

## Biometric Measurement Results of Variety of Newly Created Hot Pepper in Greenhouse Sowing

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### ABSTRACT

*In this article discusses about biometric measurement results of variety of newly created hot pepper in greenhouse sowing and gives important information about it.*

**KEYWORDS:** *hot pepper, sowing, greenhouse, resource-efficient, cultivation, selection, agriculture, crop, innovative method.*

**Introduction.** Today, the world over hot pepper (*Capsicum annum* L.) 4,6 million hectares of land are planted and 69,3 million tons of products are grown from it. The average yield is 100-110 tons per hectare in greenhouses and 14,1–18,3 tons in open areas. Currently, interest and need for the cultivation of hot pepper is increasing day by day, this crop is grown in all countries of the world. Hot pepper (*Capsicum annum* L.) although the average yield in the world rose from 7,3 tons in 2006 to 18,4 tons in 2019 in open areas, from 80 tons to 110 tons in greenhouses, the selection and creation of varieties of hot pepper suitable for cultivation in hot, cold-resistant, salty soils, resistant to diseases and pests is one of the pressing issues.

In recent years in the world, research has been carried out on the selection and creation of bitter pepper suitable for cultivation in unheated greenhouses, the degree of bitterness is higher than 10 points, exportbop, the quality of fruit is good, the yield is 85-90 t/ha varieties using innovative methods, determining the optimal planting periods and schemes in unheated greenhouse conditions. In countries such as Vietnam, Brazil, Indonesia, where they are leading in the cultivation of hot pepper, bitter pepper is widely used in both industrial and pharmaceutical sectors, as well as being the main crop. Therefore, the creation of fertile varieties suitable for cultivation in conditions of its unheated greenhouse is an important scientific direction. The development of important elements of the technology of selection and cultivation of varieties suitable for cultivation in its unheated greenhouse conditions is also one of the urgent tasks of today's to provide the population with fresh products throughout the year.

In recent years, a number of measures are being taken to organize greenhouse farms in the Republic and radically increase the volume of cultivation of vegetables and fruits in them. In the strategy of actions for further development of the Republic of Uzbekistan in 2017-2021 "...further strengthening the food security of the country, expanding the production of environmentally friendly products, creating the feed base of livestock, optimizing the composition of crop fields and crops in agriculture, introduction of advanced agrotechnologies, increasing productivity, increasing the cultivation of fruits and vegetables and grapes have been identified as one of the important strategic tasks". Restoration of unheated resurstejamkor greenhouses and expansion of the volume of cultivation of vegetable crops in them exactly serve to find solutions to the above-mentioned important tasks. However, today the total area of greenhouses in the Republic does not exceed 50,5 thousand hectares, and tomatoes and cucumbers are grown mainly in them. And hot pepper is grown only in the open ground area around 2,3 thousand hectares. The establishment of resource-efficient unheated greenhouses and the increase in the volume of cultivation of the most demanded vegetable

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crops, such as hot pepper, allows the population of our country to increase the type and size of vegetable crops in the provision of a healthy eating lifestyle.

According to the data presented in Table 1, the weight of the controlled varieties of poya in a bush plant was 824,4 gramm, while in the Shark gavkhari variety was 967,2 g or 17,3 percent heavier than the control. While the number of leaves was 582 units in control, 706 units in the "Shark gavkhari" variety or 21,3% more than the control, leaf levels were 89,2 dm<sup>2</sup> in the control varieties, 107,4 dm<sup>2</sup> in the Shark gavkhari varieties or 15,5 percent greater than the control. Correlation between the number of leaves in a bush plant and the leaf level was strong  $r=0,87\pm 0,13$  (Table 1).

**Table 1.** Morphological indicators of spicy pepper varieties planted for selection test in conditions of unheated greenhouses (2018-2020 century.)

№	Name of the varieties	In a bush plant:					
		stem weight		number of leaves		leaf level	
		g.	%	pcs.	%	dm <sup>2</sup>	%
1	Margilan 330 (control)	824,4	100,0	582,0	100,0	89,2	100,0
2	Shark gavkhari	967,2	117,3	706,0	121,3	107,4	120,4
	×	895,8		644		98,3	895,8
	Σ	1791,6		1288		196,6	1791,6
		$r=0,87\pm 0,13$					

The fruit of the plants was 13 centimeters in a variety, during the ripening rate, while the Shark gavkhari variety was 21 cm in the variety or 61 per cent (Table 2).

**Table 2.** Integrated greenhouse conditions in the conditions of non-heated greenhouse fruits length of the fruits, diameter, diameter of the diameter of hot pepper, diameter of the fruit, and thickness indicators (2018-2020 yy.)

№	Name of the varieties	In the plants, the mass is during the fruit ripening period					
		Fruits length		Diameter of berries		Fruit flesh thickness	
		sm	with regard to control, %	sm	with regard to control, %	mm	with regard to control, %
1	Margilan 330 (control)	13,	100,0	3,0	100,0	2,1	100,0
2	Shark gavkhari	21,0	162,0	2,4	80,0	1,4	67,0
	×	17		2,7		1,75	17
	Σ	34		5,4		3,5	34
		$r=0,96\pm 0,05$					

**Conclusion.** Fruits were 3 cm in diameter in the control variety, 2,4 cm in the Shark gavkhari variety or 20 percent smaller than the control variety. The longer the fruits of hot pepper can be explained by the fact that they are so thin in diameter. The correlation between the diameter of the fruit and the thickness of the flesh of the fruit during ripening of the fruit cover of the plant was strong  $r=0,96\pm 0,05$ .

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