

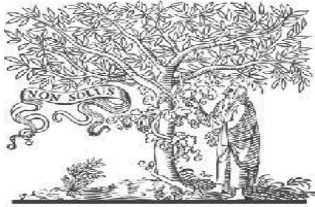


International Journal for Innovative Engineering and Management Research

A Peer Reviewed Open Access International Journal

www.ijiemr.org

COPY RIGHT



ELSEVIER
SSRN

2021IJIEMR. Personal use of this material is permitted. Permission from IJIEMR must be obtained for all other uses, in any current or future media, including reprinting/republishing this material for advertising or promotional purposes, creating new collective works, for resale or redistribution to servers or lists, or reuse of any copyrighted component of this work in other works. No Reprint should be done to this paper, all copy right is authenticated to Paper Authors

IJIEMR Transactions, online available on 20th November 2021.

Link: <https://ijiemr.org/downloads/Volume-10/Issue-11>

DOI: 10.48047/IJIEMR/V10/I11/26

Title: **PRODUCTIVITY OF PEAR TREES DEPENDING ON THE VOLUME OF THE CROWN**

Volume 10, Issue 11, Pages: 184-186

Paper Authors: **Urmonbek Mirzakhidov**



USE THIS BARCODE TO ACCESS YOUR ONLINE PAPER

To Secure Your Paper As Per **UGC Guidelines** We Are Providing A Electronic Bar Code

PRODUCTIVITY OF PEAR TREES DEPENDING ON THE VOLUME OF THE CROWN

Urmonbek Mirzakhidov

Scientific Research Institute of Horticulture, Viticulture and Winemaking named after
academician M.Mirzaev, Doctor of Philosophy in Agricultural Sciences,

Email: mirzaxidov48@mail.ru

Abstract: The article presents the material of the productivity of pear trees depending on the volume of the crown at the age of 8 years, depending on the variety, rootstock, pharmacy and planting scheme.

Keywords: pear, variety, rootstock, shaping, crown, planting scheme, yield, crown volume.

Introduction

For a modern intensive garden, one of the important indicators is the productivity of the crown volume, t.e. the amount of yield per 1 m³ of crown volume, this indicator primarily depends on the design of fruit crops, t.e. on the density of planting, the shape of the crown and the rootstocks used.

Research methodology

The study was conducted in an intensive pear orchard growing in the Samarkand Research and Experimental Station.

The volume of the crown of pear trees was determined by the method described in the works of V.A.Zhogolev and L.S.Efremov by linear measurements of the height and width of the crown along across the row, followed by recalculation by formulas [1,2]:

a) for sparse - tiered form - $v=2/3\pi R^2h$

b) for the palmetto form - $v=1/2$

$\pi R_1 R_2 h$ where

π -3,14; R- average crown radius; h- crown height

Research results and discussion.

Ya.S. Nesterov believes that the identification of high-yielding varieties for production should be carried out not only in terms of the yield from the tree, but also in terms of 1 m² of crown projection and 1 m³ of crown volume [4].

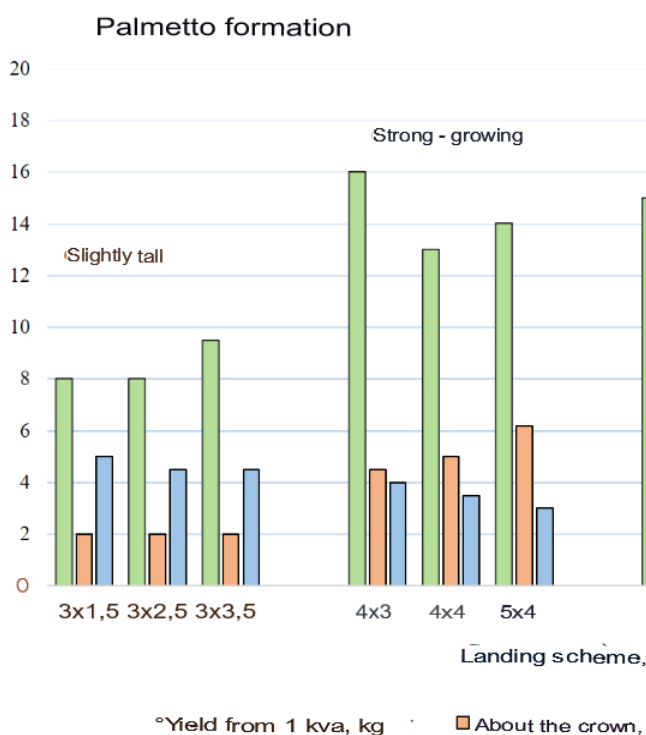
We have calculated the productivity of the crown volume to the period at the age of 8 years when the yield of trees and the volume of the crown in our experience reached the largest sizes [3].

The data obtained show that in the Gift variety on both studied rootstocks and formations, the productivity of the crown volume was directly dependent on the planting density, t.e with its enthusiasm, the value of the crop passing 1 m³ of crown volume increases (diagram.1).

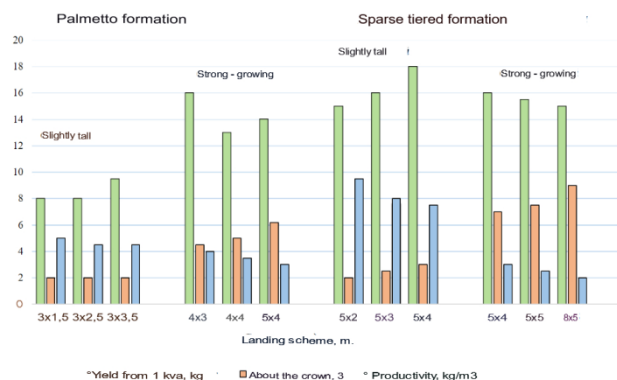
In pear trees on a low-growing rootstock, this indicator was, on average, 56,7% higher than on a strong-growing one. At the same time, under conditions of sparse-tiered formation, the productivity of the crown volume was, on average, 70,2% higher than with palmetto.

Diagram 1.

The productivity of trees depends on the volume of the crown. Gift variety (Trees aged 8 years).



The productivity of trees depends on the volume of the crown. Cure variety (Trees aged 8 years).



The amount of harvest per 1 m³ of crown in trees on a strong-growing rootstock with a palmetto crown shape was, on average, by 30,4% more than with a sparse -tiered system.

Under conditions of sparse - tiered formation, the productivity of crown volume on a weakly grown rootstock is, on average, 3,5 times higher than on a vigorous one.

The influence of tree planting patterns on the productivity of the crown volume in the Kure variety was basically the same, t.e., with an increase in tree planting density, the amount of yield per 1 m³ of crown increases. (diagram. 2).

An exception should be considered options for a weak rootstock with palmette crown formation. In these variants, the studied tree planting schemes did not affect the productivity indices of the crown volume, t.e. for all tree planting schemes, it was almost the same.

Diagram 2.

It should be noted that despite the high yield of trees, it should be noted that despite the high yield of pear trees of the Curie variety in comparison with the Gift variety, the productivity of the crown volume of the Curie variety was lower due to the large crown volume. At the same time, unlike the Gift variety, when forming trees according to the palmetto system, the influence of a strong-growing rootstock on this indicator was large. The amount of harvest is per 1 m³ of crown volume on a strong-growing rootstock, on average, 17,6% more than on a weak-growing one.

With sparse-tiered formation, in the Cure variety as well as in the Gift variety, the crown productivity index on a weakly growing rootstock, on average, was 2,8 times greater than on a strong-growing one.

With all planting schemes on both studied rootstocks, the productivity of crown volume with palmetto formation was, on average, 32,1% higher than with sparse-tiered.

Conclusions: the productivity of the crown volume of the pear trees tiered of the Curie variety, in general, is lower than that of the Gift variety. With palmetto crown formation on a strong-growing rootstock with tree planting, the productivity index of the crown volume mainly increases. The studied schemes of planting trees on a low-growing rootstock

with palmetto formation did not have a noticeable effect on the change in the productivity of the crown volume. At the same time, on the palmetto formation, the high productivity of the crown volume was noted on a strong-growing rootstock, while with sparse-tiered-on a weakly growing one.

References

1. Efremova L.S. The influence of formation, pruning and planting density on the growth and fruiting of dwarf apple trees with the trellis method of cultivation in the conditions of southern Ukraine - Diss cand.S.-x sciences.
2. Zhogolev V.A. Growth and fruiting of apple trees under various planting schemes. - Diss. cand.with, -x sciences. -M: 1976, p, 94-100.
3. Mirzakhidov U.D. the main factors of increasing the efficiency of pear cultivation in intensive type gardens in the south-west of Uzbekistan Diss. Candidate of Agricultural Sciences. Samarkand -1986.pp. 129-133.
4. Nesterov Ya.S. The role of the VIR collection in the intensification of seed crop breeding. - In the book. Tasks and modern methods of selection of fruit and berry crops. Abstracts of reports of the All-Union Meeting (July 4-6, 1985) Yerevan, 1985, pp. 5-8.