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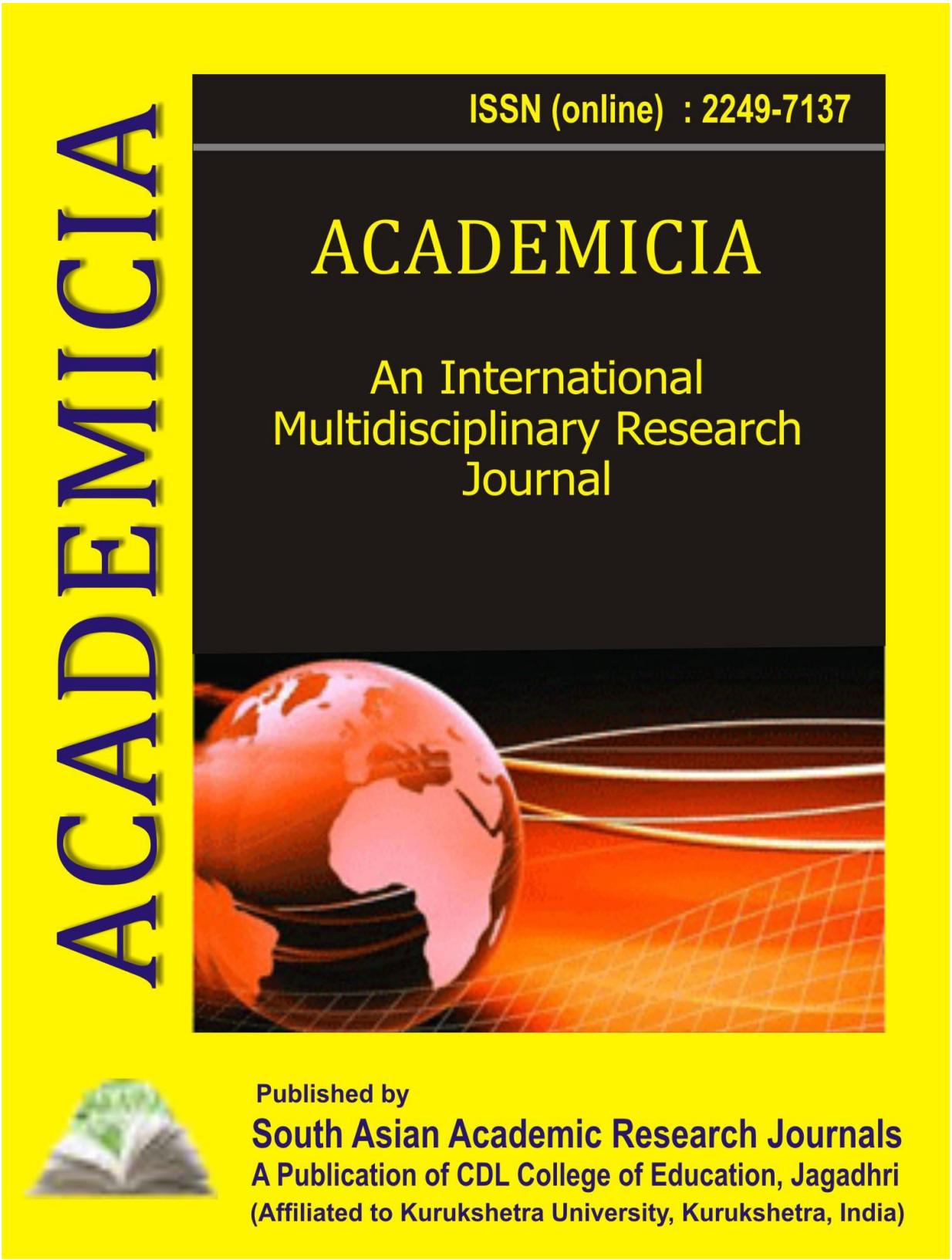

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INFLUENCE OF CULTIVAR COMBINATIONS AND SEEDLING THICKNESS ON THE FORMATION OF PHYTOMETRIC INDICATORS AND PRODUCTIVITY OF PEAR TREES IN INTENSIVE ORCHARDS

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ABSTRACT

In this articleis given the influence of varieties-rootstock combinations and planting schemes on the phytometric growth rates and fruiting of pear varieties grafted on a seedling C_1-Williams, Abbat and Carmen. The most productive varieties of pear tree connected to the vegetative graft are Carmen, Abbat and Williams, planted in the garden on a 4.0x1.2 m scheme, with 2088 pear seedlings per hectare. The air exchange process is also improved. Sunlight, on the other hand, has a positive effect on the yield formation of small pear varieties, allowing the trees to increase their productivity during the growing season.

KEYWORDS: *Fruit Growing, Intensive Pear Orchards, Dwarf Trees, Vegetative Rootstocks, Phytometric Values And Fruit Formation, Efficiency.*

INTRODUCTION

Intensification of fruit growing in Uzbekistan to increase fruit production, i.e. the use of modern methods, deep development of the fruit industry, integration of production; increase the productivity and quality of existing orchards, create new modern, abundant and high-quality orchards instead of low and low quality ones; efficient use of mountain and foothill areas, complete and efficient use of methods such as irrigation and fertilization.

The expansion of the area of orchards will be built mainly for the purpose of expanding production on farms specializing in fruit growing. In the fruit-growing regions of the country, the Government of the Republic of Uzbekistan has set a task for the fruit industry to further increase the volume of fruit production to ensure the domestic market and strengthen the export potential.

The relevance of the topic of this scientific article is in the dramatic improvement of the abundant and high-quality yield and fruit quality of intensive orchards connected to the vegetative, ie, grafted propagated grafts of pear trees from intensively seeded fruits; The establishment of science-based orchards in the cultivation of quality pears is one of the most important issues.

THE MAIN FINDINGS AND RESULTS

This field research was carried out in 2020-2021 at the horticultural farm of “SiyovushAgro” LLC, located on the territory of Bogikalon Farm, Bukhara district, and Bukhara region.

Bukhara region is located in the desert zone, and soil formation takes place in hot and dry climates. The climate of Bukhara region is sharply continental, with an average annual rainfall of 125-175 mm, mainly in early spring and winter. Hot sunny days last up to 240 days, during which time the average air temperature is 26-300C. The hottest days are in the summer, with daytime temperatures ranging from 38.7 to 46.2^{0}C and above in late June-early July. Winters are dry and cold: the average temperature in January ranges from 40 ^{0}C to 130 ^{0}C. The average relative humidity is 40-60%.

In terms of mechanical composition, clayey, heavy and loamy soils, consisting of 56.9%, account for 35.6% of lightly loamy soils and 7.5% of desert and sandy soils in the total irrigated area of the region. Layers of 0-125 cm and 200-250 cm are added with average loam soils, and layers of 125-200 cm form heavy soils. The volumetric weight of soils is 1.40 g / cm^3 in the 0-70 cm layer and 1.32 g / cm^3 in the 0-100 cm layer. [6.7].

The result of the study.

The most productive varieties of pear tree connected to the vegetative graft are Carmen, Abbat and Williams, planted in the garden on a 4.0x1.2 m scheme, with 2088 pear seedlings per hectare. The processes of growth, development and yield increase of pear trees are normal in the experimental garden. It should be noted that the protection of pear and apple trees from complex pests is carried out at the horticultural farm “Siyavush Agro” LLC with the strict participation and control of agronomists. The experimental garden is carrying out complex protective measures for 2020-2021, which will ensure the normal growth of pear trees and give a rich harvest and quality.

The branches are shaped in a semi-sparse manner. Pear orchards are fully irrigated by drip irrigation. It is watered through hoses during the day, saving water consumption 2-3 times. S1 is

the main graft for young pear trees. S1 grafts are the grafts used in many intensive weeds, and today this graft is also used in large weeds. In S1 grafting, the yield of pear tree varieties is high. It is harvested in 2-3 years after transplanting in the garden [4,5,8].

Low-growing deciduous trees are different from strong-growing deciduous trees. Pear trees attached to low-growing grafts are used more fully to form fruit buds and form a crop formed during the assimilation process. Our research shows that in gardens grown in low-growing shrubs, especially vegetative stunted shrubs, most carbohydrates are used to produce fruit elements during the growth and development process, and a relatively small portion is spent on tree and root growth.

The combination of varietal grafts and convenient seedling thickness, along with general high agro-technical care for the tree in intensive pear orchards, is its proper setting and formation, and this measure can sometimes be seen for several years.

According to modern notions, an intensive pear orchard is an orchard with an early harvest, high quality and stable yields every year, maximum use of technical means, low production costs and low cost of crops [1,3 , 5.7].

Currently, there is a lot of world practice and theoretical-practical materials on the cultivation of high-quality crops from intensive dwarf pear trees. in our studies, pears were also found in the Williams, Abbat, and Carmen varieties.

It should be noted that the pear, which is attached to the stunted vegetative grafts, in the Carmen, Abbat and Williams varieties, in 2020, 66% in the lower part, where the twigs are placed, and 72.0% in the middle part. Similar results were observed in experiments conducted in 2021, but it should be noted that as a result of the growth and development of pear trees, it was found that the percentage of light decreased by 2-4% along the tree tiers.

Pear varieties Carmen, Abbat and Williams, studied during 2020-2021, were selected from 10 typical trees for light study and were studied around indicators such as all conducted phytometric formation processes, yield and cost-effectiveness of fruit growing. In the experimental garden, he uses the method of drip irrigation through a series of hoses. Pear trees are pruned 2-3 times during the application period, taking into account the growth of weeds, 250 kg of nitrogen fertilizers, 150-180 kg of phosphorus fertilizers and 45-60 kg of potassium fertilizers are applied to the soil in one hectare of pear orchards.

Choosing the right and science-based care technology for pear trees, carrying out proper processing and pruning processes, choosing the optimal grafting and seedling thickness, and achieving uniform distribution of sunlight into the interior of the tree will result in better assimilation in stunted pear leaves. In 2021, 0.4-2.2 kg of quality was obtained from the average bush in the studied varieties.

CONCLUSION

Based on the results of a study conducted at the “SiyavushAgro” horticultural farm in Bogikalon Farm, Bukhara District, Bukhara Region, it was found that sunlight spreads evenly into the branch system of scientifically based intensive pear trees, sharply reduces the number of complex diseases and pests. The air exchange process is also improved. Sunlight, on the other

hand, has a positive effect on the yield formation of small pear varieties, allowing the trees to increase their productivity during the growing season.

It should be noted that the connection of small pear varieties to vegetative grafts leads to an improvement in their phytometric performance, and as a result, the yield of pears in Williams, Abbat and Carmen varieties increases by 15-25% and fruit quality improves dramatically.

The results of the above scientific research also show that the correct shaping of intensive pear trees attached to stunted vegetative grafts, the use of modern economical drip irrigation method and taking into account the biological properties of pear graft grafts leads to increased productivity and drastic improvement of fruit quality.

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