

INFLUENCE OF THE BIOLOGICAL CHARACTERISTICS OF THE VARIETY ON THE PRODUCTIVITY OF THE PLANTATION AND THE QUALITY OF THE APRICOT FRUITS DURING THE FRUITING PERIOD

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Abstract

The researches were carried out in the spring of 2015 from the company "Agroparc Management" SRL, located in the southern part of the country. As biological research material, trees from apricot varieties were used: Wonder Cot, Magic Cot, Spring Blush, Lilly Cot, Perle Cot, Pinkcot, Sweet Cot, Orange Red, Big Red, Falaria, Kioto and Farbaly. The Orange Red variety was taken as a control. The varieties were grafted onto Mirobalan 29C rootstock. The trees formed by open vase crown type. Planting distance 5.0 x 3.0 m. The lot is not irrigated. The soil between the intervals, between the rows and between the trees in the row was maintained as black field. The atmospheric precipitation that fell in abundance in the months of April (73.6 mm) and May (46.0 mm) in the southern part of the country had a considerable impact on the quality of the fruits of the early ripening apricot varieties (Wonder Cot, Spring Blush, Magic Cot, Pinkcot). Medium and late ripening cultivars had slower fruit development due to insufficient moisture during the development period.

Key words: apricot, variety, fruit, average weight, production, quality.

INTRODUCTION

Apricot culture is a species whose fruits are requested by consumers more and more frequently (Balan et al., 2008; Cociu et al., 1993; Peșteanu et al., 2018a; 2018b).

They are intended for fresh consumption as well as for industrialization. Until recently, the apricot crop was viewed with distrust, even considered risky, due to its lower frost resistance, often affected by late spring temperatures (Balan et al., 2021; Peșteanu & Negru, 2021a; 2021b; Stănică et al., 2010).

Among these disadvantages can be included the more obvious sensitivity to specific diseases, primarily the premature death of plants (Balan et al., 2008; Cociu et al., 1993; Peșteanu et al., 2018b).

When establishing apricot orchards in the Republic of Moldova, cultivar/rootstock associations with high growth vigour are used, in which it is recommended to lead the crown of the trees according to the high-volume pyramid, where the weight of the vegetative macrostructure prevails at the expense of the fruit microstructure (Negru & Peșteanu, 2019b; Peșteanu et al., 2018b; Peșteanu, 2021b).

Worldwide, the species in question has, in the last 20 years, undergone essential transformations regarding varieties with different ripening times, rootstocks with a shorter waist and the shape of the crown used in plantations (Milatovic et al., 2013; Peșteanu, 2021a; Stănică & Eremia, 2014). These changes allow to obtain more obvious performances in the cultivation technology of the given species and to record harvests of 20-25 t/ha of competitive quality (Peșteanu et al., 2021; Stănică et al. 2019).

In order to record an optimization of the structure of the apricot plantation, the cultivation of this species can achieve performance by implementing modern varieties with various ripening periods to have standardized productions during 60-70 days, vegetative rootstocks with balanced vigour to use new forms of crown suitable for the intensification of the given species (Balan et al., 2008; Negru & Peșteanu, 2020; Negru et al., 2021; Peșteanu, 2021b; Stănică et al., 2020). This trend can lead to the increase of trees' resistance to various abiotic and biotic cataclysms, the specialization and concentration within the country's geographic areas of apricot

culture, highlighting new cultivation micro zones (Negru & Peșteanu, 2019a; Peșteanu, 2021a; Piagnani et al., 2013)

MATERIALS AND METHODS

The researches were carried out in the commercial orchard of the company SRL "Agroparc Management", town Volcanic. The orchard was established with trees in the form of certified category rods in the spring of 2015. The material was imported from Italy, from the "Vivai Batististini" nursery.

The trees of apricot varieties from the world selection (Cot International, International Plant Selection, Escande, etc.) served as biological research material, which, thanks to a theoretical study, were considered promising for the southern area of the Republic of Moldova: Wonder Cot, Magic Cot, Spring Blush, Lilly Cot, Perle Cot, Pinkcot, Sweet Cot, Orange Red, Big Red, Faralia, Kioto and Farbaly. As a control was the variety Orange Red.

The trees of the studied varieties were grafted onto Mirobalan 29C rootstock. The trees in the experimental group were led according to the crown of the usual vessel. Planting distance 5.0 x 3.0 m. The lot is not irrigated. The soil between the intervals between the rows and between the trees in the row was maintained as black field.

The phenological investigations were investigated by the observation method in all the trees of the variant according to the methodology used in the state trial of the varieties. The ripening period of the apricots was established by the moment when the apricots reached the characteristic color and taste qualities specific to the variety (Baggiolini, 1952).

The total number of fruits within the crown of the trees was determined 2 weeks before harvest. The production obtained within each variety was determined by the fruit weighing method. During the harvest, the number of fruits was determined for each individual tree in the variant. The average weight of an apricot fruit was determined by the calculation method during the harvesting period, i.e. 100 fruits collected in a row within each variety were weighed. After this, the average harvest of a tree and the fruit per surface unit was determined by the calculation method.

Morphological indices such as: the height, the small and the large diameter of one fruit in the studied varieties were determined in the laboratory of the Department of Horticulture and Forestry, by the measurement method. The shape of the fruit was expressed based on the shape index, by the ratio between the height and the large diameter of the fruit.

Fruit quality was determined by measuring the large diameter in the equatorial area of apricots. In accordance with the quality and marketing requirements of fresh fruit, apricots with a diameter smaller than 30 mm cannot be marketed. Those with a fruit diameter of 30-35 mm are assigned to quality category I and II, or are marked with the letter C. Those with a diameter greater than 35 mm are assigned to the extra quality category. Apricots from the extra quality category are divided into the following classes: B – diameter 35-40 mm; A – diameter 40-45 mm; 2A – diameter 45-50 mm; 3A – diameter 50-55 mm and 4A – diameter 55 mm and larger.

The main economic indicators were determined by accounting for the investments implemented in 2023 for fruit production and the value obtained from sales.

The statistical processing of the main indices was carried out by the method of monofactorial dispersion analysis. The experimental results were processed using the ANOVA test and STATGRAPHICS 18 software package.

RESULTS AND DISCUSSIONS

The apricot's requirements for different abiotic factors are very different and therefore each phase of development requires an optimal temperature level and a certain length of time.

In the spring of 2023, the apricot crop in the plantation managed by the company "Agroparc Management" SRL started flowering on 23.03.2023. The data entered in Table 1 highlight that earlier flowering was recorded in the varieties with earlier ripening period Magic Cot and Wonder Cot (23.03). On 25.03, flowering began for the trees of the Perle Cot variety, and on 26.03 for the Pinkcot variety. Flowering one day later was recorded for the Sweet Cot and Spring Blush varieties. Then, in the following sequence, flowering took place in the trees of the Lilly Cot varieties - 28.03, the

Orange Red variety - 30.03, the Big Red variety - 01.04, the Faralia variety - 02.04, the Farbaly variety - 03.04 and the Kioto variety - 04.04. Practically, the flowering of the trees in the studied varieties took place during 12 days.

A degree of flowering of 50% of the flowers in the crown of the apricot trees in the Wonder Cot and Magic Cot varieties was recorded on 25.03, in the Pinkcot and Perle Cot varieties on 29.03, and in the Spring Blush and Sweet Cot varieties on 30.03. Then, in the following sequence, the Lilly Cot variety bloomed - 02.04, the Orange Red, Big Red and Faralia varieties - 04.04, the Farbaly variety - 05.04 and the Kioto variety - 06.04. That is, the period between the beginning of flowering and the 50% flowering phenophase lasted approximately 2-3 days, depending on the biological characteristics of each variety under study and the air temperature during that period.

Table 1. The influence of apricot varieties on the initiation of certain phases of development of the fruit organs of the trees in the southern part of the country, year 2023

Variety	The date of the initiation of the beginning of the flowering phase of the trees				
	Beginn ing of the floweri ng	Bloom 50%	Full bloom	Falling petals	Strengthe ning the endocarp
Wonder Cot	23.03	25.03	29.03	05.04	12.05
Spring Blush	27.03	30.03	02.04	08.04	14.05
Magic Cot	23.03	25.03	29.03	04.04	12.05
Pinkcot	26.03	29.03	01.04	05.04	13.05
Perle Cot	25.03	29.03	01.04	07.04	15.03
Orange Red (m)	30.03	04.04	06.04	09.04	14.05
Sweet Cot	27.03	30.03	04.04	10.04	14.05
Lilly Cot	28.03	02.04	05.04	10.04	14.05
Big Red	01.04	04.04	06.04	12.04	15.05
Kioto	04.04	06.04	08.04	13.04	17.05
Faralia	02.04	04.04	06.04	12.04	16.05
Farbaly	03.04	05.04	07.04	13.04	17.05

The end of flowering can be considered when 100% of the flowers on the perennial wood and the annual branches from the first wave of growth have completely bloomed. In the trees of the studied varieties, the final flowering period coincided with 29.03 - 08.04, that is, it lasted 11 days.

The duration between the phenophase of flowering and full flowering in the trees of the studied apricot varieties varied from 4 to 7 days depending on the biological particularities of the

variety. In the case of the group of trees from the varieties with early ripening, this period lasted 5-7 days, and among the trees from the varieties with late fruit ripening it was 4 days.

The falling of the petals refers to the period when the fruits have just been formed and it is necessary not to allow their condition to be affected by both abiotic and biotic factors. Apricots are quite sensitive to various biotic and abiotic changes. The obtained results highlight that the petal falls of the apricot varieties studied in the southern part of the country took place from 04.05.2023 and lasted until 04.13.2023. This phenomenon took place with very early-ripening varieties (Wonder Cot, Magic Cot, Spring Blush, Pinkcot Lilly Cot), continued with medium-ripening varieties (Perle Cot, Sweet Cot, Orange Red, Big Red) and ended with those with ripening late (Kyoto, Faralia, Farbaly).

Studying the consecutiveness of fruit ripening in the trees of the apricot varieties studied in the southern part of the Republic of Moldova during the research, we notice that large deviations from the harvest period possessed by each variety were not recorded.

The study carried out on the number of days recorded from the beginning of flowering to the harvesting of the fruits in the apricot varieties taken in the study, we note that this phenophase was 80 days in the Spring Blush variety and was completed after a period of 129 days in the trees of the variety Farbaly. If we compare the ripening period of the apricot fruits with the Orange Red variety, considered as a control, we note that all the varieties studied can be divided into 4 groups (Figure 1).

The varieties with extra early ripening include Spring Blush and Wonder Cot, whose fruit harvesting started 6-7 days earlier than the control variety. Magic Cot, Pinkcot, Sweet Cot, Lilly Cot and Orange Red varieties belong to the group of early ripening varieties, whose difference in the start of harvesting compared to the control variant was 6-8 days. Within the group of varieties with medium ripening are the varieties Perle Cot, Big Red, Sweet Cot and Kioto (6-7 days), and among those with late ripening are the varieties Faralia and Farbaly, in which the beginning of the harvest period compared to the control variant began with a delay of 23 and 37 days, respectively.

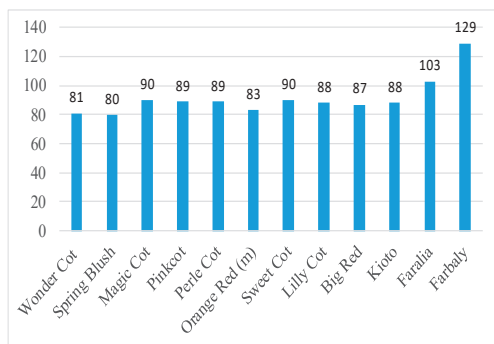


Figure 1. The influence of the biological particularities of apricot varieties on the period from the start of flowering of the trees to the ripening of the fruits, year 2023

The size and shape of the fruits influence the market value and are important indicators in the study of varieties, because they have a direct relationship with the quality of the obtained product, the productivity during sorting and packaging of the fruits.

According to the average weight, the apricot varieties studied can be divided into the following groups. The varieties whose average weight falls within the values up to 40 g, the group of those with small fruits (Wonder Cot, Kioto, Lilly Cot, Big Red, Sweet Cot, Farbaly and Faralia varieties). The Perle Cot and Spring Blush varieties are assigned to the group of varieties with medium fruits, whose average fruit weight was 41-50 g. The Orange Red (m), Pinkcot and Magic Cot varieties, according to the average fruit weight, belong to the group varieties with large fruits (50-60 g) (Table 2).

The difference between the height of the fruits differs from the genetic nature of the variety under study. Lower values of apricot fruit height were recorded in the Lilly Cot (37.0 mm) and Kioto (36.9 mm) varieties, and the highest in the Magic Cot variety (52.0 mm). In general, all apricot varieties studied can be divided according to the height of the fruit into 3 groups. Kioto and Lilly Cot belong to the group of varieties with a fruit height of 35-40 mm, and to those with a fruit height of 40-50 mm the varieties Big Red, Wonder Cot, Sweet Cot, Spring Blush, Pinkcot, Orange Red, Perle Cot, Faralia and Farbaly. Values greater than 50 mm were recorded only in the Magic Cot variety (52.0 mm).

The large and the smallest diameter in the studied varieties were influenced by the biological particularities of the variety. In most apricot varieties the large diameter ranged from 30 to 40 mm (Wonder Cot, Lilly Cot, Sweet Cot, Big Red, Kioto, Faralia and Farbaly), then the varieties Spring Blush, Magic Cot, Pinkcot, Perle Cot and Orange Red recorded values higher than 40.0 mm.

Depending on the values of the small diameter, we record diametrically opposite correlations. In the case of the varieties Lilly Cot, Wonder Cot, Sweet Cot, Big Red and Kioto, the diameter of the apricot fruits was less than 40 mm, and in the varieties Spring Blush, Perle Cot, Faralia, Orange Red (m), Magic Cot, Farbaly, the Pinkcot index in the study recorded values greater than 40.0 mm.

Table 2 Average weight and morphological parameters of apricot fruits according to the biological characteristics of the variety, year 2023

Variety	Average weight, g	Height, mm	Large diameter, mm	Small diameter, mm	Shape index
Wonder Cot	34.4	46.4	36.4	38.1	1.22
Spring Blush	44.6	44.0	40.5	44.4	0.99
Magic Cot	56.2	52.0	43.5	45.3	1.15
Lilly Cot	27.0	37.0	32.0	37.3	0.99
Pinkcot	52.2	46.6	41.4	44.9	1.04
Perle Cot	41.0	42.3	40.0	42.3	1.00
Orange Red (m)	60.3	47.5	43.3	45.7	1.04
Sweet Cot	30.0	40.1	33.6	37.1	1.08
Big Red	30.7	40.6	34.1	38.0	1.07
Kioto	28.5	36.9	33.7	36.3	1.02
Faralia	35.4	46.3	35.8	40.1	1.15
Farbaly	38.2	46.7	35.2	41.1	1.14
LDS 5%	1.98	2.18	1.83	2.05	-

The study carried out on the shape of the fruit by means of the shape index, highlights that in the varieties Lilly Cot, Kioto, Perle Cot, Spring Blush, Orange Red and Pinkcot it was 0.99-1.04, that is, the fruits were round in shape. The varieties Big Red, Magic Cot, Sweet Cot, Faralia and Farbaly, the shape index varied from 1.07 to 1.15, which highlights the spherical shape of the fruit. For the Wonder Cot variety this index registered 1.22, meaning the fruits had an elongated spherical shape.

A smaller number of apricots in the crown of the trees was recorded for the varieties Orange Red - 143 pcs, Magic Cot - 163 pcs, Spring Blush - 223 pcs, Wonder Cot - 311 pcs and Perle Cot - 313 pcs. Further, the varieties Farbaly - 320 pcs.,

Pinkcot - 325 pcs., Faralia - 396 pcs./tree, Sweet Cot - 447 pcs./tree, Big Red - 464 pcs./tree and Lilly Cot - 479 pcs., and the Kioto variety recorded a higher number of apricots per tree (527 pcs.) (Table 3).

The fruit production within the tree was correlated with the number of fruits obtained after their fall in June and the average weight of an apricot of the respective variety.

The obtained results highlight that the production of fruits within the tree is more essential influenced by the number of remaining fruits and their average weight is secondary.

Lower values of fruit production from an apricot tree were recorded for the varieties Orange Red (m) – 8.62 kg, Magic Cot – 9.17 kg, Spring Blush – 10.26 kg and Wonder Cot – 10, 70 kg. Next, the varieties Farbaly – 12.22 kg, Perle Cot – 12.33 kg, Lilly Cot – 12.33 kg, Sweet Cot – 12.93 kg, Faralia – 14.02 kg and Big Red were placed in growth 14.24 kg. The varieties Kioto and Pinkcot recorded a higher production of apricot fruits per tree, constituting 15.02 and 16.97 kg, respectively.

Table 3. Apricot plantation productivity according to the biological characteristics of the variety, year 2023

Variety	Number of fruits, pcs./tree	Average weight, g	Production	
			kg/tree	t/ha
Wonder Cot	311	34.4	10.70	7.14
Spring Blush	230	44.6	10.26	7.02
Magic Cot	163	56.2	9.17	6.12
Lilly Cot	479	27.0	12.93	8.62
Pinkcot	325	52.2	16.97	11.32
Perle Cot	313	41.0	12.33	8.56
Orange Red (m)	143	60.3	8.62	5.75
Sweet Cot	447	30.0	13.41	8.94
Big Red	464	30.7	14.24	9.50
Kioto	527	28.5	15.02	10.02
Faralia	396	35.4	14.02	9.35
Farbaly	320	38.2	12.22	8.15
LDS 5%	9.51	1.98	0.42	0.36

The study carried out further on the fruit production per surface unit, demonstrates the influence of the production obtained within an apricot tree of the studied varieties.

Higher global production values of apricots were obtained within the variety Kioto (10.02 t/ha) and Pinkcot (11.32 t/ha). Insignificantly lower values were obtained in the trees of the Big Red (9.50 t/ha) and Faralia (10.02 t/ha) varieties. Then, in descending order, the varieties Sweet Cot (8.94 t/ha), Lilly Cot (8.62

t/ha), Perle Cot (8.56 t/ha), Farbaly (8.15 t/ha) were placed ha), Wonder Cot (7.14 t/ha), Spring Blush (7.02 t/ha), Magic Cot (6.12 t/ha) and Orange Red (5.75 t/ha).

The sizes of the fruits are of particular importance because depending on them, they are redistributed to different quality classes, which then depends on the selling price, thus implicitly the economic efficiency.

From the varieties studied, a higher proportion of fruits with a diameter of 35-40 mm were recorded in the Lilly Cot (100.0%), Sweet Cot (92.4%) and Big Red (91.4%) varieties. In quality class A (diameter 40-45 mm), a higher share of fruit returned to the varieties Spring Blush (63.3%), Pinkcot (60.1%), Wonder Cot (92.4%), Perle Cot (60.0%), Faralia (65.7%) and Farbaly (70.2%) (Table 4).

Table 4. Influence of biological characteristics of apricot varieties on fruit quality by diameter, %, year 2023

Variety	By diameter		
	B	A	2A
Wonder Cot	24.3	50.6	25.1
Spring Blush		63.0	37.0
Magic Cot	29.5	30.7	39.8
Lilly Cot	100.0	-	-
Pinkcot	20.0	60.1	19.9
Perle Cot	18.4	60.0	21.6
Orange Red (m)	10.0	32.2	57.8
Sweet Cot	92.4	76	-
Big Red	91.4	86	-
Kioto	100.0	-	-
Faralia	25.6	50.0	24.4
Farbaly	10.7	70.2	19.1

Apricot fruits with a diameter of 45-50 mm are assigned to class 2A, and the higher share of fruits in that class returned to the Orange Red varieties (57.8%). Lower values in the respective class went to the varieties Wonder Cot (25.1%), Perle Cot (21.6%) and Farbaly (19.1%). The varieties Spring Blush (37.0%) and Magic Cot (39.8%).

The conducted research has highlighted that the income from sales is higher in the variants where the realization price is higher and the harvest of apricot fruits was higher (Table 5).

The studied varieties are of different ripening period, have different average fruit weight and specific price for each variety depending on the ripening period. The lowest realized price in 2023 was obtained for the Kioto, Faralia and Farbaly varieties where, due to the low quality of the fruits, the value was 10.0 lei/kg. Next in ascending order were the varieties Lilly Cot,

Perle Cot, Sweet Cot and Big Red, with a sales price of 12.0 lei/kg. A higher price was given for the fruits of the varieties Pinkcot (14.0 lei/kg), Orange Red (18.0 lei/kg), Wonder Cot, Spring Blush and Magic Cot (20.0 lei/kg).

Table 5. The economic efficiency of apricot production in the southern part of the country depending on the biological characteristics of the variety, year 2023

Variety	Sales revenue, thousand lei/ha	Production cost, thousands of lei/ha	profit, thousand lei/ha	Profitability level, %
Wonder Cot	142.8	50.7	92.1	181.6
Spring Blush	140.4	50.6	89.8	177.5
Magic Cot	122.4	49.7	72.7	146.3
Lilly Cot	103.4	52.2	51.2	98.1
Pinkcot	158.5	54.9	103.5	188.7
Perle Cot	102.7	52.2	50.5	95.8
Orange Red (m)	103.5	49.4	54.1	109.5
Sweet Cot	107.3	52.5	54.2	104.4
Big Red	114.0	53.1	60.9	114.7
Kioto	100.2	53.0	47.2	89.1
Faralia	93.5	53.0	40.5	76.4
Farbaly	81.5	52.0	29.5	56.7

As part of the investigations undertaken, higher sales income values were obtained for the Pinkcot variety - 158.5 thousand lei/ha. Next, in decreasing order are the varieties Wonder Cot - 142.8 thousand lei/ha, Spring Blush - 140.4 thousand lei/ha, Magic Cot - 122.4 thousand lei/ha, Big Red - 114.0 thousand lei/ ha, Sweet Cot - 107.3 thousand lei/ha, Orange Red (m) - 103.5 thousand lei/ha, Lilly Cot - 103.4 thousand lei/ha, Perle Cot - 102.7 thousand lei/ha, Kyoto - 100.2 thousand lei/ha, Faralia - 93.5 thousand lei/ha and Farbaly - 81.5 thousand lei/ha.

The cost of production, as usual, is an indicator showing expenses that were directed to obtain the respective production of fruits. This indicator correlates directly with the production of apricots obtained per surface unit and those investments directed to obtain this production. The investigations undertaken have highlighted that the higher value of the production cost was recorded for the Pinkcot variety, where for a production unit it was 54.9 thousand lei/ha, and lower indicators for the Wonder Cot varieties - 50.7 thousand lei/ha ha, Spring Blush - 50.6 thousand lei/ha, Magic Cot - 49.7 thousand lei/ha and Orange Red (m) - 49.7 thousand lei/ha.

The varieties Big Red, Kioto, Faralia, Sweet Cot, Perle Cot, Lilly Cot and Farbaly recorded an average production cost, constituting 53.1; 53.0; 53.0; 52.5; 52.2 and 52.0 thousand lei/ha, respectively.

Another very important economic indicator is the profit, which directly affects the sales revenue of the apricot production and depends a lot on the cost of the registered production. The research carried out highlighted that the most rational link between the cost of apricot production and the income from sales was obtained within the Pinkcot variety, where the profit was 103.5 thousand lei/ha. Average profit values were obtained for Wonder Cot varieties - 92.1 thousand lei/ha, Spring Blush - 89.8 thousand lei/ha, Magic Cot - 72.7 thousand lei/ha Big Red - 60.9 thousand lei /ha, and the lowest for the varieties Sweet Cot - 54.2 thousand lei/ha, Orange Red (m) - 54.1 thousand lei/ha, Lilly Cot - 51.2 thousand lei/ha, Perle Cot - 50, 5 thousand lei/ha, Kyoto - 47.2 thousand lei/ha, Faralia - 40.5 thousand lei/ha and Farbaly - 29.5 thousand lei/ha.

More balanced values between profit and production cost were obtained for trees of the Pinkcot, Wonder Cot, Spring Blush and Magic Cot varieties, where the level of profitability of apricot production was 188.7; 181.6; 177.5 and 146.3%, respectively. Next, lower profit values were obtained for the varieties Big Red - 114.7%, Orange Red - 109.5%, Sweet Cot - 104.4%. Within the varieties Lilly Cot, Perle Cot, Kioto, Faralia and Farbaly, the lowest level of profitability was recorded, constituting 98.1; 95.8; 89.1; 76.4 and 56.7%, respectively.

CONCLUSIONS

The biological peculiarities of the variety influence the initiation of the flowering period of the trees of the studied varieties, as well as their continuation, until the ripening period of the apricot varieties.

The flowering period of the apricot crop in the spring of 2023 in the southern part of the country with different ripening period took place during 7-8 days.

The fruit ripening of the apricot varieties studied in the reference year in the southern part of the country did not show large deviations from the ripening period, which each variety possesses.

The shape index indicates that the Lilly Cot, Kioto, Perle Cot, Spring Blush, Orange Red and Pinkcot varieties have a round fruit shape, the Big Red, Magic Cot, Sweet Cot, Faralia and Farbaly varieties are spherical, and the Wonder Cot variety elongated spherical.

The atmospheric precipitation that fell in abundance in the months of April (73.6 mm) and May (46.0 mm) in the southern part of the country had a considerable impact on the quality of the fruits of the early ripening apricot varieties (Wonder Cot, Spring Blush, Magic Cot, Pinkcot). Medium and late ripening cultivars had slower fruit development due to insufficient moisture during that period.

The results obtained in the southern part of the country, during 2023, highlight the varieties with extra-early ripening (Wonder Cot, Spring Blush) and early (Magic Cot, Pinkcot), which due to the atmospheric precipitation recorded in the spring period, could form a more competitive quality of fruit and a higher level of profitability was obtained. Varieties with later ripening recorded lower fruit quality, which attracted lower economic efficiency.

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