



POSITION

on dissertation work for obtaining the educational and scientific degree "Doctor" in the field of higher education: 6. *Agrarian sciences and veterinary medicine*, professional field: 6.1. Crop Science, specialty: *Fruit-growing*

Author of the dissertation: Georgi Ivanov Govedarov - PhD student in independent preparation at the Department of Fruit- Growing at the Faculty of Viticulture and Horticulture at the Agricultural University in Plovdiv.

Thesis topic: POSSIBILITIES FOR ACCELERATED PRODUCTION OF THE PEAR AND THE QUINCE TREES ON DIFFERENT QUINCE ROOTSTOCKS

Reviewer: Prof. Dr. Stefan Ivanov Gandev, Fruit Growing Institute, Plovdiv, Higher Education Area: 6. Agrarian Sciences and Veterinary Medicine, Professional direction: 6.1. Crop Science, speciality: Fruit-Growing, appointed as a member of the Scientific Jury with order No. ΠΔ-16-1374 / 13.12.2019 by the Rector of the Agricultural University, Plovdiv.

1. Relevance of the problem

The production of fruit planting material requires two years of cultivation of the plants in a nursery, and in the case of grafting with an intermediate - three years. The topicality of the presented dissertation is expressed in the shortening of this term, by presenting specific guidelines and recommendations for the practice.

In this connection it can be concluded that the topic of the dissertation was successfully selected. It is topical and has practical importance in the production of the pear and the quince trees.

2. Purpose, tasks, hypotheses and methods of research

In the thesis, the goal is not clearly formulated. There are four tasks: in a mother plantation for rootstocks; in a nursery for traditional production; in a nursery for accelerated production and in a mother plantation for the production of budsticks. The research hypothesis is not clearly presented. It is implied by the experiments performed.

The experiments are conducted of the experimental base of the Department of fruit-growing at the Agricultural University-Plovdiv, on the territory of the village of Brestnik.

The studies were carried out with the quince rootstocks Provence quince, MA, Ba 29 and B 12, the pear cultivars Cure and Passe Crassane and the quince varieties Asenica, Triumph and Hemus.

The methods used are up-to-date and the number of indicators is sufficient to interpret the results. Data were statistically processed.

3. Visualization and presentation of the results obtained

The dissertation is written on 112 pages, including the necessary sections, follows the logical structure and has a good layout. Contains 29 tables and 25 figures. The conclusions presented are directly related to the results obtained.

4. Discussion of the results and the literature used

The results are presented correctly and their discussion indicates that the doctoral student is well informed of the topic on which he is working. The dissertation is written in a good scientific style.

The literature used is from 135 authors, with a predominance of foreign language sources. Citations in the text are correct. The sources cited provide sufficient scientific information to interpret the data and conduct the study in its entirety.

5. Contributions to the thesis

Contributions may be divided into contributions of original nature, applied contributions and confirmatory contributions.

Contributions of original character

- The duration of soldering of grafted pear and quince buds in the traditional and accelerated production method has been established.

-The development of grafted pear and quince buds in traditional and accelerated tree production is presented in the dynamics.

- It is found at quince the most suitable method for producing scions (leaf-bearing buds), as well as the time to make it.

-It has been found that by applying high agricultural technology, standard pear and quince trees can be produced in a one-year-old nursery.

Scientific and applied contributions

- In the case of accelerated production, it has been found that for better soldering of the rootstocks at the one-year-old nursery, they must be planted in the period 15.11-15.12.

- The thickness of the rootstocks reached in the mother plantation (4-7 and 7-12 mm fractions) does not have a significant impact on their development in the nursery.

- The period 15.07 - 15.08. is suitable for defoliation of scions (60-100 cm). After 15.08. the fruit buds of the shoots exceed the number of leaves bud.

Contributions of a confirmatory nature

- In the mother plantation quince rootstocks form shoots suitable for nursery planting.

- Cultivar Cure has more growth vigor than Passe Crassane.

6. Critical notes, questions and recommendations

I have no critical notes and recommendations to the dissertation submitted for opinion. Let me ask myself the following question:

Question: What are the advantages of the methods presented in the dissertation for accelerated production of trees over the worldwide practice of accelerated trees production, including winter grafting and receiving of the trees within the same year?

7. Evaluation of the abstract and publications on the dissertation

The abstract presented objectively reflects the structure and content of the dissertation. In connection with the dissertation, the doctoral student has independently published three articles and one article in a team. The doctoral student meets the minimum national requirements.

CONCLUSION:

Based on the various methods of research, learned and applied by the doctoral candidate, the correctly performed experiments, the generalizations made and the conclusions drawn, I believe that the presented dissertation meets the requirements of the Law for Development of the Academic Staff in Republic of Bulgaria and the Rules of the Agrarian University for its application, which gives me a reason to rate it POSITIVE.

I allow myself to propose to the venerable Scientific Jury also to vote positively and to award to Georgi Ivanov Govedarev an educational and scientific degree "Doctor" in the scientific specialty "Fruit-growing".

Prof. Dr. G. G. Govedarev

