



DRYING APPLES

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ANNOTATSIYA

Mazkur maqolada olmaning respublikamizdagi keng tarqalgan “Semerenko” va “Besh yulduz” (Red Delishes) navlarini quritish uskunasida quritish usullarini va mahsulotlariga qo'yiladigan talablar, uni sifatiga ilmiy asoslangan ma'lumotlar keltirilgan. Ushbu quritgich qurilmasi tabiiy sharoitga nisbatan yuqori samaradorligi isbotlangan.

АННОТАЦИЯ

В данной статье представлена научно обоснованная информация о способах и требованиях к сушке яблок “Семеренко” и “Пять звезд” (Red Delishes). Эта сушилка доказала свою высокую эффективность в естественных условиях.

ANNOTATION

This article provides scientifically based information on the methods and requirements for the drying of apples in the drying equipment of the most popular varieties of apples in the country “Semerenko” and “Five Stars” (Red Delishes). This dryer has been proven to be highly efficient under natural conditions.

This article presents the requirements for the drying methods and products of the "Semerenko" and "Besh tyzni" and (Red Delishes) varieties of apples, which are common in our republic, in the drying equipment, as well as scientifically based data on their quality.

Keywords: Apple, apple varieties, quality indicators, drying methods, drying agents, moisture, temperature, equipment, dried product, hot air, sunny air, energy.

Dolzarbligi

Today, our government attaches great importance to drying fruits and vegetables. Organization of high-quality drying of fruits, grapes and vegetables allows to increase production profitability of farms specializing in horticulture, increase their





competitiveness and further economic development. is one of the cheap, simple and popular routes. [3].

In the gardens of our country, fruit varieties with seeds, grains and berries are ripe. . Since the beginning of the consumption of fruit and grape products, they have been engaged in their storage and processing. Storing and processing the grown product without spoiling it and without reducing its quality, as well as its effective use, is one of the human needs. [4].



In this regard, PQ-4406 of the President of the Republic of Uzbekistan "On additional measures for deep processing of agricultural products and further development of the food industry" adopted on July 29, 2019 - measures for further development of agricultural products and further development of the food industry are specified in the decision No. [1].

Based on the above-mentioned decisions and decrees, drying processes have reached a new stage, and now fruits and vegetables and other products are dried in the sunny air not in a simple way, but on the basis of various innovative technologies. One of them is the equipment for drying fruits using electricity. The design of this dryer is simple, it is reliably protected, and most importantly, it produces dried products that meet world standards.

Research Methods and Materials

Based on the above, we conducted research on the drying of apples in innovative ways in our experiments. In this regard, the laboratory equipped with the most modern tools and equipment at the Department of "Preservation and Processing of Agricultural Products" of the Tashkent State Agrarian University was established, and modern fruit drying equipment based on electricity was installed in this laboratory.



The operation of the drying equipment is simple, efficient and economical. The duration of product drying in this dryer is many times shorter than that of ordinary sun-air drying, depending on the type of product and its size. Fig. 1

Fig. 1. Fruit drying equipment

There are requirements for dried fruits and their quality indicators in electric drying equipment, which are as follows:

- ✓ short duration of drying;
- ✓ the product to be dried is protected from dust, insects, precipitation and wind;
- ✓ comfort and other benefits for workers are highlighted;
- ✓ the possibility of drying vegetable products that cannot be dried by other methods;
- ✓ environmental cleanliness;
- ✓ saving electricity;
- ✓ resistance to external influences, etc.

Table 1 Construction of apples in artificial drying equipment effect on duration

No	Apple naval	Drying duration, hour		Moisture content of dry product %	Dry product yield is 1kg against the product g.
		Artificial drying in the equipment	Sunny in the air		
1	Five stars (Red Delicious)	8	72-144	18	105
2	Semerinko	7	70-140	20	102

Research Results

Experiments on drying fruits of different apple varieties were carried out in this dryer. Experiments were carried out in spring, in the first ten days of March, that is, with apple fruits brought from storage warehouses. Apple varieties "Semerenko" and "Five stars" (Red Delishes) were selected for drying in the drying equipment.

The fruits of the above varieties of apples were peeled, soaked in 0.3% Namakob water (this helps to preserve its natural color), and after 10-15 minutes, they were placed on trays and placed in the drying equipment.

The internal temperature of the drying equipment was set at 45 oC. As a result of the observations, it was observed that apple peels from Semerenko varieties were ready for 8 hours. The yield of dried products was 12-15% of apple varieties. is the availability of opportunities for change.



Conclusion

Thus, this fruit drying device deserves attention for its all-round convenience. Especially in laboratory conditions, scientific researchers conducting their research and private garden owners can use this technology to obtain quality dried products in a short period of time without allowing product wastage. Undoubtedly, this device has attracted great interest among fruit and vegetable growers. 'shoots, it should be widely implemented.

Experiments have shown that drying fruits and vegetables in this dryer is effective and promising.

References

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