



Application of Modern Technologies in the Storage and Processing of Food Grapes

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ABSTRACT

This article talks about the importance of innovative technologies in the development of viticulture in our country, as well as in the preservation and processing of cultivated grape varieties.

Keywords:

Innovative Technologies, Viticulture, Grape Varieties

The validity of the subject. According to the decision of the President of the Republic of Uzbekistan "On additional measures to introduce a cluster system in the development of viticulture, state support for attracting advanced technologies to the industry", further development of viticulture in our country, grapes establishing a cluster system for cultivation, processing, and production of finished products, providing the republic with quality products by widely introducing effective mechanisms for regulating the alcohol market, strengthening the export potential of the industry, increasing investment attractiveness, as well as , the development of wine tourism (wine tourism) was set as a priority task.

In the current conditions of the Republic of Uzbekistan, the main tasks of the development of viticulture are to create an effective organizational and economic mechanism aimed at ensuring its high profitability and profitability, regardless of the various forms of management of the sector, its management, as well as production, scientific research. improvement of the system, training of qualified personnel capable of working in new conditions. The solution of these issues will ensure the smooth operation of this industry,

create favorable conditions and opportunities for its further development.

Many specialists engaged in growing grapes are conducting research to preserve the newly grown crop for a long time. On the one hand, storing grapes is not much different from other fruits and vegetables. In order to preserve grapes, it is necessary to have a special room where temperature and humidity are maintained. But this is not always enough.

Harvested crops are transported on the farm by car, rubber-wheeled tractor and horse-drawn cart. When sending to distant places, automobile and railway transport, sometimes airplanes are used. It is especially convenient to transport in auto-refrigerators, refrigerated wagons (temperature 2-5 degrees). For this, it is necessary to keep the grapes in special refrigerators at a temperature of 12-20 degrees. For good preservation of grapes sent by railway transport, 10 g of potassium metabisulfite tablets should be placed in each box containing grapes. Anhydrite gas released from them prevents grapes from mold. Grapes intended for winter storage are placed in boxes according to GOST with the band facing up. Before placing in special coolers, the room is fumigated with sulfur gas. Grapes should be kept at a temperature of 1-2 degrees and a humidity of

90-95%. It is not good to take the grapes from the refrigerators to a hot environment at once ("sweats" and darkens quickly).

Among the grape products, dried varieties of raisins (made from seedless varieties) and raisins (made from seeded varieties) play an important role in the food industry and strengthening human health. In Uzbek, both types are called raisin. Their quality indicators depend on the grape variety, soil and climate conditions, growing and drying methods. Most of the raisins grown in the world (90-95%) are made from seedless-seedless varieties (Black Raisins, White Raisins, Kishmish Khishrau, Kishmish, VIR, Askari, Korinka, etc.). The sugar content of the grapes to be raisined should be at least 23-25%, and the heads of the grapes should be moderately dense, and the clusters should be fleshy. The higher yield of raisins depends primarily on the juice content of the grapes and the consistency of the flesh.

Grapes are mainly dried in the open air in the sun (solar method), in special shade rooms (soyaki method), as well as with the help of drying devices. Kishmish has long been made from Black Raisin, White Raisin, and in some cases Askeri and Pink Raisin varieties. In recent years, breeders of Uzbekistan have created a number of quality raisin and raisin varieties (Kishmish Khishrau, Kishmish Zarafshon, Kishmish Sogdiyana, Kishmish VIR) and horaki (Rizamat, Kara Kandal, etc.) is being prepared. Also, in Central Asia, especially in Uzbekistan, there are high-quality varieties of khoraki, such as Kattakurgan (mask), Nimrang, Sultani (jaus), Toyifi, Gozal black, Shtur angur, Husayni, which are called hermiyon and avlon. raisins are prepared. Raisins and raisins are grown in the Uzbek region, mainly in Samarkand, Bukhara, Kashkadarya, and Sur Khandary regions. Countries such as Turkey, USA (California), Greece, as well as Iran, Iraq, and Afghanistan, and among the Commonwealth of Nations countries, Uzbekistan ranks first in the cultivation of raisins and raisins.

There are ways to dry grapes in the sun, under the sun, and under the shade. After picking grapes in all methods, they are brought to special drying areas, sorted and placed in the

necessary containers (baskets, wooden trays, etc.). 10-12 kg per 1 2 m area. They are turned over every 5-6 days for the grapes to settle and dry evenly. Grapes are considered dry when the moisture content is 18-20%. Sundry is a method of drying grapes in the sun without any processing. Mainly raisin and raisin varieties are dried. The drying time is 20-30 days. 22-25% of raisins fall. Raisins made from white raisins are called quail, and those made from black raisins are called shigani. Objush is a method of drying grapes by immersing them in a 0.3-0.4% solution of caustic soda in boiling water for 2-3 seconds. This accelerates the process of the formation of grapes due to rapid evaporation of moisture in its inner layers. The drying time is 7-12 days in the sun. 25-26% of raisins fall. Raisin sabza made from white raisins, Shigani made from black raisins, Kattakurgan, Nimrang, etc. are called hermiyan. Soyaki is a method of drying grapes in special shade rooms. Drying time without any treatment is 25-30 days; 14-20 days after soaking in a 0.3-0.4% solution of caustic soda in boiling water. 26-32% of raisins fall. White raisins are light green in appearance and quality when they are dried in the shade. To make white grapes more colorful (golden color), they are dried by smoking with sulfur in stacks (0.6-0.8 g of sulfur is burned for 30-40 minutes per kg. of grapes). Raisins dried from white raisins are called sabza or golden color sabza, Katta Korgon, Nimrang, dried raisin or golden color shigani. Raisins dried in greenhouses are of high quality, juicy and medicinal.

In the USA, grape heads are treated with No. 30 emulsion containing oleic acid before harvesting. This also creates small holes in the skin of the piles, accelerates the evaporation of the moisture contained in them, and shortens the construction process by 6-8 days. Grapes can be dried under polyethylene films. In this case, as a result of the air temperature under the film being 2-3 degrees higher than the temperature outside, the grapes dry 3-5 days earlier than in the open air; the product is protected from dust and precipitation. In some cases, grapes are dried in special drying devices that work on the basis of electric sources. The dried product is placed in special cardboard

boxes and sent to special fruit canneries for secondary processing. There, they are cleaned of various impurities and bands, washed if necessary, placed in appropriate containers, labels are attached and sent to the required places. Raisins are nutritious and healing food. The product, which contains up to 80% sugar (glucose, fructose), nitrogenous substances, organic acids, fiber and vitamins, is stored for a long time.

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