



OPINION

on a dissertation work thesis for obtaining the educational and scientific degree 'Doctor' in field of higher education 6. Agricultural sciences and veterinary medicine, professional field 6.1. Plant growing, scientific specialty 'Viticulture'.

Author of the PhD thesis: Assist. Prof. Aneliya Svetoslavova Popova PhD Student (individual form of education) in Department 'Viticulture and Fruit growing', at Agricultural University - Plovdiv.

PhD thesis title: 'A comparative study of vegetative and reproductive behaviour of some clones of Syrah cultivar'.

Member of the Scientific Jury: Assoc. Prof. Dr. Denitsa Dimitrova Serbezova, University of Forestry - Sofia, field of higher education 6. Agricultural sciences and veterinary medicine, professional field 6.1. Plant growing, scientific specialty 'Fruit growing' appointed as member of the Scientific Jury according to Order No RD-16-660/07.06.2023 of the Rector of the Agricultural University - Plovdiv.

1. Actuality of the problem.

The interest in vine culture and wineproduction is growing in world scale. The wide distribution vine due to owing valuable economic and biological properties – fruit with high nutritional and medicinal properties, high demand on the market and greater economic efficiency. The production of red wine cultivar Syrah and it's clones are raw material for obtaining red wines and have a great economic importance in our country and are established as competitive under the new economic conditions on the domestic and foreign markets.

The production needs the study of introduced cultivars and clones, information on their proper zoning, development of cultivation technologies through differentiated approaches in agrotechnical measures, to obtain high and quality grape production, which is the basis of raw material for obtaining quality wines.

Based on the above, I believe that presented for opinion work is in accordance with contemporary trends in vinegrowing and wineproduction and provides specific answers and recommendations to science and practice. The significance and actuality of the topic is well substantiated by the PhD student in the presented work.

2. Purpose, tasks, hypotheses and methods of research.

The aim of the dissertation work is to study the vegetative and reproductive manifestations of clones No. 100, 174, 470 and 524 of the Syrah cultivar, grafted on a SO₄ rootstock and a general evaluation of the obtained wines for the improvement of

the technology of growing vines and grape processing, grown in the region of Brestnik village.

9 tasks have been developed in order to achieve the aim.

The methods used are actual and are in accordance with the tasks and aim of investigation.

3. Visualization and presentation of the obtained results.

The dissertation work includes 174 standard pages, 3 appendices, including 28 tables and 62 figures, structured according to the requirements for educational and scientific degree "Doctor".

The presented chapters 'Introduction' and 'Literary Review' are in the volume of 38 pages and cover the problem in details. Impression makes the good inform of the PhD student and the excellent interpretation of the used literary sources.

Thus structured, the dissertation work gave an opportunity the doctoral student to get deep insight into the essence of the processes and to draw accurate conclusions.

4. Discussion of the results and the literature used.

The section 'Obtained results' is structured correctly, according to the performed experimental work in connection with the set tasks.

As a result of the obtained data, 13 conclusions were made.

During the development of the dissertation work, assist. professor Aneliya Popova used 257 literary sources, of which 12 are in Cyrillic and 245 are in Latin, which shows that the PhD student got acquainted in depth with the problems in the issues related to the subject of the dissertation work.

5. Contributions of the dissertation work.

Based on the obtained results, 3 scientific and 2 scientific-applied contributions were made.

Scientific contributions

Clones Syrah 100 and 524 showed the greatest degree of their biological potential in the made comparative study of clones numbered 100, 174, 470 and 524 of the Syrah cultivars, grown high-stemmed, with a short pruning system and loading with 12 winter buds per vine.

Depending on the biological characteristics of the clone and the cultivation technology, the content of C₁₃-Norisoprenoids (β -damascenone, α -ionone and β -ionone) in the wines varies.

The wines obtained from clone 524 with a standardized yield are distinguished by the highest organoleptic qualities - high content of total and sugar-free extract, content of anthocyanins, total phenolic substances, higher color intensity, aroma, finesse, body, harmony, length of taste and fruitiness.

Scientific-applied contributions

The wines obtained from the Syrah 100 and 524 clones with a standardized yield are distinguished by the highest content of coloring matter and trans-resveratrol, which makes them suitable for the pharmaceutical industry in the production of drugs against

cardiovascular, cancer, neurodegenerative and other diseases.

The quality of the wines obtained from the studied clones of the Syrah cultivar is much higher when applying summer pruning operations, from which the determination of the optimal number of grapes should become a mandatory practice.

6. Critical remarks and questions.

I would like to recommend Assistant Professor Aneliya Popova to continue her active scientific activity and to publish the obtained results in a monograph.

7. Published articles and citations.

Assist. Prof. Aneliya Popova has presented 1 independent publication on the dissertation work, printed in reports, published in a scientific publication, referenced and indexed in world-famous databases with scientific information, which she presented at the *International Conference "Agriculture for Life-Life for Agriculture" in University of Agronomic Sciences and Veterinary Medicine of Bucharest, 04-06 June 2021, Romania* and meets the minimum scientometric requirements.

Citation by the PhD student is not applied.

The presented abstract objectively reflects the structure and content of the dissertation work.

CONCLUSION:

Based on the studied and applied by the PhD Student different methods of research, the correctly performed experiments, the summaries and conclusions made, I believe that the presented dissertation work meets the requirements of Law for development of academic staff in the Republic of Bulgaria and Regulations of the Agricultural University for its application, which gives me reason to evaluate it **POSITIVE**.

I allow myself to propose to the honorable Scientific Jury also to vote positively and award Aneliya Svetoslavova Popova an educational and scientific degree '**doctor**' in scientific specialty 'Viticulture'.

Date: 19.06.2023
Sofia

OPINION PREPARED BY:
(Assoc. Prof. Dr. Denitsa Serbezova)