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The Dependence of the Formation of the Yield of Trees in Intensive Apple Orchards on the Methods and Levels of Pruning

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Abstract: *In this article, the influence of the method and degree of pruning of fruit formations is studied. It has been established that in order to produce high and stable crops with good quality, it is necessary to create conditions for the formation of fruit buds in intensive apple trees.*

Keywords: *Intensive sadi. varieties of apple trees. method and degree of pruning. Rejuvenating and normalizing pruning method. Formation of fruit buds.*

INTRODUCTION

Today, serenum requires intensive gardens to provide access to the crop in 2-3 years after planting, in combination with the production of consistently rich quality crops, making the established gardens faster. Also, in intensive Gardens, varieties of slow-to medium-slow-growing, high-quality yielding varieties with a small bush are selected, and when a set of high, agrotechnical activities is applied to them, conditions are created for the possibility of producing a high-quality harvest of 25-30 t/ha as a result of the proberium.

In Uzbekistan and foreign countries, a group of researchers on the growth, development and yield effects of the excess branch dew cutting tools and levels of intensive apple trees has received various based scientific data based on the study of the biological characteristics of the variety and the influence of grow shoots on the plant in different lower – climatic conditions, and, in turn, made scientific recommendations corresponding to But it should be noted that the scientific studies carried out on this subject do not give the opportunity to fully reveal the biological characteristics of fruit tree varieties, fruiting of branches, their rejuvenation cycles. [1,2,3]. Depending on the methods of rejuvenating, meticulating pruning and the condition of the branches, which are used to cyclically renew fruit tree varieties for 3-4 years, the measure of determining the degrees of reduction and giving a certain shape to the trunk is considered the most basic agrotechnical factor in improving productivity and radically improving the quality of the material and methodology[4.5].

Research has not been carried out in a holistic and complex state of Uzbekistan in certain soil-climatic conditions. In the process of growing apples, which is also available in the Bukhara region, it requires special attention to the features of the biological and variety of trees, the methods of rejuvenating and meowing branches, the year of fruiting and pruning, and the degree of pruning, giving shape to the body.[6]

From the above points, it can be said that the selected research unit is considered extremely relevant and actual, it has great scientific practical importance in increasing the yield of fruit trees and improving quality.

The purpose of the experiment: Bukhara region consists in making recommendations for the annual production of stagnant (stable), continuous abundant and high-quality crop production technology in intensive diamonds by scientifically determining the cyclic rejuvenating and meticultural pruning methods of yielding apple varieties in the soil climate of the Republic of Bukhara region and the most effective levels of shrinking growing branches, depending on the condition of the trees.

To achieve this goal, the tasks below were carried out.

The study of the dependence of fruit trees on the method and level of pruning when pruning growing branches, determining the growth, development and yield effect of the main phytometric indicators; how the tree trunk is provided with light and determining photosynthetic products: consists in studying the formation of generative organs in the tree trunk and their location, influence on yield and its quality.

Scientific research work was carried out during 2010-2022 on the farm “ Amin Life Park, " located in Bukhara district, Bukhara region. The apple orchard was erected in 2000 in an order of 6x4 m. The Bukhara region is located in the desert zone, the formation of the soil takes place in a scorching and dry climate. The climate of the Bukhara region is sharply Continental: in a year there is an average of 125-175 mm of precipitation, which is observed mainly at the beginning of the spring season, in late autumn and winter. Warm sunny days last up to 240 days, during which time the air temperature in the furnace is 26-30 C. The warmest days are observed in the summer, and the daytime air temperature is 38.7-46.2 C degrees and even higher is in late July - early July. Winters are dry and cold: average January temperatures range from 4.0 C to -13 C. The average air humidity is 40-60%.

The total area of irrigated land in Bukhara region is 274.9 thousand ga, of which the area of cultivated land-276.0 thousand ha, of the total area of irrigated land, 2.4% Occupy Sandy and grazed sandy soils located in the steppe zones of the region. 0.7% consists of heathland, 5.6% includes heathland and 91.3% includes heathland**.**

In the layer where the root is located (0-70cm), the specific gravity of the soil phase is -2.84 g/cm, in the meter layer -2.83 g/cm, some of the soil is 51.6-51.9 , respectively, the limited field wet capacity is 21.2% in the 0-50 cm li layer, 0-70 cm -21.1% and 21% in the 0-100 cm li layer.

According to the results of agrochemical studies, the amount of humus in pasture, old and New irrigated areas is low in Jude. The amount of humus in the plowing layer of the soil is equal to 0.8 - 1.4%, nitrogen-0.06-0.12%. The gross content of phosphorus is 0.11-0.18%, the amount of exchangeable potassium is 1.5-3.0%. "Amin Life garden,, the soil of the farm consists of alluvial - ancient irrigated, weakly saline soil, which is distinguished by the shading on the surface of the water table (2.3-2.5 m), by mechanical composition - medium-gravelly.

One of the most effective ways to obtain an absolute abundant and high - quality harvest of intensive branches is the rational use of the cutting method and levels of tree trunk branches, which, through this event, makes it possible to create favorable conditions for their active growth and formation of generative organs in branches, ensuring high yields with the formation of annual harvest elements.

The method and levels of pruning show a positive effect on the time of entry into the crop of fruit trees, determining the quantity of the crop and its quality. Indicators such as regulation of growth and yield, coping with periodicity, increasing winter hardiness are some of the activities of significant importance, which are solved by cutting.

As a result of the method of pruning in fruit trees and the coagulation of trees, having a positive effect on their growth and development, as a result of the successful passage of all physiological processes: metabolism, high photosynthetic intensity and productivity, and transpiration processes, the opportunity was created to improve productivity and its quality. If, at a young age, the excess branches of fruit trees are shortened, then their entry into the crop begins early.During the period of fruiting, when no specific agro-event is used, the order of continuous fruiting is disrupted when fruit

trees give up to a certain period of fruiting later, reaching a certain stage of growth and development. In combination with the appearance of fertile shoots for this year in adulthood, even for the next year in the growing season, the flower ensures the formation of buds on the branches. In apple varieties, where the harvest buds are left on their branches in large quantities, growth and development are reduced, the periodicity of fruiting begins. The fruits become smaller in size, the appearance and marketability of the crop deteriorate, and the quality decreases. In this case, of course, in such gardens it is required to pay attention to the cutting method and the degrees of reduction.

From the studies, it was found that in the course of a study on 3 different apple varieties under study, the amount of flowers in the options left to give a crop, not shortening the branches left for periodic rejuvenation, compared to the control option, 12.3% in the Golden Delishes variety, 11.8% in the Renet Simirenko variety, 13.0% in the pervenes Samarkanda variety 12.8%.

Influence on the formation of the tree yield of the cutting method and level

Table 1.

Rejuvenating cutting options on growing branches that have formed	Rejuvenating cutting options on growing branches that have formed	2010 year		2022 year	
		Number of flowers, pieces	Number of flowers, pieces	Number of flowers, pieces	Number of flowers, pieces
Golden Delishes type					
Control With a three-year periodicity to replace cut.	4-8 8-12 12-16 irreducible	4831 3236 3391 3502 4052	11,6 13,0 12,8 12,5 12,3	5786 4096 4239 4455 4875	11,4 12,8 12,6 12,4 12,0
Cutting with a four-year periodicity that prints the Orn.	4-8 8-12 12-16 irreducible	3495 3622 3888 4295	12,8 12,6 12,4 12,0	4210 4436 4691 5012	12,6 12,3 12,0 11,8
Renet Simirenko type					
Control With a three-year periodicity to replace cut.	4-8 8-12 12-16 irreducible	4710 3012 3155 3320 3780	11,4 12,6 12,4 12,0 11,8	5523 3844 3977 4155 4436	11,2 12,5 12,3 12,1 11,7
Cutting with a four-year periodicity that prints the Orn.	4-8 8-12 12-16 irreducible	3236 3488 3621 4210	12,4 12,2 12,0 11,7	3644 3870 4012 4688	12,3 12,0 11,8 11,6

Pervenes Samarqand type

Control With a three-year periodicity to replace cut.		4629	11,2	5499	11,1
	4-8	3020	13,0	3790	12,8
	8-12	3144	12,6	3888	12,5
	12-16	3301	12,4	4012	12,2
	irreducible	3695	12,0	4324	11,9
Cutting with a four-year periodicity that prints the Orn.	4-8	3199	12,8	3580	12,6
	8-12	3395	12,5	3710	12,3
	12-16	3512	12,3	3980	12,0
	irreducible	4102	11,8	4536	11,8

Conclusion. The above information indicates that the application of rejuvenating cutting methods and grades of branches poured into the fruiting indicators of the tree for harvest on a 3-4-year cycle has a positive effect, the fruiting elements are well formed and cause an increase in yield. Also, the percentage of useful pollination is higher in the cut options, leaving 4-8, 8-12, and 12-16 fruit buds on branches that have left 3-4 years on a cycle basis for the purpose of rejuvenating the branches that have formed and grown in the studied varieties, the number of Flowers has decreased, and as a result, the

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