



**Journal Website:**  
<https://theusajournals.com/index.php/ajahi>

**Copyright:** Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

## **SUBSTANTIATION OF THE CLUSTER SCHEME FOR THE PRODUCTION OF DRIED GRAPES IN THE REGIONS OF THE REPUBLIC OF UZBEKISTAN**

**Submission Date:** April 20, 2024, **Accepted Date:** April 25, 2024,

**Published Date:** April 30, 2024

**Crossref doi:** <https://doi.org/10.37547/ajahi/Volume04Issue04-05>

**Raxmatullaev Ravshan Kushmurodovich**

Doctor of Philosophy of Technical Sciences (PhD), Gulistan State University, Uzbekistan

**Turakulov Mamaraym**

Candidate of Technical Sciences, Docent, Gulistan State University, Uzbekistan

**Batirov Bakhtiyor Kunishovich**

Lecturer at Gulistan State University, Uzbekistan

**Ermatov Valijon Abdivaitovich**

Lecturer at Gulistan State University, Uzbekistan

### **ABSTRACT**

The article proposes a cluster scheme for the production of dried grapes in the regions of the Republic of Uzbekistan and describes the features of cleaning dried grapes in farms specializing in the cultivation and processing of commercial grapes.

### **KEYWORDS**

Grape products, commercial grapes, national economy, farming, dried grapes, cluster system.

### **INTRODUCTION**

In the world, work is underway to create environmentally friendly products of viticulture, fruit

and sheep farming and melon crops in order to ensure food security. If we consider that "every year there are

70-75 million tons of grapes in the world and 3.5-4.3 million tons of them are brought to "drying" [1], then one of the most important tasks is the development of energy-intensive resource-saving technical environments and an installation with high quality of work and productivity for the production of dried grapes, i.e. kishmish. In this regard, certain successes have been achieved, including in the USA, France, Spain, Portugal, the Russian Federation, Ukraine, the Republic of Belarus, the Republic of Moldova, Turkey, China, India, Australia and other countries, and in them "special attention is paid to developments in the field of technical and technological upgrades of resource-saving technical environments for processing and drying of grapes" [2].

## **METHODS**

As is known, commercial grapes are produced primarily for the production of dried wine products: kishmish, raisins and coriander. According to the International Organization of Viticulture and Winemaking, more than 1.6 million tons of dried fruits are produced in the world. Dried grapes are produced in 19 countries of the world: USA, Turkey, Greece, Uzbekistan, etc. About 90% of exports on the world market are carried out by Greece, Turkey, Afghanistan, and Australia. The world

importers of dried grapes are: England, Germany, the CIS, Canada, Japan, France and the Netherlands [3]. Of the post-Soviet states, dried fruits are grown in Moldova, Ukraine, and the Southern regions of Russia, and the main suppliers of these products are the Central Asian states: Uzbekistan, Tajikistan and Turkmenistan, which are characterized by favorable climatic conditions and high-altitude table-raisin soils. It belongs to the Kishmish grape varieties. At the same time, the Republic of Uzbekistan accounted for more than two thirds of the total production of dried products in Central Asia [4, 5].

Subsequently, a cluster production system was used in various sectors of the national economy of Uzbekistan. The cultivation of grain crops was carried out in cotton, sericulture and animal husbandry. The cluster system includes a chain of interactions between various producers involved in the creation of raw materials, their processing to obtain the target product and its final implementation. The cluster's non-dispersion ensures an uninterrupted production cycle with economic benefits.

The cluster system of dry wine production is based on this principle. She was not dangerous. 1.

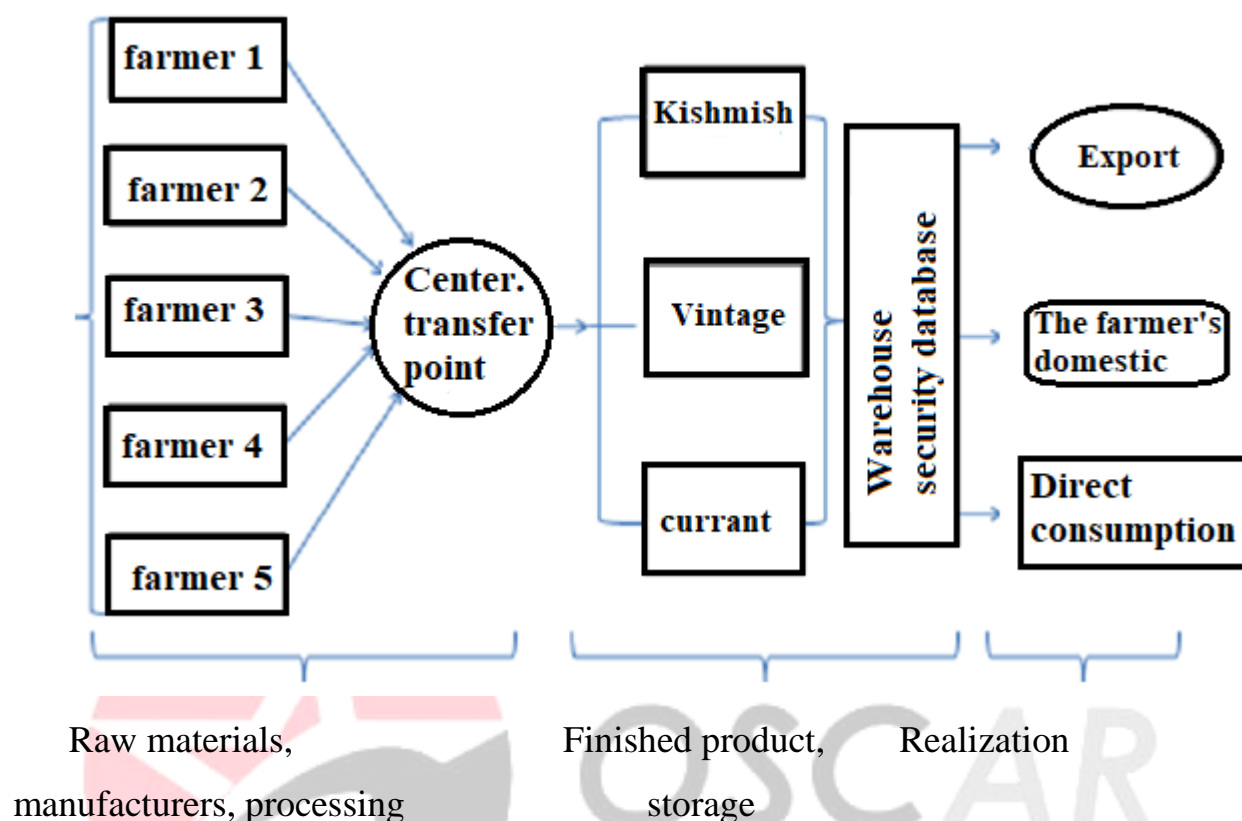


Fig.1. Cluster scheme of dried grape production.

As noted earlier, the cluster system for the production of dried grapes is based on a combination of several farms: planting and care of grape plantations, harvesting, processing to obtain the target product and its sale.

In accordance with the developed scheme, some farms grow grapes, carry out demanding agricultural techniques, remove damage and extract it at a centralized processing point, creating and basing their own capital on the warehouse. Grapes are extracted here (by varieties) in accordance with technological requirements for drying in the sun or using wine. At high humidity up to 18-20%, the screws are recycled into mobile rotary dismembrator propellers with the

removal of ridges. Next, the divided berries are sorted by varieties: export-oriented, high-yielding, liquid and illiquid, packed in cardboard boxes of 25 kg and stored in a warehouse. Depending on the trading environment, the product can be sold in large quantities for export or to the domestic market at different prices.

## CONCLUSIONS

The cluster system for the production of dried grape products provides a number of economic advantages compared to private producers:

- technological equipment has been purchased in the warehouse;



-obtaining a preferential loan from a bank for the purchase of equipment;

- collective performance of complex technological work;

-the wholesale sale of wine products in small quantities is more economical than the market sale -in small portions;

-the possibility of exporting finished products and consolidation of financing.

## REFERENCES

1. <http://ikc.belapk.ru/upload/iblock/efa/efaofode3eb199a7a09bboedb34ce52d.pdf>.
2. <http://vinocenter.ru/estestvennaya-sushka-vinograda.html>.
3. Рахматуллаев Р.К. Разработка и обоснование параметров устройства для обработки сушеного винограда. Дисс. канд. техн. наук. – Гулистан, 2023. – 110 с.
4. Рахматов О. Совершенствование технологии и технических средств для сушки и очистки ягод винограда. Дисс. ... докт. техн. наук. – Гулистан, 2019. – 266 с.
5. Абдуллаев Р.М., Мирзаев М.М., Набиев У.Я. ва бош. Узум етиштириш ва майиз куритишнинг замонавий технологияси. – Ташкент: Фан, 2011. – 54 с.
6. Obidov, A., Turakulov, M., Ermatov, V., & Yusufaliev, A. (2021). Rationale of the quantity of soil-cutting stars and working body of soil rotary knives. In E3S Web of Conferences (Vol. 284, p. 02011). EDP Sciences.
7. Turakulov, M., & Ermatov, V. (2020, July). Justification scheme installation of a rotary working body for opening grape bushes. In IOP Conference Series: Materials Science and Engineering (Vol. 883, No. 1, p. 012131). IOP Publishing.
8. Turakulov, M., Ermatov, V. A., Yusufaliyev, A. T., & Batirov, B. K. (2022, August). Results of laboratory research on the movement of soil with a rotary working body from the area of the shelter roll vineyard. In IOP Conference Series: Earth and Environmental Science (Vol. 1076, No. 1, p. 012070). IOP Publishing.