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DRYING GRAPES NATURALLY AND CALCULATING PRODUCT YIELD

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Annotation
Grapes must be picked from twigs, sprinkled on a wire rack in one layer and left in a sunny place. The drying process lasts up to three weeks, depending on the weather. The finished product has a moisture percentage of not more than 20%. The disadvantage of drying in the sun is that the grapes lose their original color and become dark brown, the aroma also becomes dull.

Keywords: Grapes, grape drying, natural grape drying, raisin grape varieties.

Introduction

In Uzbekistan, there are exceptionally favorable conditions for drying grapes. Long hot summer, low relative air humidity, excellent kishmish and table grape varieties, traditional experience, as well as the achievements of science make it possible to widely use air-solar and shade drying, to obtain products at minimal cost and of high quality.

A significant increase in raw materials for drying with high commercial qualities is the main task. For its implementation in each farm, it is necessary to carry out the entire range of Agro activities with high quality work on the entire area occupied by vineyards, in the best possible time, in full. In order to increase the yield of dried products and improve its quality, two weeks before harvesting, it is necessary to thin out the leaves and mint the shoots, at the same time stop watering, since the excess moisture content in the berries slows down the drying process.

The grapes go for drying when the sugar content in the berries of kishmish varieties is 23-25%, raisins - 22-23%.

The best varieties of grapes intended for drying: seedless - Kishmish white, Kishmish black, Kishmish, Sogdiana, Kishmish Botir, Kishmish Khishrau, Kishmish Zarafshan, Kishmish marble, Kishmish lunda, Kishmish Irtyshar, Guzal Kora; raisins - Katta mound, Shtur angur, Rizamat, Kara dzhanjal, Kara kaltak, Sultani (Jaus), Nimrang,

Muscat of Alexandria. Air-solar drying of grapes in farms is carried out on specially equipped drying sites, which are placed on lands unsuitable for growing crops.

In our country, grapes have been grown since ancient times. Viticulture plays an important role in the economic development of the Republic of Uzbekistan. In favorable soil and climatic conditions of the republic, grapes are grown for food, high-quality sultanas and various wines.

In addition, the absence of dangerous pests and diseases allows you to get a consistently high, environmentally friendly product at no cost. It is possible to extend the shelf life of products for consumption during off-seasons and extend the shelf life by a certain amount of processing. Making kishmish from grapes has long been known to mankind. Since ancient times, people have been able to dry grapes and cook raisins. In this sense, viticulture is one of the most important branches of agriculture in our country. Favorable natural and climatic conditions of the Republic of Uzbekistan allow growing a variety of grape varieties and obtaining a variety of products. A resolution “On measures to develop agricultural cooperation in the field of fruits and vegetables” was adopted. In accordance with these decrees and resolutions, the Council of Farmers, Dekhkan Farms and Landowners took measures to introduce new mechanisms for the development of cluster systems and cooperation systems in the cultivation, processing and export of fruits, vegetables and grapes.

Methods and Research Methods

The Republic of Uzbekistan is one of the most favorable regions for growing varieties of raisins. Among them, varieties of kishmish occupy a special place. Kishmish production is one of the ways to preserve grape products and plays an important role in providing the population with grape products throughout the year. It is well known that drying grapes has great economic benefits. The object of the study - white raisins, black raisins, pink raisins were selected from the raisin grape variety. Selected varieties were studied in 2 different drying methods. When preparing raisins from an attack, volumetric and solar methods are used.

Objosh

It is a method of soaking grapes in boiling alkaline water and spreading them out in the sun to dry. This method mainly dries large grape varieties such as Kattakurgan, Sultani, Rizamat, Nimrang. The advantage of this method is that after immersion in alkaline boiling water, small cracks appear on the skin of the grapes, and the dust on them disappears. This will reduce the drying time of grapes by 3-4 times, improve the quality of the product and increase the yield of sultanas.

Before drying, the grapes are sorted, placed in 2-3 kg sieves and immersed in 0.3-0.4% boiling alkali for 6-8 seconds. It is recommended to add 300-400 grams of lye for every 100 liters of water and immerse the grapes in cayenne after boiling the water for 7-8 minutes. If the grapes do not crack, you can hold them a little longer (11-12 seconds) or increase the concentration of baking soda a little, if the grapes are very crushed, you can add a little extra water. It is recommended to immerse no more than 10 centners of grapes in a 200-liter pot, after which the solution should be changed. Drying lasts 6-12 days, and every 2-3 days the grape heads must be turned upside down. When grapes are dried this way, you can get 26-30% raisins as a standard. After the raisins are dried, they are cleaned and stacked to keep the moisture even. This method of producing raisins is now widely used in viticulture, as a reduction in drying time is important for farms.

The Obzhoshi and Oftobi methods were used to obtain dried grapes from the observed varieties in the experiment, and the duration of its drying and the yield of the finished product were determined.

According to the analysis of the data shown in the table below, the drying time of the raisins studied by the burnt method was 10-12 days, the yield was 26.8% for white raisins, 25.1% for pink raisins and 25.9% for black raisins. %. Drying time was 10-11 days for white raisins and black raisins, while pink raisins was found to take the longest time (12 days) to produce a dried product.

Table 1 Production of finished products from experimental varieties of sultanas

№	Name of varieties	Amount of grapes for drying, kg	Drying time (in days)	Yield of dried products	
				kg	%
1	White kishmish	1000	10	268	26,8
2	Black kishmish	1000	11	259	25,9
3	Pink kishmish	1000	12	251	25,1

Thus, with the same drying, it was found that the most finished product can be seen in white raisins. When the white raisins dried out, the yield was 0.8% and 1.7% respectively higher than for black and pink raisins.

In the above method (Table 2), raisin varieties were dried and examined by the solar method. The duration of solar drying of the studied raisins was 18-20 days, the yield of finished products was 21.4-24.3%, the drying time of white raisins was 18 days, and the dried product was 24.3%. In the case of black raisins, the drying time was 18 days, the same as for white raisins, and the yield was 21.4%. The pink raisin variety showed a longer time of two days with a dried yield of 22.9%.

Thus, when sunflower and grape varieties were dried in the sun, the highest dried yield was observed in white raisins from the experimental varieties, which differed significantly from the yield of the dried product from other varieties.

Table 2 The output of the finished product from experimental grape varieties raisins by the solar method

№	Name of varieties	Amount of grapes for drying, kg	Drying time (in days)	Yield of dried products	
				кг	%
1	White kishmis	1000	18	243	24,3
2	Black kishmish	1000	18	214	21.4
3	pink kishmish	1000	20	229	22,9

Conclusion

In conclusion, we can say that grapes are in our country (write a summary). The main goal of natural storage of grapes is to keep their properties as natural as possible and to dry the product without the use of various chemicals. As the number of people increases day by day, the demand for nutritious food will increase and we will see that the demand for natural and bio products will never decrease.

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