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Dependence of Pruning Methods and Trees on the Formation, Productivity and Quality of Apple Trees in the Conditions of the Bukhara Oasis

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Abstract: In this article, the dependence of pruning methods and trees on the formation, yield and quality of trees in the existing intensive apple orchards of the Bukhara oasis has been studied. In the studied apple varieties, the highest rates were obtained when pruning trees according to a 3-4-year cycle and leaving 12-16 eyes on the branches of the harvested crop.

Keywords. Intensive apple orchard, irrigated land, varieties, grafting, crop formation, yield, quality indicators, fruit weight, yield.

INTRODUCTION

To come in. The irrigated soils of the Bukhara oasis have long been cultivated and consist of unique agro-irrigation layers. In Uzbekistan, including in the Bukhara oasis, a sharp development of fruit and vegetable farming and an increase in fruit production are planned.

The main area of irrigated land is located on the Zeravshan River. One of the most effective ways to obtain a high and quality yield from intensive orchards is the rational use of the method of pruning and trimming the branches of a tree trunk, which allows you to produce annually and ensures a high yield. [1,2,3,4]

Material and technique. Bukhara Bukhara region deepening of MFP cultivation of "Amin Khayat Bogi" in horticulture in the process of formation of meadow alluvial soils, which have been irrigated since ancient times, in addition to high regulation in the region, sex, sizot waters, etc. one of the most important is that agro-irrigation is directly related to the receipt of deposits on irrigated fields. Since the accumulation of new alluvial compounds in the soil profile, the formation of anthropogenic soils leads to an increase in the quality and power of biological processes.

In this regard, the diseases of the farmer's soil bog differ sharply from the soil groups of the horticultural economy in terms of the properties and characteristics of morphological structures, which is the editor's goal to improve land reclamation and increase the productivity of environmental protection. Requires enrichment with new data and indicators of properties and energy, water, physical, temperature regimes of

irrigated soils. Experience helps. A training plan for agrochemical soil analysis was identified in the Bogozi farm of Siyovush Agro LLC, Bukhara district (Table 1).

The number of nutrients in the soil of the horticultural farm of the MCC "SyovushAgro" at the site of the Boghikalon MFP, Bukhara district

(Table 1).

Cut	Depth, см	Humus, %	R2O5, мг/кг	K2O, мг/кг71
A	0-32	0.7708	15.0	171.0
B	32-62	0.7520	14.0	214.3
C	62-85	0.7332	13.0	195.0

Data presented in Table 1 show that the agrochemical properties of the soils of intensive apple orchards kept in the horticultural farm of Siyovush Agro LLC on the territory of the Bogakalon MFU in the Bukhara region The are considered average. It should be noted that the amount of humus at a depth of 0-85 cm is 0.7332-0.7708%, this indicator is low for long-term irrigated soils, and the amount of phosphorus is 13.0-15.0 mg/kg and potassium is 171.0-214 ,3. mg/kg is kg. The type and level of salinity of the soils of these intensive apple orchards are average. The soil and climatic conditions of the farm are suitable for keeping apple varieties in intensive grafting combinations.

The method and levels of pruning have a positive effect on the timing of the entry of fruit trees into the crop, the quantity of the crop and its quality. Regulation of growth and yield, the fight against seasonality, increasing winter hardiness are among the important activities that pruning decides. An experimental garden measuring 5 x 4 m was laid out in 2009.

Results and data: Experiments show that as a result of the application of methods and levels of pruning of fruit trees, it positively affects their growth and development, all physiological processes: metabolism, high photosynthesis rate and productivity, and as a result of successful transpiration processes, productivity and its quality[5,6,7].

If the extra branches of fruit trees are pruned at a young age, they will start harvesting early. During the harvest period, if this agrometer is not applied, fruit trees will bear fruit until a certain period (maturity), and then there will be some growth, and when it reaches the development stage , the pattern of continuous returns will be violated. In the period of maturity, along with the appearance of buds that give fruits of this year, during the growth period, it ensures the formation of flower buds on the branches of the next year

The frequency of fruiting (periodicity) begins in apple varieties with a heavy load on their branches, growth and development are reduced. The fruits become smaller, the appearance and marketability of the crop deteriorates, and the quality decreases. At the same time, it is necessary to pay attention to the felling method and reduction levels in such orchards [8,9,10].

As a result of the research, it was found that over 3-4 years of study in 3 different varieties of apple trees, the number of flowers in the variants left for obtaining without shortening the branches, left for rejuvenation, was 12.3% for the Golden Delicious variety, 11.8% for cultivar Renet Simirenko compared with the control variant, %, in cultivar Pervenest Samarkand it was 13.0%, and in apple

cultivars 11.5 - 12.8% on shortened branches, leaving 4-8, 8-12, 12-16 fruit buds for harvest.

Influence of the method and level of pruning on the formation of the apple crop (Table 2).

Anti-aging pruning options on growing branches that have already borne fruit	Number of buds on other branches (pcs)	2007 year		2010 year	
		Number of colors, pcs	Percentage of beneficial pollination,%	Number of colors, pcs	Percentage of beneficial pollination ,%
Golden Delishes variety					
Control	4-8	4831	11,6	5786	11,4
Pruning at three-year intervals	8-12	3236	13,0	4096	12,8
	12-16	3391	12,8	4239	12,6
	does not decrease	3502	12,5	4455	12,4
		4052	12,3	4875	12,0
Pruning at an alternating four-year interval	4-8	3495	12,8	4210	12,6
	8-12	3622	12,6	4436	12,3
	12-16	3888	12,4	4691	12,0
	oes not decrease	4295	12,0	5012	11,8
Renet Simirenko variety					
Control	4-8	4710	11,4	5523	11,2
Pruning at three-year intervals	8-12	3012	12,6	3844	12,5
	12-16	3155	12,4	3977	12,3
	Does not decrease	3320	12,0	4155	12,1
		3780	11,8	4436	11,7
Pruning at an alternating four-year interval	4-8	3236	12,4	3644	12,3
	8-12	3488	12,2	3870	12,0
	12-16	3621	12,0	4012	11,8
	oes not decrease	4210	11,7	4688	11,6
Pervenest Samarkanda variety					
Control		4629	11,2	5499	11,1
Pruning at three-year intervals	4-8	3020	13,0	3790	12,8
	8-12	3144	12,6	3888	12,5
	12-16	3301	12,4	4012	12,2
	does not decrease	3695	12,0	4324	11,9
Pruning at an alternating four-year interval	4-8	3199	12,8	3580	12,6
	8-12	3395	12,5	3710	12,3
	12-16	3512	12,3	3980	12,0
	does not decrease	4102	11,8	4536	11,8

From the data in Table 2 above, it is determined that the application of the method and levels of rejuvenating pruning of the branches placed for harvesting in 3-4 year sticks had a positive effect on the fruit-bearing indicators of the trees.

Thus,in order to rejuvenate the branches that have already yielded and grown in the studied varieties, the percentage of useful pollination in the variants cut with 4-8, 8-12 and 12-16 fruit buds left on three-four-year-old branches on the basis of a stick is high, the number of flowers is reduced and consequently fruit shedding is reduced.

From the above data, it is determined that the application of the methods and degrees of rejuvenating pruning of the branches placed for harvesting in a 3-4 year cycle had a positive effect on the fruit-bearing indicators of the trees.

Conclusion: It should be noted that in order to rejuvenate the grown branches of the studied varieties, 4-8, 8-12 and 12-16 fruit buds are left on the three-four-year-old branches on the basis of a stick. cut varieties have a higher percentage of beneficial pollination, reduced flower numbers and, as a result, reduced fruit shedding.

In addition to the biological characteristics of the variety, the factors that determine the amount of fruit tree yield include the age of the trees, agrotechnical activities carried out in them, soil and climatic conditions, and the method of cutting and shaping and its application.

Currently, intensive orchards are orchards in which the trees begin to bear fruit early, they produce high and constant quality crops, the cost of the grown products is low due to the efficient use of technology and the reduction of production costs.

It shows that the productivity of the garden depends not only on the productivity of each tree, but also on the level of its use, depending on how the tree trunks are located in the garden.

During the years of the study, the average yield was obtained when rejuvenating the bearing branches on 3-4-year-old cuttings as a replacement and when cutting leaves 4 to 16 fruit buds on the bearing branches, apples in the Golden Delishes variety were 0.1-4, Additional yield was obtained up to 0 st/ha, in Renet Simirenko variety up to 0.9-3.5 st/ha, in Pervenest Samarkanda variety up to 0.6-3.1 st/ha compared to the control option. The best results were obtained in the variants that left 8-16 fruit buds on the bearing branches against the background of 3-4 years of rejuvenation of the fruit-bearing branches.

When the raised branches are pruned at standard cutting levels, leaving 4-8, 12-16 jointed buds for rejuvenating and yielding branches, the yield branches are proportionately compared to the control option: 54-378, 5-273 and 47-327 branches we will witness more cuts..

Thus, it was found out from the results of the research that, taking into account the biological characteristics of apple varieties, the legal tendency to reduce and increase body thickness depends on the method and levels of cutting carried out in it. That is, using the method of rejuvenating pruning on the branches that have yielded according to the 3-4-year stick rotation, leaving buds on the 4-8, 12-16 joints according to the standard pruning levels on the branches that have been kept for bearing. when pruned, depending on the variety of apple, the mass and number of pruned branches increased with the degree of shortening of the fruit branches.

Also, the most optimal yield and quality of the apple varieties were obtained by rejuvenating the already harvested branches in a 3-4 year cycle, leaving 8-16 buds on the bearing branches.

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