

Date: 23rd September-2025

GROWING PEACH TREES USING DRIP IRRIGATION in BUKHARA REGION.

Tojiyev Sherzod Mirzoxid ugli

teacher of TIAME NRU Bukhara Institute of Natural Resources Management.

Ergashev Mirsharif Ganijon ugli

student of TIAME NRU Bukhara Institute of Natural Resources Management.

Abstract: A peach tree is a self-fertile fruit tree, so you only need one plant to produce fruit though it may take three to four years before it does so. The deciduous peach tree grows best in full sunlight, acidic and sandy soil, and moderate temperatures. In this article, it is presented that it is possible to obtain a high-quality and high yield with the help of drip irrigation of peach fruit by saving 30-40% of water.

Keywords: Peaches, cultivation, packaging, dialing, boxing, storage, temperature, caps, basics, vehicles, stairs.

Favorable soil-climatic conditions for growing peach fruit of the republic, availability of fertile and promising peach varieties, provide the opportunity to obtain a high, abundant and high-quality harvest from them.

The homeland of peach is northern China, and according to information, it spread to Europe through Italy.

Peach fruit has choleretic and laxative properties. Its organic acids and essential oils improve gastric secretion and digestion. It whets the appetite. Due to the abundance of minerals in peaches, it is used for the treatment of anemia and gastritis (inflammation of the gastric mucosa). Due to the presence of potassium salt in its composition, it is also recommended for heart diseases.

The peach root system is located close to the surface - only at a depth of 20-50 cm. Peach trees reach an average height of 4 m, and their crown can grow up to 6 m in diameter. Peach leaves are lanceolate, finely toothed along the edges. The flowers are pink or red, almost sessile, open in mid or late April, before the leaves appear on the peach, so from a distance the blooming peach resembles sakura. The peach fruit, usually velvety, can be flat, round or elongated elliptical with a groove on one side. The fruit stone is wrinkled, grooved, with a pointed apex.

Peach trees begin to bear fruit 2-4 years after planting; the fruiting period lasts 10-15 years. Peach, like mangoes and oranges, is one of the most delicious fruits with the finest aroma and refreshing taste. It is related to such fruit trees as almond, from which it differs only in fruits, apricot, serviceberry, quince, chokeberry, plum, rowan, hawthorn, rose hip, cotoneaster, apple tree, pear. We offer you material we have carefully selected on how to grow a peach in your garden and how to properly care for a peach, how to treat a peach against pests and diseases, how to fertilize a peach throughout the season and how to plant a peach if you have a desire to start propagating it. Planting a peach When to plant The time for planting a peach depends on the climatic conditions of your area. The further



Date: 23rd September-2025

south you live, the more advisable it will be to plant peach trees in the fall. In the northern regions, it is better to plant seedlings in open ground in the spring, so that during the spring-summer season the trees will take root well and have time to grow. The conditions of the middle zone make it possible to plant both spring and autumn peach, but it is better to give preference to the latter.



Figure 1. Footage from the field where the experiment is being conducted.

For peach, choose an elevated and protected from the wind, but sunny place on the south side of the site. Large trees, shrubs and buildings should not block the seedling from the sun. Place the peach at least 3 m away from other plants. Do not plant peach where strawberries, alfalfa, clover, nightshades and melons grew before it, as it may develop verticillium disease. After the listed plants, peach can be planted on the site only after 3-4 years. Planting in spring The pit for the seedling must be dug in advance - the longer the time passes from digging the pit to planting the tree, the better the quality of the soil. If you are planning to plant a peach in the spring, prepare a hole for it in the fall, six months before planting. The depth of the pit depends on the size of the root system, but, as a rule, a hole for a seedling is dug with a diameter of 50-70 cm, and its depth should be the same. A strong long peg is driven into the bottom of the hole in the center, so long that it protrudes at least half a meter above the surface level.

If the soil on the site is poor, the top layer of soil removed from the pit is mixed with rotted manure, humus or compost in an amount of 5-8 kg, 200-300 g of wood ash, 50 g of superphosphate, 50 g of potassium chloride are added and everything is mixed thoroughly. Only mineral fertilizers and ash are added to fertile soil. The soil with additives is poured in a heap into the center of the hole.

Carefully inspect the roots of the seedling and make sure that they are not over dried or rotting. Annual peach seedlings take root best in open ground. The tree is placed on a mound in the center of the hole, its roots are carefully straightened and the pit is filled with soil. As a result, the grafting site should be several centimeters above the surface of the site. The soil is trampled down from the edges of the trunk circle to the trunk, then the seedling is watered with two or three buckets of water. When the water is absorbed and the earth settles, tie the tree to a peg and mulch the tree trunk with a layer of manure 8-10 cm



Date: 23rd September-2025

thick. Make sure that the mulch does not come into contact with the trunk of the seedling. Autumn planting A hole for a seedling is dug at least 2-3 weeks in advance of autumn planting, but in the fall only ash and mineral fertilizers are mixed with the soil. Soil with fertilizers, just as during spring planting, is poured in a heap into the center of the hole around the peg. Peach is planted in the fall in the same way as in spring, but after planting and watering the seedling, when the soil is dry, the tree is hilled to a height of 20-30 cm, and on the eve of the onset of cold weather, the peach trunk is wrapped in burlap, making holes in it on the south side for ventilation.



Figure 2. Peach harvesting process.

The number of watering during the growing season depends on weather conditions, but on average, early peach varieties are watered 2-3 times per season, and late ones - 5-6 times. During a session, from 2 to 5 buckets of water are consumed per tree. Watering is carried out in the early morning or evening. The first time the peach is watered is at the beginning of June, and if the winter was without snow and the spring without rain, then it is better to water the plant at the end of May. The next watering is carried out in the first half of July, and the third - in the first half of August. Try to wet the soil to the depth of the roots - 60-70 cm. It is very important to water 3-4 weeks before harvesting, which will allow the fruits to increase their mass. The amount of water for each m² of tree trunk circle is 30-60 liters, depending on the age of the tree. After this, the peach cannot be watered until harvest, otherwise its fruits will become watery and lose their sugar content. Equally important is winter watering of peach, which saturates the soil with moisture and increases the winter hardiness of the tree. Water consumption for moisture-recharging irrigation is 90-100 liters per m² of tree trunk circle.

Usually, seedlings are first grown in nurseries, and then, during winter dormancy, seedlings are transplanted to peach orchards. The roots of the seedlings are planted in the open field (without covering). Annual seedlings are usually planted in clumps. Peach seedlings are usually planted in a 6.0 x 6.0 m scheme. In this case, the number of seedlings in 1 ha area will be about 280 pieces. In densely planted gardens (planting pattern 4.0 x 2.0 m), the number of trees per hectare is more than 1,200. Shaping (cutting branches) of

Date: 23rd September-2025

peach trees is usually done in the form of a vase. When this shape is given, the sun's light falls well between the fruits and leaves of the tree. Also, methods of shaping peach trees by straightening branches and cutting along the central axis are also widely used. Depending on the type of peach tree, branch thinning or chemical thinning methods can also be used. Watering peach trees The irrigation coefficient (K.) of peach trees is determined based on the level of evaporation (which changes according to the season) in the conditions of Uzbekistan. The seasonal irrigation rate of peach trees m³/ha varies between 4500-7500 m³, depending on the amount of seasonal rains. The irrigation period begins depending on soil moisture, spring flowering and leafing periods of trees.

Drip irrigation of peach trees works well. In this case, it is recommended to lay 2 rows of irrigation hoses next to rows of large trees, and 1 row of irrigation hoses next to each row of trees in densely planted areas. Between the drippers of the irrigation hose the distance is usually defined as 0.5-0.6 meters. In this case, the water consumption of each dropper is equal to 2-4 l/h. Watering is carried out every 1-3 days, depending on the mechanical composition of the field soil. For watering peach trees, it is recommended to use a drip irrigation system with a dripper attached to the outside of the irrigation hose.

REFERENCES:

1. Hamidakhon Komiljonovna Khatamova, Kholida Azamovna Kimsanova. (2020). The Peach Propagation Methods. The American Journal of Agriculture and Biomedical Engineering, 2(11), 42- 46
2. R.M Abdullayev, M.M. Yakubov “Shaftoli yetishtirsh” -57 kitob Agrobank” ATB – 2021, Nashriyot uyi “Tasvir” – 2021, “Colorpack” MCHJ – 2021
- 3.Sarimsakov, M. M. (2023, May). THE INFLUENCE OF THE WATER SOURCE ON THE GROWTH AND DEVELOPMENT OF APPLE TREES. In INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE (Vol. 2, No. 14, pp. 170-172).
- 4.Musinovich, S. M. (2023, June). DRIP IRRIGATION INTENSIVE APPLE ORCHARDS AND SEASONAL WATER CONSUMPTION. In Proceedings of Scientific Conference on Multidisciplinary Studies (Vol. 2, No. 6, pp. 8-14).
- 5.Musinovich, S. M., Khaitmuratovich, K. I., & Raximovna, K. K. (2023). Methods of Irrigation of Gardens and Vineyards in Salty Land.

