seed propagation, grafting, propagation using branches is possible. Before planting the seed, the type of soil it is planted in, the structure of the soil, and the fertility of the soil are taken into account first. Before planting seeds, it is necessary to study the condition of the soil. Conifers are not as easy to grow as other trees, it is more beneficial to feed them with a little fertilizer than to feed them too much because they are very slow growing fir trees PH 4, Prefers alkaline soils up to 6-6. We mainly use seeds for planting blue spruce.



*Seedlings and seedlings of thorny black pine*

Before sowing the seeds, we separate the seeds from the ripe domes and if we want the seeds to germinate faster, they are stratified and then planted. It takes a little more time for the agar to germinate without stratification. In this case, a place where sunlight does not fall is chosen for sowing the seeds, then 60 cm wide eaves are opened, and a phase, or eaves, is opened on the eaves.

The width of the phase is 5-10 cm, depending on the size of the seed. We plant the seeds in the open phase. The composition of the soil for planting the seeds should be humus or sandy.

It gives good results if it is buried with 3 times the size of saliva. In winter, the seed is planted to a depth of 5 cm from its width. If we want to plant 1 kg of seed, we add 3 kg of sieved soil or sand to it and mix it, the sand is a good condition for the seed to germinate and germinate. creates. If we sow the seed by stratification, then the seed will begin to sprout in 2-3 days, if we sow the seed itself in the soil, it will take a little longer for it to germinate. They are basically a very slow growing tree species, producing a growth rate of 5-10 cm in just 1 year. Currently, due to the need to propagate valuable and rare tree species and use them in landscaping, this is such valuable and rare tree species include spruce species, thorny spruce (blue and silvery-leaved forms), Schrenk's black pine. There are significant obstacles to the wide application of these species in green construction practices due to the lack of scientifically based technology for growing seedlings, especially in closed soil. Cultivation is often carried out in closed ground conditions, because in open ground, seedlings of many valuable species do not germinate due to adverse environmental conditions, or there are difficulties in fully preserving sprouted seedlings. Spruce seeds are also soaked in water for 9-12 hours before planting. When seeds are planted in greenhouses, the water is closed using glass frames or polyethylene films. Irrigation in greenhouses is done by sprinkling small dispersed water drops. In this way, the sown seeds are moistened every day, the greenhouse building is ventilated, if there are greenhouse frames, they are left open during the day and closed at night. It is possible to keep sprouted seedlings in a greenhouse or a greenhouse until autumn. In some cases, it is also possible to transplant them to shaded areas (pikiroafka) and take care of them. Seedlings left until autumn are watered, cleaned of weeds, and treated with a 0.02% concentrated solution of manganese-sour potassium (mainly in the care of spruce seedlings). After the sprouts mature, the glass frames are removed, and to protect the seedlings in the greenhouse from birds, the mats are closed with stretched frames. Seedlings need shading in the hot summer season. Seedlings grown in indoor soil are transplanted to adult shaded beds in open soil for maintenance purposes, and then grown in the maintenance section of the nursery to reach a larger seedling level. After pikiroafka, the soil is treated with compost and watered immediately. After the seedlings take hold, the shaded devices are removed. The future care system for seedlings will consist of watering them, softening the soil, weeding and feeding them with mineral fertilizers. In the spring of the following year, spruce seeds (slow-growing species) are planted in the field of growing in the shade, and the seeds grown in closed ground are prepared for the planting of seedlings - leveling the surface of the ground, planting watering cans and soil will consist of processing. The main method of tilling the soil: it is turned over with a plow and plowed to a depth of 27-30 cm. The plowing is done when the soil is ripe, that is, when the soil is easily crumbled. If the land is cleared in the spring, plowing is carried out, before planting, the land is plowed and mulched, the distance between the rows is 0.6 m. Before plowing, 20 tons of compost per hectare is added to the



land area. Against the background of organic fertilizers, mineral fertilizers are highly effective. In case of lack of organic fertilizers, only mineral fertilizers can be used. Depending on soil conditions, the annual rate of mineral fertilizers is as follows: nitrogen fertilizers 90-120 kg (depending on the active substance) phosphorous fertilizers 60-90 kg per pot. Potassium fertilizers per 60 kg.

A part of mineral fertilizers is given before plowing, and the rest during the process of feeding seedlings during the growing season. Prickly spruce seedlings are planted in the growing field at a distance of 0.2 m from each other. Seedlings are planted in the upper part of the raised egates. In this case, the width of the egates is 0.6 m. Spruce saplings are planted using a planting knife (kolishko) and are cared for for 2-3 years. After that, they are transplanted to the care department of the nursery. During the growing season, both in the growing field and in the maintenance department of the nursery, the soil is kept moist due to constant irrigation. In the hot season, watering is done at least once a week. According to the soil condition and necessity, they are softened and cleaned of weeds, seedlings are fed with nitrogen and phosphorus in the amount of 30 kg (according to the active ingredient) in May-June. If diseases or pests appear in seedlings, control measures are taken against them according to the instructions currently in use.

The difference between the growing field and the maintenance section of the nursery is as follows: it mainly grows seedlings of slow-growing and developing species (such as thorny spruce). Due to the slow growth and delicacy of such seedlings, they are planted thickly (in a row at a distance of 0.2 m from each other). After 2-3 years, they are transplanted to the care section and planted leaving 0.4 m from each other, and care is continued.

Propagation by grafting. We can also use methods of propagation of blueberry bygrafting method. In short, tree grafting is one of the simple methods that is used in many cases today. Mainly spruce species or pine species, i.e. blueberry, can also be grafted to the crack of the apical bud or to the trunk of the spruce by creating a new crack. These processes are mainly carried out in the spring or at the beginning of July. In many cases, for welding, we cut a small part of a different type of spruce and insert it into the prepared crack of the branch we want to graft, and fasten it tightly with glue, because it is necessary that air does not enter the place of the graft we made, if air enters, the grafted branch will hold leaving gives a very low indicator result. Its upper layer can be wrapped with insulating tape, which also acts as another protection against air ingress.

Propagation. In addition to the methods used above, there are also many methods of breeding the blue-eyed king. In this case, the 2-3-year-old part of the branch is selected. We need to get the horn we want to get without using any scissors or knife. In this case, if the cutting is not 2-3 years old or older, the process of rooting will be a little difficult, and in some cases, it may not take root at all. In this case, we can pull the branches with our hands by the heel, that is, we need to pull them out quickly. The horn we want to make should be 7-10 cm or 8-10 cm, it is possible to make it even longer.





### *Methods of propagation of thorny black pine from a branch*

Propagation from a branch of a thorny black pine. If we make a branch 10 cm long, then 2 cm of it will be on the top of the soil, and the remaining 8 cm part will be inserted under the soil with the branches removed. We remove the leaves of the branch from the lower part, i.e. 8 cm, with our hands. In this case, we dip the lower part of the branch that we want to multiply, i.e., the place we took with the heel part, in carnoven liquid, because this liquid helps the process of vascularization of the plant faster. In this case, we dip the lower part of the branch that we want to multiply, i.e., the place we took with the heel part, in carnoven liquid, because this liquid helps the process of vascularization of the plant faster. The branch soaked in Carnoven liquid is mainly planted in sand, in this case its temperature should not exceed 20-25%. The process of reproduction from the king is cut from the middle part of a 10-liter pot, and the inside of the pot is filled with sand, and the bottom of the pot is made several holes, so that the water poured into it can flow out, it is planted immersed in carnoven liquid, and the pot is filled with sand. the upper side is closed and tightly wrapped with a thick film, the real reason for this is that air should not enter it, and when pouring water into it, the lid of the container is opened and water is poured into it.

In this case, the vein removal process may take 1 month or more. Branches of a plant planted in a pot are mainly watered using a watering can.

Useful features: All types of spruce and pine trees have the ability to release phytoncide substances. Phytoncides (phyto- caedo- to kill) are active substances produced in plants, which kill other organisms (mainly microbes) or stop their growth and development. Phytoncides are important in plant immunity and interactions of organisms in biogeocenoses. According to their chemical composition, they consist of glycosides, terpenoids and secondary metabolites. The phytoncide-producing feature of trees, mainly conifers, is of great importance in greening cities by cleaning them from some microbes and infections.

### Summary:

The blue form of thorny black pine is rare among conifers and ranks high with relative ease of care. Its popularity is due to the fact that it grows in cold climates and tolerates urban conditions better than other species, and it is considered one of the species that gives a very beautiful appearance to city streets. They are distinguished from other species by their good nature.

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