



## ROCAMBOLE IS A NEW TYPE OF VEGETABLE (*ALLIUM SCORODOPRASUM L.*)

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In the research, in order to make a initial source for garlic selection, during the study of local variety samples, a variety sample with a large onion head, an average weight of 72-150 g, and a number of bulbs of 5-6 were selected. In addition to having a large bulb and less number of bulbs, it was also monitored that the leaves of this cultivar sample were wide and produced additional small bulbs in the root part and between the dry skin sheaths. By comparing its biology, morphology, productivity and other characteristics, it was found that it is significantly different from garlic, and it was determined that it is a new vegetable crop in the conditions of Uzbekistan.

According to the classification of A.A. Kazakova (1978), rocambole (*Allium scoro-doprasum L.*) is a genus of *Allium L.*, is a type of *Agardh* and is a type of vegetable belonging to a family of *Allium Wendelbo*. In addition to rocambole, this group includes garlic (*Allium sativum L.*), leek (*Allium porrum L.*), kurrat onion (*Allium kurrat Schwenf.*), grape onion (*Allium ampeloprasum L.*), nutmeg (*Allium moshatum L.*), also includes long pointed onion (*Allium longicusps Rgl.*). Rocambole is also called Egyptian onion, Spanish garlic, onion-garlic in some countries. His homeland is Central Asia. It has been found to grow naturally in Spain and Egypt. Now it is grown in Europe, the North Caucasus, China, Korea, Japan, and partly in Russia. It is very popular in Mediterranean countries - Spain, Turkey, Greece, Egypt, Morocco (Kazakova A., 1978).

Rocambole gives the taste of both onion and garlic at the same time. It is used in place of onion and garlic in many dishes. Rocambole is a herbaceous plant that combines the characteristics of onion and garlic. Its height reaches 1.5 m including the false stem and flower stalk. Its inflorescence is spherical and consists of many small bell-shaped flowers of purple color. Its leaves, false stem and bulb are valuable food. The leaves are rich in vitamins, carbohydrates, essential oils, protein, phytoncides, carotene, and they contain a lot of ascorbic acid compared to onions.

<https://www.botanichka.ru/article/vyirashhivaem-luk-chesnok-rokambol/>).

**Object and methods of research.** The type of garlic, "Chidamli", was the object of research. This type of garlic was included in the State Register of the Republic of Uzbekistan since 2016 [State Register of crops recommended for sowing on the territory of the Republic of Uzbekistan, Tashkent., 2017].

The studies were carried out according to: [Methodology of the State variety testing of agricultural crops, 1975; Methods of field experience, 1985; Plots and sowing schemes for



selection, variety testing and primary seed production of vegetable crops. Options. OST 4671-78, 1997].

In our research, rocambole bulbs were planted together with the resistant variety of garlic on September 20. The experiment has four returns, the area of the compartment is 10.1 m<sup>2</sup>.

The period from planting to germination was 19 days (Table 1). The growing period, that is, from the emergence of the bulbs to the technical ripening of the bulbs, was 221 days in the comparative “Chidamli variety”, and 242 days in the rocambole, that is, the rocambole matured 21 days later.

**Table 1.**

**The duration of Rocambole's development phases (2020-2021)**

Sample name	Landing massive appearance seedlings, days	From mass shoots, days				Vegetative period, days
		before the advent inflorescences	until yellowing stems	until the technical ripeness of the head	before harvesting	
“Chidamli”, control	19	194	213	221	227	221
Rocambole K-24	19	194	232	242	242	242

In our research, the height of the false stem, including the flower stalk, was 74 cm in garlic and 106 cm in rocambole. This variability is due to the flower stem.

In garlic, the length of the flower stem was 27 cm. It was observed that this indicator was 46 cm in rocambole, and it was 19 cm longer than the garlic flower stalk.

There was no sharp difference between garlic and rocambole in terms of leaf number and length, and its number was 8.8-9.0 pieces, length 43-44 cm.

Garlic and rocambole crops differ sharply from each other in terms of leaf width. The width of the leaf plate was 3.0 cm in Chidamli variety and 5.0 cm in rocambole, which was 2.0 cm more than garlic.

The difference between these two crops is clearly visible in the weight of the bulb, the number of bulbs and their size (Table 2). In rocambole, the height of the onion head was 4.9 sm, and the diameter was 6.2 sm, which is 0.6 and 1.0 sm more than garlic, respectively.

**Table 2.**

**Description of Rocambole bulbs (2020-2021)**

Sample name	Bulbs				Pi is the number of cottages, pcs	one pi cottage, gr
	height, sm	diameter, sm	Index	average weight,		



				gr		
“Chidamli”, control	3,9	5,6	0,7	62	14	4,2
Rocambole K-24	4,9	6,2	0,8	106	5,5	19,0

The average weight of Rocambole onion was 106 g (58-150 g) and was 44 g more than garlic. One of the most important signs is the number of bulbs. One of the requirements for new varieties is that the number of bulbs in the onion head is small and their size is large. The number of bulbs in a bulb is 13-14 in garlic. It was observed that this index was 5-6 in Rocambole. The average weight of one bulb of garlic was 4.2 g. And in Rocambole, this indicator was 19.0 g, which was 452.3% compared to garlic.

In our research, it was found that garlic and rocambole are different in terms of total productivity (table 3). The productivity of garlic was 27.0 t, while this indicator reached 44.0 t. 100% of the total harvest was considered marketable.

**Table 3.**

**Yield of garlic and rocambole (2020-2021)**

Sample name	Productivity, t/ha					
	Overall	the standard in %	marketable	total yield in %	non-standard yield, t/ha	total yield in %
“Chidamli”, control	27,0	100	25,2	93,3	1,8	0,7
Rocambole K-24	44,0	163,0	44,0	100,0	-	-
	0,51					
Sx,%	0,25					



Figure. Rocambole are very small bulbs that form on the bulbs and roots. 10-25 extra small bulbs are formed in the root system of the rocambole and between the dry bark of the bark (Fig.).

These bulbs are similar to air bulbs of garlic, and in the first year of planting, in most cases, they form whole bulbs.

It was observed that its bulbs are well preserved until February-March of the following year.



The reproduction coefficient of Rocambole is 5-6, which causes certain difficulties in its reproduction. Nevertheless, we believe that rocambole will find its place in the vegetable industry of Uzbekistan. Further research will focus on creating a new variety of rocambole, developing a seed breeding system, studying its biochemical composition, and applying it to production.

As a result of the research, a new vegetable crop, rocambole, was isolated in the conditions of Uzbekistan, and its morphobiological properties were studied and botanically described.

It was found out that garlic and rocambole are different in terms of yield and quality.

The productivity of garlic was 27.0 t/ha, while this indicator reached 44.0 t/ha of rocambole.

The highest marketable yield was also observed in rocambole and was 44 t/ha. It gave 63% higher yield than garlic and 100% of the yield is marketable.

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