

SELECTION OF VARIETIES WITH HIGH PRODUCTIVITY AND QUALITY INDICATORS OF MELON IN SPECIAL SOIL AND CLIMATE CONDITIONS

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Аннотатсия. Мазкур мақолада Навоий вилоятининг тупроқ-иклим шароитида қовун етиштиришнинг ўзига хос хусусиятлари, серҳосил ва юқори сифатли навларни яратишда селекция ишларининг аҳамияти ҳамда маҳаллий ва хорижий генетик материаллар асосида янги навларни танлаш масалалари ёритилган. Шунингдек, қовун навларининг ҳосилдорлиги, қанддорлиги ва бозорбоплик кўрсаткичларини оширишга қаратилган илмий ёндашувлар таҳлил қилинган.

Калит сўзлар: қовун, селекция, нав, тупроқ-иклим, ҳосилдорлик, қанддорлик, генетик материал.

Аннотатсия. В данной статье рассматриваются особенности выращивания дыни в почвенно-климатических условиях Навоийской области, важность селекционной работы по созданию высокоурожайных и высококачественных сортов, а также вопросы отбора новых сортов на основе местного и зарубежного генетического материала. Также анализируются научные подходы, направленные на повышение урожайности, содержания сахара и товарности сортов дыни.

Ключевые слова: дыня, селекция, сорт, почвенно-климатические условия, урожайность, содержание сахара, генетический материал.

Annotation. This article examines the specifics of melon cultivation in the soil and climatic conditions of the Navoi region, the importance of breeding to create high-yielding, high-quality varieties, and the selection of new varieties based on local and foreign genetic material. It also analyzes scientific approaches aimed at increasing the yield, sugar content, and marketability of melon varieties.

Keywords: melon, breeding, variety, soil and climatic conditions, yield, sugar content, genetic material.

Melon is one of the melon crops that occupy an important place in the agriculture of Uzbekistan. It has high nutritional value, contains 8–20% dry matter and up to 18% sugars. Therefore, the cultivation of melon and increasing its export potential are of great importance.

The conditions of Navoi region are characterized by a sharply continental climate, high temperatures, low rainfall, and soil salinity in some areas. In such conditions, the creation of high-yielding and high-quality melon varieties is an urgent direction of breeding work.

Characteristics of soil and climate conditions of Navoi region In Navoi region:

- In the summer months, the temperature reaches +40°C.
- low rainfall (per year 100–200 mm)
- the soils are mostly gray and sandy
- salinity is high in some places

Melon plants are highly adaptable to this region, as they are heat-loving and drought-tolerant. However, variety selection is a crucial factor in achieving high yields.

One of the most important factors in melon cultivation in Navoi region is the selection of varieties that are resistant to heat and drought. Practical experience shows that the main varieties that give the best results in this region are the Saxovat, Oftob and Oltin tepa varieties. The Saxovat variety is distinguished by its high yield, resistance to water shortages and large fruits. The Oftob variety does not lose its quality even under strong sunlight and gives a stable yield. The Oltin tepa variety, on the other hand, has a higher sweetness of the fruit in hot climates, which increases its market value.

In addition, the Iftixor and Shirali varieties also show good results in Navoi conditions. The Iftixor variety is distinguished by its resistance to diseases and high yield, but it requires more care and watering. Shirali, on the other hand, is an early ripening variety and, due to its low water requirements, allows for quick income.

Among the melon varieties with high market value, the following varieties can be distinguished: Zar gulobi, Qizil magiz, and Dilxush. These varieties attract buyers with their sweetness, aroma, and appearance. However, since they are somewhat sensitive to heat and drought, they are recommended to be grown mainly in well-irrigated areas.

The Kichkintoy and Shirali varieties are particularly suitable for early harvests. Although Kichkintoy is small in size, it ripens very quickly and can be sold at a high price at the beginning of the season. This ensures a quick cash flow for farmers.

Some varieties should be planted with caution in Navoi conditions. For example, the Oltin Vodiy and Ko'k magiz varieties are more suitable for humid areas, and here they will give high results only with good irrigation and care. The L-142 variety is a selection variety, and it is advisable to plant it as an experiment in small areas.

Agrotechnical measures also play an important role in melon cultivation. Sowing is usually carried out in mid-April or early May. The irrigation system must be properly organized, especially during the flowering and fruiting periods, when the demand for water is high. During the ripening period, if irrigation is reduced, the sweetness of the fruit increases. The use of organic and mineral fertilizers in fertilizing, loosening the soil and removing weeds increases productivity.

The table below lists the main characteristics of melon varieties suitable for the Navoi region:

№	Variety, hybrid name	Main stem		Leaf			Fruit		
		length (m)	diameter (sm)	shape	color	Length (sm)	shape	color	Length (sm)
1	Kichkintoy	1,5-2m	1,5 sm	kidney	green	8 sm	round	yellow	20-25
2	Oftob	2-2,5m	1,5 sm	kidney	light green	13,5 sm	spherical	bright yellow	30-35
3	Ko'k mag'iz	2-2,5m	1,5 sm	round	light green	13 sm	cylinder	light green	40-45
4	Oltin vodiy	2-2,5m	1,2 sm	round	green	11,5 sm	Round, egg-shaped	brown, green	25-30
5	Oltin tepa	2-3m	1,7 sm	round	Yellowing	12 sm	round, egg-shaped	green is dark	40-50
6	Qizil mag'iz	1,7-2,5m	1,3 sm	kidney	kulrang	10,5 sm	kidney	yellowish green	45-50
7	Iftixor	2-3m	1,6 sm	round	green	9 sm	spherical	green yellow	38-43
8	Dilxush	2-3m	1,3 sm	kidney	light green	11 sm	elliptical	green	30-45
9	Shirali	2-2,5m	1,5 sm	round	green	9 sm	round	green	20-25
10	Zar gulobi	2-2,5m	1,7 sm	round	green	10 sm	spherical	green	25-30
11	L-142	2-3m	1,3 sm	kidney	light green	12 sm	round	blond	20-30
12	Saxovat	2-2,5m	1,4 sm	round	green	11 sm	round	blond	30

Conclusion. To achieve the best results in melon cultivation in Navoi region, it is recommended to choose the Saxovat, Oftob and Oltin Tapa varieties as the main crops, combining them with early and premium varieties. With the right approach, it is possible to obtain high yields and significant economic benefits in this region. In addition, selection work is also of decisive importance in melon cultivation in the soil and climatic conditions of Navoi region. By creating high-yielding and high-quality varieties adapted to high temperature and drought conditions:

it is possible to increase productivity, strengthen export potential, ensure food security. Also, in the future, the wide introduction of genetic selection, biotechnology and hybridization methods will serve the further development of this field.

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9.Experience and practical observations of local farms (Navoi region, 2020-2024)