ACADEMICIA: An International Multidisciplinary Research Journal
ISSN: 2249-7137 Vol. 12, Issue 04, April 2022 SJIF 2022 = 8.252
A peer reviewed journal

COLLECTION OF MAIN FOOD ELEMENTS IN THE VEGETATIVE MEMBERS OF NEW ISTIKBALLI EMERALD AND KARAKOZ VARIETIES

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DOI: 10.5958/2249-7137.2022.00237.3

ABSTRACT

A number of works are underway to cultivate the olive plant. In Uzbekistan, olive varieties are also regionalized and cultivated. In our experiment, we studied the characteristics of olive varieties, their differences from each other.

KEYWORDS: *Olea Europaea L, Varieties, Biological Features, Productivity, Agriculture Technology Methods, Yield Capacity.*

INTRODUCTION

The olive plant continues to grow and develop during the growth process from early spring to late autumn, which is why this tree has been called “evergreen”. It is known that the leaves of other trees ripen biologically, physiologically in September and October, and all chemical processes in the cells stop. The leaves cease to function during the growth of woody material. **[1]**

The twigs and leaves of the olive plant grow in the spring from May to the end of October. The growth and development of olive branches is unique and slightly different from other plants. It is characteristic that even if the olive stems stop growing, the branches will grow, the first order being from the branch, the second order the branches being longer is unique to the olive. The growth of olives creates a "harvest" of specific chains. **[2]**

To determine the growth and development of the olive branches, 5 plants were taken from each variant, and two growth branches were taken from each tree, hung on a label, and measurements were made on the olive branches and stems every ten days. The rapid growth of the olive leads to a good work of shaping it, in our experiments the fast-growing branches were shaped beautifully and cup-shaped. **[3]**

The growth dynamics of olive stem diameter in the introduced variety samples during the study years The stem diameter circle of the growth process by months was 1.5 cm to 2.7 cm, the

average stem diameter in April was 5 cm in 5 seedlings. In this sample, the diameter of the stem was 2.6 cm in May, 2.7 cm in June, 2.8 cm in July, and 3.7 cm in October. **[4]**

The stem diameter of Gaziantep seedlings imported from Turkey was 2.3 cm in April and 3.0 cm in thickness. On average in April, it was observed that the thickening of the stems of this variety was 1.0-1.3 cm higher. By October, the diameter of the stem of olive seedlings was found to be 3.5-3.7 cm. In Gaziantep seedlings, the diameter of the stem was 0.5-0.9 cm thicker than in the Karakoz variety, and the diameter of the stem increased by an average of 1.2 cm. **[5]**

It was observed that the diameter of the stem of Krymskaya 172 cultivars varied. The diameter of the stem in 1 bush olive was 1.5 cm to 2.4 cm according to the observations made in April, while the diameter of the stem increased by 1.0 cm in the observations made in May. The diameter of the stem did not change in June, however, it was noted that in July the diameter of the stem increased by 3.3 cm, or 0.8 cm in two months. In October, the diameter of the stems of the Spanish olive variety was 6.0 cm. **[6]**

The thickening of the diameter of the stem of olive varieties was almost the same in all varieties. On October 26, it was observed to be 6.0 cm. Introduced olive varieties were found to be similar to each other not only biologically but also in terms of botanical characteristics. **[7]**

In our study (2016-2018) it was found from the observations of the growth dynamics of olive branches (see Table 4.16) that in the first three years of the Emerald variety in the first decade of April the length of the primary branch was 4.6 cm, in the third decade the branch length was 8, 7 cm, our observations on May 5 showed that the average length of the branches increased by 12.3 cm. From the second decade of May to the third decade, it was found that olive seedlings grew by 12.0 cm, and from the first decade of June to the third decade by almost 11.4 cm. By the end of October, the primary branches were observed to grow and develop to a length of 131.7 cm. **[8]**

Primary olive branches from the Crimea (Karakoz) grew slightly slower than the studied Izumrud, Gaziantep, Krymskaya 172 varieties, which in the third decade of October averaged 105.0 cm in three years, which is 22.3-35.4 cm lower than these varieties. was found. **[9]**

In the first decade of April, the length of the twig in the Gaziantep variety imported from Turkey averaged 4.1 cm in 5 seedlings, 13.1 cm on May 5, and 19.7-30.1 cm in the second and third decades. It was noted that our observations increased by 10.4-12.4 cm every 10 days in May. In the third decade of June, olive seedlings were 56.7 cm, and in the first and second decades of June the difference between the growth of branches was 7.6 cm. Primary olive branches imported from Turkey showed a growth of 140.4 cm in the third decade of October. The branch length or annual growth dynamics of this variety was 34.1-35.4 cm higher than that of the Crimean variety sample. In the third decade of June, there was a significant difference in the length of the branches between the varieties, from 5.7 cm to 11.6 cm. **[10]**

The highest rates were observed in Gaziantep and Izumrud varieties, from the first decade of June to the third decade of July the branches grew by 33.3-44.3 cm, the length of the branches was 72.7-86.8 cm. In October, the average length of these branches was 131.7-140.4 cm.

Growth dynamics of twigs in olive varieties, cm; 2018-2020

Varieties	Date of observation							
	5.04	25.04	15.05	5.06	25.06	15.07	5.10	25.10
Izumurud	4,6	8,7	17,0	39,4	50,8	67,3	108,0	131,7
Karakoz	4,1	8,9	19,7	42,5	56,7	75,1	118,5	140,4
Gaziantep	3,8	7,1	16,2	36,5	45,1	59,0	87,1	105,0
Krymskaya 172	4,4	7,5	17,3	39,2	52,6	61,3	110,3	127,3

Based on our experiments, it was noted that the Krymskaya 172 variety also grew well in our conditions. In the first months of development, the newly adapted varieties Karakoz and Izumrud grew uniformly in the country. 4.4-13.1 cm lower than Izumrud and Gaziantep varieties and 22.3 cm higher than Karakoz varieties. **[11]**

In conclusion, on the basis of the growth and development of the studied different olive varieties, the growth of twigs of the acclimatized Karakoz variety increased to 101.4-105.0 cm per vegetation year, and the growth of twigs of the acclimated Emerald and Gaziantep varieties reached 131.7-140.4 cm. Turkish varieties differed from each other in the fact that they grew taller and had fewer side branches, and grew more slowly than in the temperate Izumrud and Karakoz varieties, with more side branches. **[12]**

In some species of olives, vegetative branches were more abundant, ie generative branches were less in Karakoznav samples, and more generative branches in Izumrudnav samples.

Over the years of research, it has been found that not all branches grow at once on the base of an olive tree. The branches grow up to 10 cm per year. Branches that did not grow well or did not develop were found in 4 varieties of olives, and the resulting stalk remained unchanged for a long time with 6-8 leaves. While these branches had 6 or 8 leaves in spring, they did not show any difference in growth or change in autumn. Branches of olive varieties were observed to grow more than one meter per year. **[13]**

Olive leaves have a lifespan of 2-3 years. It was found that the leaves of trees ripen biologically and physiologically in September and October, the cessation of all chemical processes in them, the formation of woody matter during growth, the end of its activity and natural shedding of leaves. **[14]**

To do this, the newly formed olive leaves were determined and their growth in length and width was observed every 5 days. During the study, 4 leaves were marked separately from each branch, red threads were hung on the leaf band, and observations were made on these leaves until leaf growth stopped.

During the years of research, it was observed that the leaves of the air-conditioned Karakoz variety grew from 1 cm to 1.5 cm in length and 0.4-0.7 cm wide. During the study, it was observed that the leaves of the olive grew by 0.2-0.3 cm in width and 0.8-1.5 cm in height in 5 days. During the observations in Maya, it was noted that the olive leaves grew from 2.2 cm to 5.0 cm in height and 0.8-1.6 cm in width. **[15]**

The leaves of Gaziantep variety imported from Turkey in April were 1.5-2.0 cm tall and 0.5-1.1 cm wide, and on May 1, the leaves were 2.5-3.6 cm long and 1.0-1 cm wide. , Grew to 5 cm. On

May 5, the leaves grew 2.8-5.0 cm in height and 1.3-2.0 cm in width. It was observed that the process of full formation of leaves of this variety was not until May 10. On May 10, the leaves grew 3.0-5.5 cm in height and 1.3 and 2.5 cm in width. When the leaves of this variety were counted in late May, no change in width and height was observed in the leaf surface. **[16]**

The method of determining the chemical composition of vegetative organs is studied mainly on the basis of the detection of minerals in the leaves and annual branches. By detecting minerals in the leaves, it will be possible to determine how the olives are supplied with minerals during development. Leaves and annual twigs were obtained from olive seedlings growing in the experimental fields to determine the chemical composition of the vegetative organs. **[17]**

It is known that the abundance of nitrogen and phosphorus in the growing organs of olives ensures the rapid and high rate of photosynthesis, ie the synthesis of organic matter. During the growth and development of olives, phosphorus substances are actively involved in ensuring the growth and high yield of the plant. In the absence of phosphorus, energy metabolism in cells slows down. Phosphorus is also abundant in the roots of olives and is widely absorbed in the early growth phases of the plant. **[18]**

Insufficient supply of mineral fertilizers leads to the crushing of olive leaves, prolonging the flowering and ripening phases. Because the olive seedlings grown in our experiments were moderately supplied with mineral fertilizers, the lower leaves of the olive seedlings turned dark green and became seravj.

It is known that the presence of sufficient amounts of phosphorus in the cells makes the olive resistant to disease. As the experimented light gray soils were adequately supplied with phosphorus, early ripening of the olives was observed as a result of the seedlings assimilating sufficient amounts. However, it was noted that the size of the olives was small. **[19]**

In the study years (2016-2018) it was found that the average phosphorus content in the dry mass of olive leaves in three years was 0.897% in Izumrud variety, 0.699% in twigs, 0.946% in Gaziantep leaves and 0.743% in twigs. It was also noted that the total phosphorus content was 0.900-0.822% in the leaves and 0.515-0.697% in the branches of Karakoz and Krymskaya 172 varieties. However, the higher the amount of nitrogen in the organ of the plant, the higher the amount of phosphorus in the vegetative organs of the olive. 1,897-2,092% in the leaves and 0.858-0.950% in the twigs of the cultivated Izumrud and Gaziantep olive varieties imported from Turkey.

Among the studied varieties, the highest total nitrogen and phosphorus content in the leaves and twigs was observed in the Gaziantep variety, which was found to be 0.363-0.092 and 0.124-0.228% higher, respectively, than other varieties. **[20]**

The total potassium content in the leaves of the studied varieties was 0.179-0.176% in Izumrud and Karakoz varieties, 1.781-1.585% in the branches, 0.140-0.135% in the leaves and 1.549-1.555% in the branches of Gaziantep and Krymskaya 172 varieties. it was found that the total potassium content in the vegetative organs was 0.044-0.232% lower than in the newly introduced varieties. The method of determining the chemical composition of vegetative organs is studied mainly on the basis of the detection of minerals in the leaves and annual branches. By detecting minerals in the leaves, it will be possible to determine how the olives are supplied with minerals

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