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MORPHOLOGICAL AND BIOLOGICAL CHARACTERISTICS AND CULTIVATION AGROTECHNOLOGY OF WATERMELON (CITRULLUS)

Nortojiyev Bobosher Sheraliyevich¹

Associate Professor, Tashkent State Agrarian University

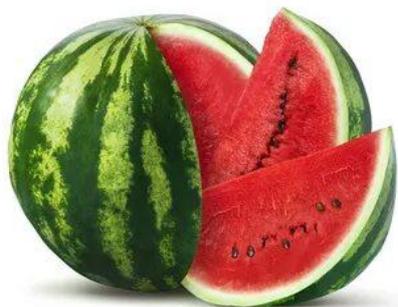
Abdullayev Mavlonbek Farxod og'li²

Independent researcher, Tashkent State Agrarian University

Email: abdullayevmavlonbek43@gmail.com

Abstract: *This article examines the morphological and biological characteristics of different watermelon varieties, as well as the features of varieties recommended for cultivation in our country.*

Keywords: *watermelon, variety, melon crops, plant, leaf, moisture, temperature, stem, vegetation, fruit, yield.*



Introduction: In our Republic, watermelon is the most widely grown melon crop among farmers. Watermelon is recognised for its medicinal properties; its pulp and juice are used to treat anaemia, cardiovascular diseases, atherosclerosis and metabolic disorders. Watermelon actively cleanses the body of toxins and helps to break down cholesterol. It contains vitamins A, C and E, as well as B-group vitamins, magnesium, potassium, calcium, phosphorus, iron and sodium. Watermelon is 91% water and contains 5–13% easily digestible sugars. Due to its high sugar content, watermelon should be consumed in moderation by people with diabetes. Watermelon also contains the amino acid L-citrulline, which is beneficial for alleviating joint pain. Watermelon is a heat-loving crop, which suggests that it originates from southern regions, particularly Africa. Watermelon belongs to the genus *Citrullus* and has two types: edible (*Citrullus vulgaris* Schrad.) and fodder (*Citrullus patesca* Sagent.). Seeds require a temperature of +14–16°C to germinate. It is not recommended to sow watermelon seeds in early spring before the soil has warmed up. Watermelon is a plant that requires plenty of light; in shaded areas, it grows slowly or dies. Its root system consists of a taproot with many lateral roots. The stem and leaves spread over the soil and the vines can grow to 2–3 metres in length. Tendrils growing from the leaf axils allow the plant to cling to surrounding objects. Five types of flowers are found in varieties cultivated in our region:

functional male and true male flowers, functional female and true female flowers, and hermaphrodite flowers. Watermelon fruits can be spherical, oval, pear-shaped, elliptical, cylindrical or other shapes. They can be large, medium or small, with rind colours ranging from light green to dark green and yellow. The pulp is usually pink or red, but can also be yellow or white. The seeds vary in size (large, medium or small) and come in colours such as white, yellowish, brown, red or black. One thousand seeds weigh 50–100 g. According to the State Register of the Republic of Uzbekistan, 47 watermelon varieties have been approved, 15 of which are local and the remainder foreign. Early-ripening varieties take 80–85 days to grow, while late-ripening ones take 120–130 days.

Methods of cultivation: To ensure a high-yield, high-quality harvest, seeds with a germination rate of at least 90–95% are selected. Treating seeds with various solutions before sowing has been scientifically proven to improve both germination and disease resistance. Watermelons should be cultivated in soil that is exposed to direct sunlight and is rich in organic and mineral substances. It grows best in sandy and sandy loam soils.

In the southern regions of the Republic:

- early-ripening varieties should be sown by 10 April, mid-ripening varieties are sown from 20 April to 10 May; Late-ripening varieties are sown from 15 May to 10 June.

In the northern regions:

- early-ripening varieties are sown until 20 April; Mid-ripening varieties are sown from 25 April to 10 May. Late-ripening occurs from 20 to 30 May.

For sowing, 4 kg of small seeds or 5–6 kg of large seeds are used per hectare. To achieve high productivity, the following are required: timely thinning, soil loosening, fertilisation, hoeing, irrigation, vine management and control of weeds and pests. Watermelon is drought-resistant due to its strong root system. To obtain high yields, the following should be applied per hectare: 225 kg of nitrogen, 225 kg of phosphorus, 150 kg of potassium and 25 tonnes of organic fertiliser.

Conclusion: Watermelon is one of the most consumed products by people, especially in summer when demand significantly increases. Its production has been growing year by year. By applying the above-mentioned cultivation technologies, it is possible to achieve the highest yield indicators.



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