



## Organoleptic Characteristics Of Melon Fruits Intended For Storage

Sultanov Jetkerbay Davletbayevich<sup>1</sup>  
Umidov Shavkat Ergashevich<sup>2</sup>

<sup>1</sup>Independent researcher of Tashkent State Agrarian University

E-mail: [Jetkerbaysultanov1989@gmail.com](mailto:Jetkerbaysultanov1989@gmail.com)

<sup>2</sup>PhD, Tashkent state agrarian university

E-mail: [umidov\\_shavkat@mail.ru](mailto:umidov_shavkat@mail.ru)

**Abstract:** In the article, the results of the research carried out for the purpose of studying the organoleptic characteristics of melon fruits intended for storage are given with an in-depth scientific analysis.

**Key words:** melon, varieties, ontogeny, peel, fruit, technological features.

### Introduction:

When choosing vegetables and fruit products, the consumer first of all pays attention to their appearance, taste and smell. By itself, organoleptic evaluation becomes the main method in evaluating the quality of fruits and vegetables.

When evaluating the melon fruits isolated for the study, we chose the scoring method, using the weight ratio, which allows for an objective evaluation of each indicator of the melon, which is widely used in commodity science. To solve the problem, we used the indicators used to determine the quality of fruit and vegetable products based on their specific and specific characteristics.

The main quality indicators include: appearance, size (with permissible deviations), taste and smell.

Melon cultivars under the experiment were evaluated according to the following parameters: shape, color and integrity. The size of the melon was determined based on the dimensions indicated in the characteristics of its variety, as well as specified in the standards. Also, consistency, taste and aroma were studied as important quality indicators. Melon cultivars under the experiment were evaluated according to the following parameters: shape, color and integrity. The size of the melon was determined based on the dimensions indicated in the characteristics of its variety, as well as specified in the standards. Also, consistency, taste and aroma were studied as important quality indicators.

**Table 1**

**Scale for organoleptic assessment of the quality of melon fruits of different types and varieties**

Melon quality indicators	Significance coefficient	Scale	Description of the quality level
			1
Shape	1,5	5	A botanical variety
		4	It differs imperceptibly from the indicators typical of the botanical variety
		3	Significantly different from the correct form
		2	It is completely different from the indicator specific to the botanical variety
		1	Ugly
Color	1,0	5	Even and consistent, consistent with the botanical variety
		4	The color of the fruit is slightly different from the botanical variety
		3	Fruit color varies significantly from botanical variety level
		2	Not suitable for botanical variety
		1	Not suitable for botanical variety, has serious defects
Wholeness	1,0	5	The fruits are whole, healthy, not diseased
		4	Fruit pods are healthy, not diseased, with minor damage from scratching and cutting
		3	Fruit pods are healthy, not diseased, significantly damaged by scratching and cutting
		2	Fruit pods are mechanically damaged, not diseased, suitable for quick processing
		1	Fruits are cracked, crushed and softened due to disease
Round fruit size, cm	1,5	5	Very large (greater than 30 cm)
		4	Large (30-25)
		3	Average (24-20 )
		2	Small (23 - 15)
		1	Very small, non-standard (less than 15 cm)
The size of the elongated fruit, cm	1,5	5	Very large (greater than 26 cm)
		4	Large (26-22)
		3	Average (21-17)
		2	Small (16-12)
		1	Very small, non-standard (less than 12 cm)
The consistency of the meat	2,5	5	Very watery, soft, dense
		4	Watery, medium density
		3	Low water, soft
		2	Fibrous
		1	Bark, tough
The taste	6,0	5	Very sweet, with a pleasant taste of melon
		4	Sweet
		3	It has little sweetness
		2	Not sweet
		1	The taste is unpleasant

Fragrance	4,0	5	Pleasant, melon-like, bright
		4	Pleasant
		3	Less noticeable
		2	Unnoticeable
		1	Bad smell
Internal structure (ripeness)	2,5	5	Fruits are edible, the flesh is of botanical variety color and the seeds are ripe.
		4	Done at the consumer level
		3	Fruits are edible, flesh color characteristic of botanical variety, seeds unripe
		2	The flesh of the fruits is not ripe, the color is not characteristic of the botanical variety and the seeds are not ripe
		1	Unformed fruits

For certain types of fruits and vegetables, some specific indicators are taken into account: in the case of melons, the internal structure is taken into account, which is important in determining the degree of ripeness and the state of the seed.

We have developed a 100-point scale representing 5 levels of quality to determine the quality of melon types. It is rated as follows: 5 - excellent quality, 4 - good, 3 - medium, 2 - poor and 1 - very poor (see Table 1).

An expert commission consisting of 5-7 people was formed and organized to evaluate the researched varieties. The average value of the evaluations given by each expert for each indicator was calculated. These obtained data made it possible to calculate the quality level ( $C_n$ ) in percentages for each variety using the following formula.

$$C_n = (\sum \text{the sample scores under study} / \sum \text{maximum scale}) \times 100.$$

In determining the coefficients of importance, E.P. We used the methodology developed by Shirokov and V.I.Polegaevlar (2000) for evaluating the quality of fruits and vegetables. As a result of the research, the organoleptic characteristics of different types of melon are presented in Table 2.

**Table 2**

**Melon fruit quality evaluation scale**

Overall grade, scale	Quality level, %	Sample quality assessment
90-100	90-100	Excellent
80-89	80-89	Good
70-79	70-79	Satisfactory
<69	<69	Unsatisfactory



Table 3

Organoleptic assessment of melon varieties under study (2016-2018)

Variety name	Appearance			Size	The consistency of the meat	Taste	Fragrance	Internal structure (ripeness)	Overall grade, scale
	Shape	Color	Wholeness						
	Significance coefficient								
	1,5	1,0	1,0	1,5	2,5	6,0	4,0	2,5	
Qizil-asani	4,72 ±0,45	4,72 ±0,45	4,85±0,35	4,00±0,00	4,81±0,45	5,00±0,00	5,00±0,00	4,71 ±0,45	97
Qora gulabi	4,71 ±0,45	4,71 ±0,45	4,86±0,35	4,00±0,00	4,71±0,45	5,00±0,00	5,00±0,00	4,71 ±0,45	96
Shakar-palak	4,43±0,49	4,43±0,49	4,86±0,35	4,00±0,00	4,86±0,35	4,86±0,35	4,86±0,35	4,71±0,45	94
Mestnaya	4,57±0,49	4,71±0,45	4,43±0,49	3,00±0,00	4,57±0,49	4,57±0,49	4,71 ±0,45	4,71±0,45	90
Bargi	4,86±0,35	4,86±0,35	4,29±0,45	3,00±0,00	4,29±0,45	4,14±0,35	4,14±0,35	4,71±0,45	85
Shirin-pechak	4,85±0,35	4,85±0,35	4,28±0,45	3,00±0,00	4,28±0,45	4,18±0,35	4,15±0,35	4,72±0,45	86
Talыk-aktıla	4,57±0,49	4,71±0,45	4,43±0,49	3,00±0,00	4,57±0,49	4,57±0,49	4,71 ±0,45	4,71±0,45	90
Shirintoy	4,71±0,45	4,71±0,45	4,29±0,45	3,00±0,00	4,29±0,45	4,43±0,43	4,57±0,49	4,43±0,49	87
Qora-kokcha	4,29±0,45	4,57±0,49	4,43±0,49	3,00±0,00	4,14±0,35	4,57±0,49	4,57±0,49	4,57±0,49	87
Kara-kiz	4,71±0,45	4,71±0,45	4,29±0,45	3,00±0,00	4,29±0,45	4,43±0,43	4,57±0,49	4,43±0,49	87
Ak-navat	4,72±0,45	4,72±0,45	4,30±0,45	3,00±0,00	4,28±0,45	4,42±0,43	4,57±0,49	4,43±0,49	88
Oltin vodiу	4,73±0,45	4,72±0,45	4,34±0,45	3,00±0,00	4,31±0,45	4,44±0,43	4,57±0,49	4,43±0,49	86
Saxovat	4,43±0,49	4,43±0,49	4,86±0,35	4,00±0,00	4,86±0,35	4,86±0,35	4,86±0,35	4,71±0,45	94
Suyunchi-2	4,29±0,45	4,57±0,49	4,43±0,49	3,00±0,00	4,12±0,35	4,57±0,49	4,57±0,49	4,57±0,49	87
Zargulabi	4,03±0,46	4,42±0,49	4,25±0,49	3,00±0,00	4,22±0,35	4,45±0,49	4,54±0,49	4,45±0,49	85
Oltin tepa	4,20±0,46	4,41±0,49	4,33±0,49	3,10±0,00	4,21±0,35	4,62±0,49	4,27±0,49	4,48±0,49	87
Dilxush	4,25±0,46	4,01±0,49	4,14±0,49	3,41±0,00	4,44±0,35	4,53±0,49	4,35±0,49	4,46±0,49	87



In the description, we determined the standard deviation (S) for each indicator when summing up the experts' ratings. The standard deviation of the experts on a 5-point scale did not exceed  $\pm 0.5$  points.

Among the researched varieties, three varieties - Kyzil-asani and Kara gulabi and Shakar-palak varieties were evaluated at 96.6, 96.21% and 94.43%, respectively, and it was found that they have excellent quality. The variety Mestnaya (O'ITI. 212), which belongs to the same species, was also evaluated as excellent, but due to the small size of the fruits (20 cm), the quality level was relatively low - 90%.

As a result of the organoleptic analysis, a summary of the researched varieties was obtained (see Table 3.10).

The Kara-kokcha variety outperformed the Kara-kiz variety in several parameters, with overall scores of 10.36 to 10.71, respectively. But it should be recognized that this difference was within the standard deviation (0.35-0.45).

## Conclusion

1. The thickness of the shell of polys crops is of great importance for long-distance transportation and storage. Among melon varieties, the thickness of the peel was 4-5 cm in Kara Puchak, K-199, Altin Vady and Zargulobi varieties.

2. The studied melon varieties differ in the weight of flesh, pods and seed-placentas, and in the cross-section of the varieties, fruit flesh - 79.7 - 86.0 percent, pod - 9.4 - 16.4 percent, and seed - placenta - 2.4 - 5.5 percent, the highest meat yield (81.2 - 86.1%) Kokcha - 588, "Kora Gulabi", "Bargi", "Sakhavat", "Shirin-ivechak", "Altin Tapa" - 557, "Talyk" -aktila", Shakarpalak - 554, "Shirali", "Ak-navat", "Zargulabi", "Mestnaya (O'ITI. 212)" varieties were observed.

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