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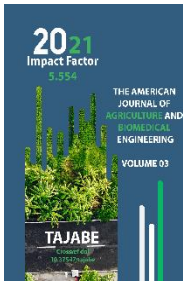

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Selection Of Local And Introduced Apricot Varieties

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ABSTRACT

The purpose of this article is to select from the existing collection orchards of apricot such varieties that are resistant to natural and climatic conditions and possess valuable biological and economic characteristics, as well as to select and introduce promising high-yielding varieties.

KEYWORDS

Climatic conditions, endurance, trimming, shape, variety, apricot, drought, cold resistance, economic features, biologist features.

INTRODUCTION

Apricot is an ancient fruit tree, whose homeland is Armenia, but later it turned out that it is Chinese.At the same time, it was confirmed that the homeland of the apricot is also Central Asia, as wild ones are still found here.Apricot is one of the most widely grown grainy fruits in Uzbekistan.The importance of apricots is determined by the fact that they can be eaten raw and processed.Fresh apricots contain 8.4-19.0% sugar, 0.3-1.7% malic acid and a small amount of tartaric acid, 0.1-1.6% pectin, as well as vitamins A and C, oxalic acid, and in dried form contains 80% or more sugar.The core of most apricots grown in Uzbekistan is sweet and eaten like almonds. It contains 45-58% fat and about 28-30% protein[6].

Research on improving apricot cultivation technologies emphasize the need to take into account the degree of drought tolerance of

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varieties when growing apricot varieties in arid climates[5].

In terms of drought and heat resistance, apricot varieties are second only to almonds.In summer, it grows well in July when the average temperature is above 300C and the maximum temperature rises to 45-470˚C.[2].

According to the authors, who studied the drought resistance of leaves on the layers of branches, that adaptation of dry soil to the leaves of the lower layers of branches was much higher than the leaves of the upper layers.This is explained by a decrease in the speed of water movement and transpiration in the leaves of the lower layer, as soon as water deficit begins.As a result of observations, the researchers came to the conclusion that the plant, with a lack of water, begins to reduce its consumption and, as a result, becomes more resistant to drought [3].

Seasonal changes in climatic conditions studied by scientists have revealed morpho-physiological changes in plants during the annual cycle during long evolution.Cold resistance, yield, fruit yield and characteristics of varieties depend on their adaptability to environmental conditions [7].

According to the author, when studying the physiological state of tempering and frost resistance of plants, the cold resistance of plants rises to a high level during tempering in autumn and early winter.In this case, the accumulation of sugar is characteristic of the first phase of tempering, which begins with the cessation of growth processes.The second phase of tempering begins at a temperature of 2-5˚C, during which time the plants develop frost resistance[8].

The dramatically changing temperatures that kill many flower buds affect in different ways even the same varieties and this depends on meteorological factors, growing conditions and the genotypic characteristics of the variety.Thus, due to the genotypic characteristics of the variety, it is detectedthe sharp temperature for apricot buds -1.1 -5.6˚C, for flowers -0.6 -2.8˚C, and for newborns -0.7-2.2˚C[9].

According to Romanian scientists, the resistance of apricot buds to low temperatures depends on its level of rising. It is observed to completely damage the fruiting buds when temperatures dropped in prolonged exposureto -25˚C in December-January.Apricot tree varieties were not damaged even at a temperature of -28˚C, but damage was detected when this cold temperature was observed for 3-4 hours [1].

Lack of moisture in the soil slows or stops the growth of fruit plants, resulting in subsequent wilting of leaves and early shedding.The next year, the growth quality of the crop and the number of main fruits decreases, and the quality deteriorates[4].

THE PURPOSE OF THE RESEARCH

Selection of local and introduced varieties of apricot in the soil and climatic conditions of the Kashkadarya region and the introduction of selected promising varieties into production.

RESEARCH METHODS

Field and laboratory experiments and the results of scientific research were carried out according to generally accepted methods in fruit growing.

RESEARCH RESULTS

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As a result of our observationson Monica Blanca apricot treesin 2019, the blossoming of flower buds was observed in the early period on

February 24, the opening of flower buds on February 28, the beginning of flowering until March 4, and the end of flowering until March 13.

In 2019, these figures on Subkhanvariety of apricotwere observed in the bloom of flower buds on March 12, the opening period of flower buds on March 15, the beginning of flowering until March 17, and the end of flowering until March 27.

In these varieties the phenological phases differed. In this case, the germination period of flower buds differed by 16 days, the opening time of flower buds by 15 days, the beginning of flowering by 13 days, and the end of flowering by 14 days. (1-жадвал).

It was observed that by orderly trimming and shaping, the trees made full use of the scattered light relative to the light falling directly on them.This is because it passes through all the branches of the tree and the sun's rays fall on the main part of the leaves.On top of this, it was found that diffused light has a more positive effect on direct light, a larger positive effect on leaf size, color, fruit quality, and good tree growth. In addition, it was shown that how long daylight lasts has a great importance.

As the tree grew older, its demand for water increased, and the root system of fruit trees grew less deeply into the soil, causing less damage to young trees and seedlings from drought.Therefore, when there is little rainfall in the fall and the soil moisture dries out, it is necessary to irrigate the land in winter.

Drought resistance provides a close relationship between water regime processes and environmental factors, as well as high resilience properties.In this regard, the leaf surface of Subkhoni Zarya apricot is 42 cm2 on large leaves and 23 cm2 on small leaves; in the Monica Blanca variety, the large leaves are

81 cm2, in the small leaves 36 cm2, and the weight of one leaf is 0.82 mg in the large leaves and 0.50 mg in the small leaves of the Subhoni Zarya variety

is79 mg. The difference in large and small leaves of these varieties was observed to vary from 0.75 to 0.29 mg. The leaf sizes of the remaining varieties were attached in the table below.The medium-growing Subkhoni Zarya and Nadjimi varieties were distinguished by their drought and drought tolerance compared to the strong-growing large-leaved Monica Blanca, Shalakh, Kaloni Kandak, Subkhoni Gigant and other varieties.

The high drought resistance of the Subkhoni Zarya variety is mainly explained by the fact that it is able to retain sufficient moisture even in adverse natural conditions.The number of leaves of the studied apricot varieties, leaf level, water content in the leaves were determined and shown in the table 2

During observations and scientific expeditions, it was observed that the onset of phenological phases in apricot varieties on trees growing in mountainous areas varies from 10 days to 23-27 days, respectively, depending on the biological characteristics of the varieties compared to varieties grown in desert areas.

These phenological phases were identified in the studied apricot varieties and of these varieties grown in mountainous and foothill areas.

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In conclusion, it can be said that among the introduced apricot varieties Monica Blanca and Shalakh in early spring 2017, due to early flowering, short-term frosts caused 65-70% of damage to the flowers, which led to a decrease in yield.Due to the fact that most varieties of the collection Nadjimi, Subkhoni Zarya, Yubiley Navoi, Isfarak Badamsky have a flowering period of 3-11 days, that is, 10-15% later than Monica Blanca and Shalakh, these varieties did not suffer from short-term frosts.

In terms of drought tolerance, Nadjimi and Subkhoni Zarya varieties are more drought and cold tolerant than Monica Blanca and Shalakh varieties due to the small size of the crown and leaves and low water content in the fruit.

Table 1
The results of phenological observations on apricot varieties were planted in 2009 on a 6x5 scheme

#	Varieties	Years	Bud swelling	Budding	Flowering			Fullle afout put	Ripening of fruits	Leaf yellowing	Falling leaves			Vegetation period (days)
					Starting	Fullbloomin g	Ending				Starting	Fullossing	Ending	
1	Subkhoni	2017	15/III	18/III	21/III	26/III	30/III	14/IV	24/VI	5/X	9/X	29/X	8/XI	238
		2018	4/III	8/III	10/III	13/III	21/III	5/IV	13/VI	24/IX	7/X	25/X	3/XI	244
		2019	12/III	15/III	17/III	20/III	27/III	13/IV	15/VI	8/XI	27/X	13/XI	21/XI	254
2	SubkhoniZarya	2017	12/III	15/III	18/III	22/III	27/III	12/IV	24/VI	29/X	11/X	25/X	13/XI	246
		2018	4/III	8/III	10/III	13/III	21/III	2/IV	9/VI	14/X	8/X	26/X	5/XI	246
		2019	9/III	12/III	14/III	17/III	23/III	7/IV	16/VI	4/XI	14/X	29/X	15/XI	251
3	Monica Blanca	2017	9/III	12/III	15/III	19/III	24/III	9/IV	23/VI	22/XI	28/X	21/XI	4/XII	270
		2018	2/III	5/III	7/III	10/III	17/III	1/IV	8/VI	18/X	27/IX	14/X	29/X	242
		2019	24/II	28/II	4/III	7/III	13/III	2/IV	15/VI	27/X	5/XI	20/XI	28/XI	274
4	Shalakh	2017	10/III	13/III	16/III	20/III	25/III	9/IV	16/VI	23/X	14/X	29/X	13/XI	248
		2018	3/III	6/III	8/III	11/III	18/III	2/IV	31/VI	19/X	28/IX	19/X	29/X	241
		2019	27/II	3/III	6/III	12/III	19/III	4/IV	3/VI	16/XI	8/XI	21/XI	28/XI	274

Table 2
Number of leaves identified on trees, leaf level, natural and dry weight

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#	Varieties	Years	Number of leaves (pieces)	Leaf size (cm2)			Wet leaf weight			Dryleaf weight		
				Large	Medium	Small	Large	Medium	Small	Large	Medium	Small
1	Subkhoni	2017	12106	39	37	33	0,96	0,92	0,83	0,44	0,43	0,32
		2018	10960	37	34	30	0,92	0,90	0,79	0,43	0,39	0,30
		2019	11328	38	36	32	0,98	0,93	0,84	0,47	0,42	0,34
2	SubkhoniZarya	2017	11640	39	31	22	0,76	0,52	0,48	0,22	0,19	0,16
		2018	10875	41	32	24	0,81	0,54	0,51	0,25	0,21	0,19
		2019	11128	42	31	23	0,82	0,56	0,50	0,24	0,20	0,18
3	Monica Blanca	2017	13640	74	57	33	1,56	1,14	0,78	0,50	0,28	0,27
		2018	10790	83	69	38	1,68	1,36	0,87	0,62	0,31	0,30
		2019	11370	81	66	36	1,57	1,40	0,79	0,65	0,33	0,30
4	Shalakh	2017	14360	81	67	52	2,09	1,51	1,16	0,56	0,43	0,30
		2018	12783	85	64	54	2,18	1,42	1,19	0,59	0,40	0,33
		2019	13294	86	65	56	2,19	1,50	1,19	0,58	0,44	0,36

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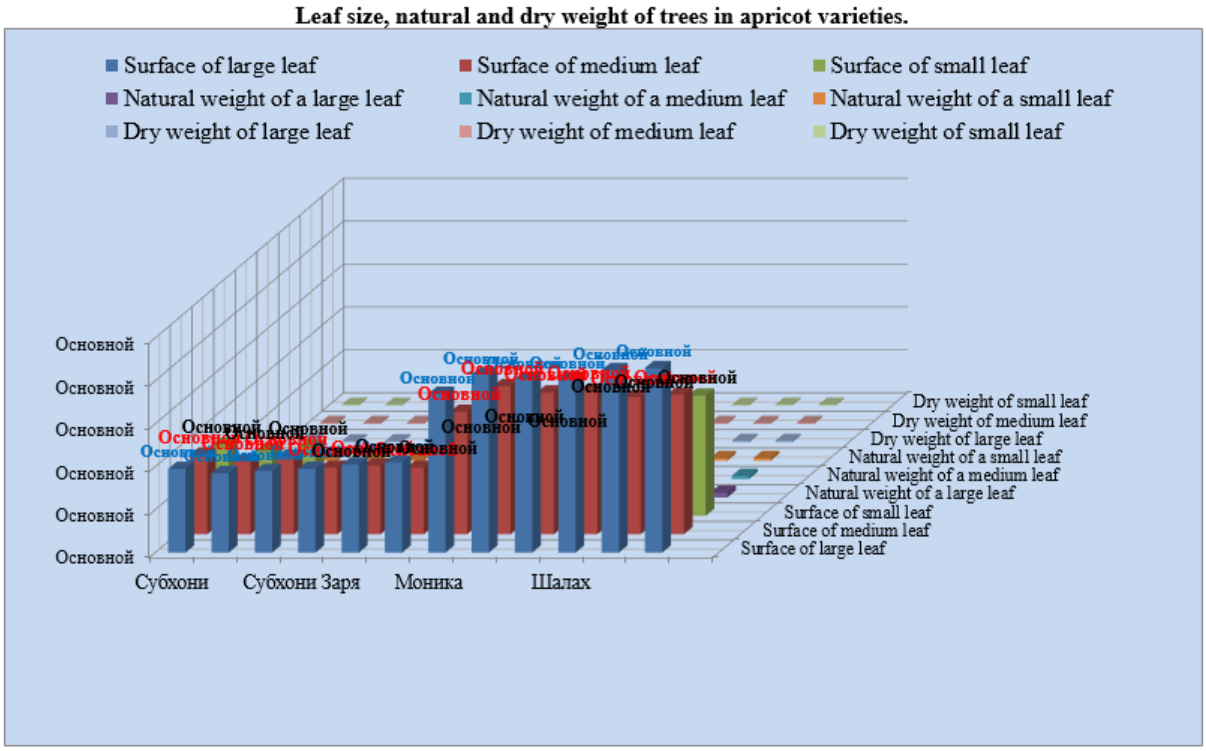

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