



Research on the Quality and Safety of Agricultural Products, Export Analysis Based on the Requirements of International Standards

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Abstract: This article provides an analytical review of the state and possibility of growing, processing and the need to increase the volume of exports of agricultural products to the world market, in particular European countries, based on the requirements of international standards. The main factors and requirements affecting the quality and safety of agricultural products grown and exported are analyzed. The criteria for quality and safety of tomatoes and melons, which are one of the main potential types of products for export, are highlighted. Based on the analysis and research, recommendations and proposals have been prepared.

Keywords: agriculture, agricultural products, product quality and safety, export, international standard.

Introduction

President of the Republic of Uzbekistan Sh. Mirziyoyev in Samarkand on September 15-16, 2022, during a meeting of the summit of leaders of the member states of the Shanghai Cooperation Organization (SCO), proposed to hold an international conference on food safety in 2023.

Our President drew the attention of the audience to the fact that, despite the fact that the countries are major producers, exporters and importers of agricultural and food products, serious cooperation on food security issues has not yet been established on the SCO platform at a sufficient level.

At the 77th session of the UN General Assembly, Qu Dongyu, Director General of the Food and Agriculture Organization of the United Nations (FAO), supported the initiative of Sh. Mirziyoyev to hold an international conference on food security in 2023. Also, the FAO Director-General said that the organization is ready to provide comprehensive support to Uzbekistan in the implementation of joint projects to ensure food security, combat climate change, diversify agriculture, and introduce water-saving technologies.

Uzbekistan has a unique climate, the number of sunny days in the republic is at least 300, which creates prerequisites for growing a wide range of fruits and vegetables, an attractive investment potential, taking into account the special geographical location and the presence of rich natural resources.

According to a number of international experts, the huge export potential of agricultural products of Uzbekistan, competitive in the international market in terms of price and quality. The competitiveness of Uzbek agricultural products in the market of the CIS countries is not inferior to European counterparts.

In January-August 2022, Uzbekistan exported 2.7 thousand tons of lemons to 7 foreign countries in the amount of 2.9 million US dollars, the export of lemons decreased by 85 tons compared to the same period last year. The costs associated with the creation of new lemon plantations and the purchase of seedlings will be covered in the form of a state subsidy in the amount of up to 300,000 soums for every hundredth of the land area.

In January-August 2022, Uzbekistan exported 119.8 thousand tons of melons and watermelons in the amount of 33.2 million US dollars. Compared to the corresponding period in 2021, the volume of exports of melons and watermelons increased by 50.1 thousand tons (71.8 percent).



In July 2022, Uzbekistan imported 22.3 thousand tons of dairy products from 30 foreign countries. The volume of imports of dairy products increased by 5.4 thousand tons compared to the same period last year. Russia is the leader among countries that imported the most dairy products to Uzbekistan in 7 months - 8.4 thousand tons.

In January-July this year, the export of agricultural products from Uzbekistan to Russia increased by 52% compared to the same period in 2021 and amounted to \$222.5 million.

The Republic of Uzbekistan is one of those countries where climatic conditions allow the production of the most popular and consumed types of fruits and vegetables. The presence of long sunny days in summer and the lack of precipitation contribute to the rapid and complete ripening of the fruit. And this is a guaranteed set of important nutritional elements by fruits - vitamins, carbohydrates, sugar, fiber and other useful minerals, wonderful taste and aroma.

The production potential in the region is huge, but, unfortunately, only a small part of it is used. Today, the share of agriculture in Uzbekistan is 19.2%.

For some types of agricultural products, Uzbekistan has few competitors, and the republic does not use this. Juicy peaches, grapes, apples, pears, figs, quinces, melons, watermelons, apricots and many other fruits and berries grow not only in the fields of farmers, but also in every household plot.



According to the State Statistics Committee of the Republic of Uzbekistan, the total volume of exports of fruits and vegetables from the country continued to decline. And China for 11 months of 2021 entered the top four largest consumers of Uzbek vegetables and fruits, pushing Pakistan.

The largest importer of fruits and vegetables from Uzbekistan is Russia. In January-November 2021, 374.7 thousand tons of agricultural products were shipped to the Russian Federation for \$ 271.6 million with a share of 31.5% in total exports.

The second largest consumer of agricultural products from Uzbekistan is Kazakhstan, where in January-November 587 thousand tons of vegetables and fruits were exported for \$180.3 million with a share of 20.9% in the nationwide export of fruits and vegetables.

During this period, 123.4 thousand tons of vitamin products were shipped to Kyrgyzstan for \$113.7 million with a specific weight of 13.2%.

Instead of Pakistan, the PRC moved into fourth place, where 99.4 thousand tons of vegetables and fruits were shipped for \$85.3 million with a share of 9.9% in the nationwide export.

These four countries are the main export markets for fruits and vegetables from Uzbekistan with a combined share of 75%.

Official statistics recorded that for 11 months 30.7 thousand tons of vegetables and fruits from Uzbekistan were sent to Afghanistan for \$24.2 million. The share of this country in the total republican export was 2.8%.

The volume of exports of fruits and vegetables in January-November amounted to 1,392.6 thousand tons and in value terms exceeded \$863.1 million (the rate of decrease compared to the same period in 2020, respectively, amounted to 7.8%).

726.3 thousand tons of vegetables were exported in the amount of \$353.2 million, as well as 301.3 thousand tons of fruits and berries in the amount of \$263.4 million. The share of fruits and vegetables for 11 months amounted to 5.6% in the nationwide export.

Results and Discussion

Fruit and vegetable products are one of the important export items of Uzbekistan; at the end of 2021, income from the supply of fruit and vegetable products to foreign countries amounted to about \$2.5 billion.

The leader in purchasing Uzbek agricultural products is Kazakhstan and Russia. Among the countries most actively purchasing Uzbek fruits and vegetables are Vietnam, China, Turkey, Kyrgyzstan, and Pakistan. Afghanistan and Iran. In Uzbekistan, in 2018, a decision was made to reduce cotton crops on an area of about 100,000 hectares in favor of growing fruits and vegetables.

According to the International Finance Corporation (IFC), the annual export of vegetable products from Uzbekistan is about \$2 billion. At the same time, the corporation's experts believe that Uzbekistan does not fully use the advantages of its climate and geographical location.

In some cases, the researchers note, Uzbekistan has few competitors, such as demand for cherries in East Asia being met by the states of California and Washington, while Turkey and the Islamic Republic of Iran supply nuts and dried fruits to Europe.



“Almost 80 percent of exports are fresh products, and almost all of these products are destined for the neighboring Kazakh and Russian markets. Imports from Uzbekistan represent a significant share of the total imports of Russia and Kazakhstan. Uzbekistan produces high quality products that it could export to Europe and other parts of Asia,” the IFC study says.

“Uzbekistan exports to a CIS country due to proximity and lower quality margins, although margins (profitability) would be much higher in Western Europe and parts of East Asia,” IFC notes.

At the same time, Uzbekistan has not yet been able to capitalize on its advantages due to low quality standards, underdeveloped transport services and logistics, and government regulation, which hamper productivity growth.

Uzbekistan has a strategic opportunity to expand the production and export of several key agricultural products, in particular cherries, dried stone fruits, nuts and raisins. The market has significant potential for these products.

The world markets are divided into three main regions: USA, Europe and East Asia.

“Given the expansion of the middle class in Asia and given the relatively favorable geographical position, Uzbekistan could position itself as a major supplier of nuts and dried fruits.

Turkey and the Islamic Republic of Iran are two of the world's top exporters in Asia; with the development of the best means of communication and strict certification, branding and quality improvement, Uzbekistan could compete with them,” the IFC believes.

In a lucrative \$2.5 billion sweet cherry market, Uzbekistan has an opportunity to gain a foothold in US-dominated East Asia by taking advantage of the fact that the Uzbek growing season starts earlier (mid-April) than in California (late May) and Washington. (in June).

The price differences between the markets currently served by Uzbekistan - mainly Russia and Kazakhstan - and potential new markets for Uzbek exports show the immediate benefits of market diversification.

For example, Uzbekistan exports 80 percent of fresh cherries to Kazakhstan, where it receives about half the value of what it receives in South Korea, but the country's share of total Uzbek cherries exports is only one percent.

“Similarly, Uzbek exports of dried apricots to Kazakhstan account for 90 percent of total exports of this product, which is a quarter of the value of Uzbek exports of dried apricots to Germany, which accounts for only 4 percent of total Uzbek exports. In raisin exports, the situation is similar, with Kazakhstan receiving half of all Uzbek exports for a quarter of its value in Germany, which accounts for only 4 percent of total exports,” the study emphasizes.

Eliminating significant differences in standards and quality assurance infrastructure is a key component in facilitating entry into new and more profitable markets.

Most of the production is produced in dekhans with an area of less than 1 hectare and 12,000-15,000 farms with an area of up to 5 hectares. Production on such small plots of land does not provide the economies of scale required to compete in international markets.

The export of its agricultural products to the world market, including the EU countries, is naturally a consistent process of complex, difficult and responsible actions, despite all the conditions and opportunities created by the government of the country.

Due to the strong competition of suppliers, high sanitary-hygienic, toxicological and environmental safety requirements, which include international standards and, in addition, their own special requirements of the host countries.

Uzbekistan has a special system of preferences of the European Union (GSP +), which will allow importing more than 6,200 varieties of Uzbek goods into the EU countries without duties. It would seem that everything is simple and good for exporters, but ... not everything is so simple.

The company operates to support the export of Uzbek goods to the countries of Western Europe under the GSP + system, as well as the organization of international industrial cooperation and the localization of modern production in Uzbekistan.

Let's first consider the advantages of exporting to European countries from the perspective of the exporter and the state. , firstly, the countries of Europe are a large market. A full-fledged entry into the EU market is an opportunity to multiply its production if a quality product is supplied in accordance with the requirements of international standards and the euro norm.

For an estimate, if we compare the scale: every year the EU countries import clothes for almost 180 billion euros, home textiles - almost 150 billion euros. For comparison, for example, Russia, according to official statistics, imports clothes and shoes for a little more than 10 billion euros.

Secondly, competitive Uzbek manufacturers work, as a rule, on imported equipment. Leasing payments are denominated in dollars or euros. If the manufacturer sells finished products in other currencies, he takes on serious currency risks. Finally, this is just a very correct business model: to bear expenses in soums, and receive revenue in euros.

For the state, increasing exports to European countries is an opportunity to qualitatively improve the export-import balance, increase tax payments to the national and regional budgets, and create new jobs.

I note that each job in food production creates another 2-3 jobs in related industries. This is an important socio-economic result for any region and for the country as a whole. **And all this contributes to the future of the country - the development of human capital, the emergence of specialists at all levels with experience working with European colleagues will be the basis for economic growth in the coming years.**

Due to the supply of high-quality and safe agricultural products to the world market, the investment attractiveness of the country increases for Uzbek farmers, agro-clusters and producers in the European market.

➤ GSP is short for General System of Preferences. In fact, this means that many goods from the republic can be exported to the countries of the European Union duty-free. Everything, this does not affect certification issues in any way.

The competition in the European market is very tough. The best manufacturers from all over the world negotiate directly with buyers and sometimes the price of a product goes up to tenths of a cent per unit.

What hinders the promotion of products from Uzbekistan to European countries today? What does a product need to successfully enter the European market? We need: certification, understanding of market requirements, a crystal clear understanding of our competitive advantages, a physical presence in Europe and, finally, building a sales system for our competitive advantages.

An analysis of the Uzbek market shows that most companies that provide services for the import of equipment and technologies from EU countries have industry specifics. There is a lack of an integrated approach and coverage of a wide range of industries.

I emphasize that many manufacturers simply need methodological assistance to effectively enter the market. We need a kind of “practical methodological instruction” for hundreds of Uzbek manufacturers, which will simplify the passage of European formalities and reduce the cost of transportation.

It is not always possible to obtain practical methodological assistance to the manufacturer specifically for his products. At the same time, in many companies, specialists responsible for comprehensive export operations do not have sufficient experience working abroad. Hence, the mistakes of most exporting manufacturers are simply inevitable.

At the same time, there are few companies in Uzbekistan offering services for the export of products to the EU countries, apart from government departments. There are several successful commercial companies, but they mainly cover the CIS market.

The approach of the relevant government authorities to agricultural exporters combines, on the one hand, support measures to the world market”, on the other hand, there should not be too harsh punishment for mistakes in entering foreign markets and short periods to achieve the desired results.

This can lead to the consequences that the most enterprising entrepreneurs who have the courage to enter the market, in the absence of their own experience and guidelines, will make mistakes - after which they will be punished.

Based on this, it is necessary to finalize the program and system for the supply and promotion of agricultural exports to the world market. Within the framework of this program and system, each export project should be provided with targeted and targeted assistance to enter the European market.

State support for exporters is a popular measure in world practice. By developing actions and activities along this path, Uzbekistan strengthens market principles. The results of each project

should be periodically monitored and checked for compliance with the project roadmap and a number of key indicators.



Based on the results of discussions and preliminary negotiations with trade networks and trade companies-importers of the EU countries, they are interested in developing trade relations in the following areas: agricultural products (dried fruits, fresh fruits, leguminous plants and others), alcoholic beverages (vodka, cognac, wine and cognac concentrate), pharmaceuticals (raw materials-semi-finished products: mountain plants, snake venom, licorice root, etc.), mineral resources and textiles.

If we talk about recommendations to potential exporters who are just planning to enter Europe, then, of course, it is necessary to act quickly, decisively and consistently. Second, before you act, conduct a deep competitive analysis of the business logic of your 7 top competitors and 7 of your most valuable potential customers.

At the end of 2021, the trade turnover of Uzbekistan with the EU countries amounted to \$3.2 billion, of which exports amounted to \$440.7 million. These figures can be much higher - the countries have a huge potential for increasing mutual trade turnover.

Uzbekistan exports fruits and vegetables, cotton fiber, fabrics, inorganic chemicals, copper products and other goods to European countries. Exports can be significantly expanded and increased, but this is hindered by a number of factors.

Above, as we said, Uzbekistan uses the basic general system of preferences (GSP), according to which it can export 3,000 types of goods to the EU without customs duties and 3,200 items at reduced rates. If the country receives unilateral tariff incentives under GSP+, it will be able to import more than 6,200 goods duty-free, which will be a positive and competitive factor for entering the EU market.

What directions are in priority Export of Uzbekistan's products to the EU countries. These are mainly agricultural, textile and alcoholic products, as well as pharmaceuticals and mineral resources.

As part of attracting European companies to investment projects in Uzbekistan, it is advisable to focus on the projects of the state import substitution program.

The EU market is extremely competitive and imposes high requirements for product imports, including certification and other regulations. Therefore, work in this direction requires the organization, development and effort of the activities of joint trading houses with European countries.

A very relevant moment in organizing and increasing the export potential is the analysis and study, as well as the observance of knowledge about the modern requirements of world standards for the quality and safety of agricultural and food products.

This applies to cultivation, processing, research methods for their qualitative and quantitative assessment, as well as safety labeling standards, transportation, storage and use of agricultural and food products.

ISO is a system of international standards that have a large number of criteria for the safety and quality of products, technologies for its production, storage and supply. This system has thousands of different standards developed and controlled by the International Organization for Standardization

(ISO) - the world's largest and most influential standards organization. ISO is adopted by more than 100 countries as national standards.

Certification of agricultural products, including international certification, is an official document that confirms the compliance of the supplied products with the quality requirements of a particular country.

The presence of an international certificate for many manufacturing companies is an important condition for the trade of agricultural products. Distributors, retail chains and supermarkets are interested in goods whose quality is confirmed by international standards.

Manufacturer certified by GLOBAL G.A.P. and Organic, shows openness and responsibility for their products. This always has a positive effect on improving the image and loyalty to the company, and also contributes to the sale of the supplied products. These certificates help promote domestic products in the European and US markets.

GLOBAL G.A.P. is a recognized international system of standards. It ensures the safety of grown agricultural products and compliance with quality and technical requirements. Its main difference lies in the fact that certification covers the entire production cycle, and not just the assessment of the quality of the final product.

Organic certified products are natural organic products that retain their taste and all the beneficial trace elements. The standard provides for compliance with the requirements of organic production at all stages, from cultivation of land and animal care, to production, storage and transportation of products.



The most common and widely applicable for industries of different types of industry are ISO 9001 and ISO 14001 - they regulate the requirements for such areas as a quality management system, environmental management and much more.

As an example, I will give a Quality Passport for two types of agricultural products, which occupies a large volume of procurement in the republic for export. The requirement of standards to define the minimum requirements of quality criteria, their quality indicators and safety indicators indicating compliance with a certain level of quality.

Паспорт качества. ТОМАТЫ грунтовые

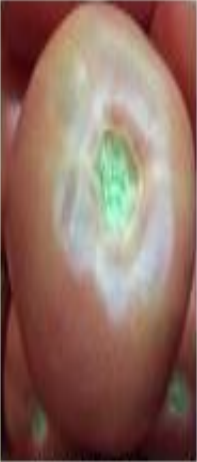



Критерии качества

МИНИМАЛЬНЫЕ ТРЕБОВАНИЯ	<p>Томаты всех сортов, с учетом специальных положений, предусмотренных для каждого сорта, и разрешенных допусков, должны быть:</p> <ul style="list-style-type: none"> + неповрежденными; + здоровые, доброкачественными; продукт, подвергшийся гниению или другому виду порчи, что делает его непригодным к употреблению, не допускается; + чистыми, без видимых посторонних веществ (земли, пыли, остатков химических веществ и других); + плотными; + целые, без механических повреждений мякоти и не зарубцевавшиеся трещины; + свежими на вид; + не перезревшими; + без солнечных ожогов; + без насекомых-вредителей и повреждений, вызванных насекомыми-вредителями; + не уродливые, типичной для биологического сорта формы; + с плодоножкой или без плодоножки; + без чрезмерной поверхностной влажности; + без какого-либо постороннего запаха и/или привкуса.
	<p>ОКРАСКА</p> <p>Допускается приемно томаты со степенью зрелости 6-10 по 12-ти бальной шкале зрелости (в зависимости от сорта и страны происхождения товара). Допускается незначительная неравномерная окраска томатов.</p>
	<p>Наличие посторонних примесей</p> <p>Допускается незначительное загрязнение землей</p>



Паспорт качества. ТОМАТЫ грунтовые

Классификация

I Категория	<p>Томаты этого сорта должны быть хорошего качества. Они должны иметь характерные признаки своей разновидности и /или товарного типа. Могут допускаться следующие незначительные дефекты при условии, что они не влияют на общий внешний вид, качество, сохраняемость и товарный вид продукта в упаковке:</p>			
	<ul style="list-style-type: none"> • незначительный дефект окраски (до 10% площади плода); 			
	<ul style="list-style-type: none"> • незначительный дефект формы и развития (незначительные выросты, небольшие неровности вокруг основания плода); 			
	<ul style="list-style-type: none"> • незначительные дефекты кожицы и очень незначительные повреждения (потертости, царапины, мелкие помехи и нажимы от тары и соприкосновения с соседними плодами) общей площадью не более 1см² 	мелкие помехи	зарубцевавшиеся трещины	незначительные дефекты кожицы
	<ul style="list-style-type: none"> • незначительная пустотелость семенной камеры (до 2мм); 			
	<ul style="list-style-type: none"> • тонкий шрам (цветочный рубец) длиной не более 2/3 наибольшего поперечного диаметра плода; 			
	<ul style="list-style-type: none"> • опробкованное образование (разросшееся цветоложе) общей площадью не более 1см²; 			
	<ul style="list-style-type: none"> • зарубцевавшиеся трещины длиной не более 1см; • небольшой пупок (не опробкованное) общей площадью не более 1см². 			
	небольшой пупок			

Паспорт качества. ТОМАТЫ грунтовые



Классификация

Нестандарт (допускается до 10% от партии)	• с сочными и земляными окозами;
	• неравномерность созревания, дефект цвета площадью не более 30%;
	• с опробованными образованиями площадью более 2см ² ;
	• зарубцевавшиеся трещины длиной более 3 см;
	• дефект формы и развития (уродливые);
	• калибр менее 50мм;
	• дефекты кожицы или повреждения при условии, что плод серьезно не затронут (поперстости, отдельные сухие пятна на кожице и незначительные зарубцевавшиеся царапины, шрамы, помятости и нажимы от тары и соприкосновения с соседними плодами) общей площадью более 2см ² ;
	• пустотность семенной камеры (свыше 5 мм);
	• с зелеными или желтыми спинками (у плодоножки);
	• плоды помятые; с проколами; со срывами кожицы;
• единичные пятна макроспарма (общей площадью не более 0,25 см ²)	
• плоды со следами химической обработки, с прилипшей землей, наличие других посторонних веществ.	



з зарубцевавшиеся трещины длиной



с земляными окозами



с опробованными образованиями



з зарубцевавшиеся трещины



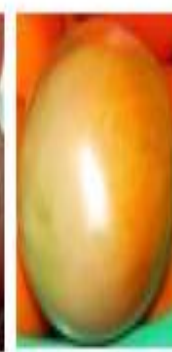
с зелеными или желтыми спинками (у плодоножки)



помятые плоды



с проколами



неравномерность созревания










дефект формы и развития (уродливые)

Паспорт качества. ТОМАТЫ грунтовые



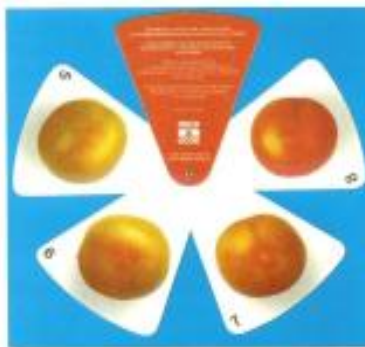
Отход/брак

Отход/брак (не допускается)	• зеленые томаты;		• плесень на плодоножке		
	• застуженные или подмороженные плоды;		• пораженные болезнями		
	• плоды, пораженные вредителями, с наличием живых личинок и их экскрементов;				
	• мятые, перерезавшие (мякоть с целой кожей, с нарушенными семенными камерами и свободно перемещающейся мякотью под кожей);				
	• плоды загнившие, пораженные болезнями (в том числе очаги макроспоровой и единичные пятна в совокупности более 0,25 см ² площади), плесневидными спорами;				
	• плесень на плодоножке;				
	• не зарубцевавшиеся трещинами (концентрическими или радиальными), вызванными особенностями созревания		зеленые томаты		
	• не зарубцевавшиеся повреждения, вызванные градом, проявляющиеся в форме глубоких язвин или опробковевых шероховатых образований;		пораженные вредителями		с наличием живых личинок и их экскрементов
	• плоды раздавленные; с серьезными механическими повреждениями;				не зарубцевавшиеся трещинами
	• увядшие, морщинистые плоды.				

Паспорт качества. ТОМАТЫ грунтовые

Шкала зрелости томатов.

Допустимая степень зрелости 6-10



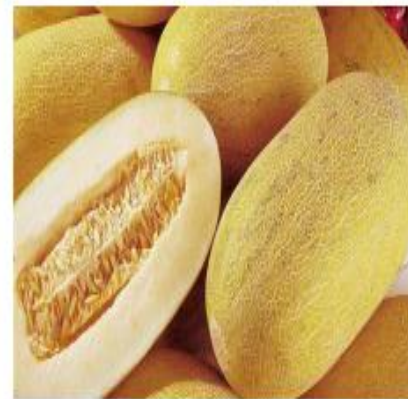
Паспорт качества. Дыня Торпеда

НАЗВАНИЕ		Дыня Торпеда			
БАЗОВЫЕ ХАРАКТЕРИСТИКИ		СПЕЦИФИКАЦИЯ УПАКОВКИ			
СОРТ	все сорта	ТРАНСПОРТНАЯ УПАКОВКА	МАТЕРИАЛ		
КЛАСС (ТОВАРНЫЙ СОРТ)	высший, 1		картон (пятыслоный), деревянные ящики		
ТРАНСПОРТНАЯ УПАКОВКА	короба	ПОТРЕБИТЕЛЬСКАЯ УПАКОВКА (может отсутствовать)	дыни должны быть упакованы таким образом, чтобы обеспечивалась надлежащая сохранность продукта		
ПОТРЕБИТЕЛЬСКАЯ УПАКОВКА	коробки и ящики	ПАЛЕТЫ	ТИП (МИНИМАЛЬНАЯ МАССА ПАЛЛЕТА), КГ	РАЗМЕРЫ, ММ	МАКСИМАЛЬНАЯ ВЫСОТА ПАЛЛЕТА, М
МАССА НЕТТО ПОТРЕБИТЕЛЬСКОЙ УПАКОВКИ	не нормируется		Евро, 20	1200 x 800	1.6
БРЕНД	не нормируется				
СТРАНА ПРОИСХОЖДЕНИЯ	не нормируется				
ДОПОЛНИТЕЛЬНЫЕ ХАРАКТЕРИСТИКИ					
КВАНТ	не нормируется				
КАЛИБР	Масса от 2 кг				
ОДНОРОДНОСТЬ	Содержимое каждой упаковки должно быть однородным; каждая упаковка должна содержать дыни только одного и того же происхождения, разновидности или товарного типа, качества и размера, в значительной мере одинаковой степени развития и зрелости, а также в значительной мере одинакового цвета				
УСЛОВИЯ ХРАНЕНИЯ					
ТЕМПЕРАТУРА ТРАНСПОРТИРОВКИ	от +5°C до +12°C *период сбора урожая июль-октябрь – не нормируется				
ТЕМПЕРАТУРА ХРАНЕНИЯ НА ЦС	от +5°C до +12°C				
ТЕМПЕРАТУРА ПРИ РЕАЛИЗАЦИИ	допускается реализация при температуре до +25°C до потери органолептических свойств				

Паспорт качества. Дыня Торпеда

Критерии качества

МИНИМАЛЬНЫЕ ТРЕБОВАНИЯ	Дыни данного сорта должны быть:
	+ не поврежденными;
	+ небольшой дефект формы;
	+ доброкачественными; продукт, подвергшийся гниению или другому виду порчи, что делает его непригодным к употреблению, не допускается;
	+ чистыми, практически без видимых посторонних веществ;
	+ практически без насекомых-вредителей;
	+ небольшие зарубцевавшиеся трещины, не задевающие мякоти и не превышающие по длине 2 см.
	+ без затрагивающих мякоть повреждений вызванных насекомыми-вредителями;
	+ свежими на вид;
	+ небольшие повреждения кожуры, вызванные трением или погружно-разгрузочными операциями;
+ твердыми; + небольшие зарубцевавшиеся трещины, не задевающие мякоти и не превышающие по длине 2 см.	
+ без чрезмерной поверхностной влажности;	
+ без постороннего запаха и/или привкуса;	
+ степень развития и состояние дынь должны быть такими, чтобы они могли выдерживать перевозку, погрузку и разгрузку, доставляясь к месту назначения в удовлетворительном состоянии;	
+ незначительный дефект окраски кожуры; бледная окраска той части дыни, которая соприкасалась с почвой в период выращивания, дефектом не считается;	
+ дыни должны быть достаточно развитыми и достаточно спелыми; цвет и вкус мякоти должны свидетельствовать о достаточной спелости.	
ВНУТРЕННЯЯ ОКРАСКА	мякоть молочного цвета
СОДЕРЖАНИЕ САХАРОВ	не менее 8*В/х



дыня соответствующего качества



Паспорт качества. Дыня Торпеда



Отход / брак

Отход / брак (не допускается)	• мягкие, перезревшие, с выраженными ушибами, с трещинами, раздавленные плоды;
	• подмороженные, запаренные, загнившие плоды, с плесенью;
	• со следами повреждения с/х вредителей, с наличием с/х вредителей;
	• с забродившим запахом и/или вкусом;
	• с серьезными повреждениями кожуры такие как механические повреждения, покоричневение кожуры, повреждение вредителями и т.д.



загнивший плод



внутренний загнив



мягкий плод с повреждением мякоти (ушиб)



повреждение кожуры, покоричневение



механическое повреждение

4

The ideology of the standard is an increase in international requirements for improving the level of mechanization and automation of the production process, and the standard also provides for a serious tightening of sanitary and hygienic requirements for food production.

The food safety management system involves, first of all, preventive actions, control and assessment of potentially hazardous factors (HACCP) (biological, chemical, physical, and others) that arise during the production process - at all stages of its production, from the acceptance of raw materials to the sale of finished products.

Food products are being audited for compliance with the new version of FSSC 22000 v.5 (HACCP), which came into force in 2020. The FSSC 22000 standard reflects the concept of continuous monitoring of possible physical, biological and other risks, as well as their control, preventing the very possible occurrence of hazards, and not just checking the final product.

Conclusion and Recommendations

These days, along with the abundance in the markets of many countries, some scientists and experts, economists are concerned that the prices of agricultural and food products remain high due to certain factors.

Of course, these factors are the state of selection and seed production in agriculture, the state of preparation and effective placement of crops in a certain type of soil, the high-quality and timely organization and implementation of appropriate agrotechnological measures and processes during the period of vegetative growth of plants, the use of effective plant protection products to prevent crop failures, high-quality processing of the grown crop with ensuring the nutritional value and usefulness of products, the development of optimal conditions and modes of their storage, transportation and logistics delivery, taking into account the requirements of international standards

in the field of assessing the quality and safety of products, the application and improvement of modern effective mechanisms of public administration in the industry.

In subsequent years, due to the growth of various types of diseases during the period of vegetative growth of plants, the level of productivity of cultivated agricultural products remains low, as a result, the huge amount of work done and the resources used (fertilizers, fuel, water, labor, etc.) remain inefficient.

All this can lead to rising prices and shortages of agricultural products. Breeding and seed production in agriculture of the republic also does not meet modern requirements, mainly relying on foreign seed production for many types of crops. If these issues are not resolved in the coming years, the situation may become more complex.

At the same time, there are large farms and agro-clusters that approach the existing problems listed above systematically, take precautionary measures, taking into account the existing and expected problems and risks, the desire and demand of consumers and customers, as a result, they get a good harvest. But they are mainly focused on the export of their products, and the domestic market is mainly satisfied by small farmers, representatives of household plots.

At present, when providing the population with food resources, ensuring the quality and safety of food products is becoming a serious problem, these issues should be given special attention.

Systematic identification, evaluation and management of factors affecting the quality of food products, the work of a group of leading specialists to solve the above tasks allow the production of natural and safe products at enterprises.

Thus, ensuring the quality and safety of agricultural and food products indicates the need to introduce international standards in this area, harmonize the requirements of national standards with international standards, and train highly qualified personnel.

It is necessary to study and implement a modern approach and methods for assessing the quality and safety of agricultural products, developing mechanisms for the implementation by all participants of a responsible approach to their activities.

In the context of the deepening global economic and food crises, it is necessary to provide for an analysis of the possibilities for taking sufficient measures to provide the population with all types of agricultural and food products, and their quality and safety in accordance with the requirements of international standards, and this naturally serves to protect the health of the population and improve their standard of living.

In order for the Quality Standards to become the norm, to ensure the requirements of the standard, increase and create conditions for the promotion of agricultural exports, it is necessary to organize training for producers and national experts, consultants, with the involvement of an experienced specialist from abroad with vast experience in the production of fresh and dried fruits, fruits and vegetables. who knows not only production, but also the requirements of European markets.

The fulfillment of all these tasks requires the unification of efforts of representatives of all branches of agrarians, manufacturers, processors, technologists, standardizers, certifiers, metrologists, international economists, scientists, university professors, transport workers and service workers.

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